

# Thermodynamic properties of CO<sub>2</sub>+SO<sub>2</sub>+CH<sub>4</sub> mixtures over wide ranges of temperature and pressure. Evaluation of CO<sub>2</sub>/SO<sub>2</sub> co-capture in presence of CH<sub>4</sub> for CCS.

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## **ABSTRACT**

In this work, density, vapor-liquid equilibrium and speed of sound measurements of the mixtures [CO<sub>2</sub>+4.72 mol% SO<sub>2</sub>+1.85 mol% CH<sub>4</sub>] and [CO<sub>2</sub>+0.09 mol% SO<sub>2</sub>+1.54 mol% CH<sub>4</sub>] were performed over the temperature range 263-373 K and at pressures of up to 30 MPa for density and up to 190 MPa for speed of sound. For the speed of sound measurements, the mixtures were doped with  $\cong 0.8$  mol% CH<sub>3</sub>OH. We compared our results to the values calculated using an extended version of the equation of state for combustion gases (EOS-CG) that includes binary models for the CO<sub>2</sub>+SO<sub>2</sub> and CO<sub>2</sub>+CH<sub>4</sub> subsystems, and a perturbed-chain statistical associating fluid theory (PC-SAFT) equation of state, validating both equations in this way. From our experimental results, we evaluated the impact of the simultaneous presence of SO<sub>2</sub> and CH<sub>4</sub> as impurities in anthropogenic CO<sub>2</sub> on selected parameters for carbon capture and storage technology. With the understanding that chemical effects have not been considered, we concluded that the presence of 4.72 mol% SO<sub>2</sub> compensates for the negative effect of 1.85 mol% CH<sub>4</sub> on most of the studied

parameters, resulting in a favorable fluid for carbon, capture and storage, contrary to the mixture with 0.09 mol% SO<sub>2</sub> and 1.54 mol% CH<sub>4</sub>.

Keywords: CO<sub>2</sub>, SO<sub>2</sub>, CH<sub>4</sub>, density, speed of sound, VLE, equation of state, CCS, saline aquifer storage.

## 1. INTRODUCTION

Fossil fuel combustion in the power generation sector is a major source of anthropogenic CO<sub>2</sub>, and significant amounts of this fluid are produced as well in oil and gas processing [1]. Global CO<sub>2</sub> emissions are expected to rise by more than 2% in 2018 [2]. To reach the Paris 2°C scenario, approximately 4 Gt of CO<sub>2</sub> per year must be captured and stored by 2040, which is 100 times more than the current annual storage capacity [3]. Thus, anthropogenic CO<sub>2</sub> should be captured at emitting facilities, conditioned and transported for disposal in adequate geological reservoirs – carbon capture and storage (CCS)– or utilization in industrial or CO<sub>2</sub>-enhanced oil recovery (CO<sub>2</sub>-EOR) projects [4].

CO<sub>2</sub> capture technologies aim to produce CO<sub>2</sub> that is as pure as possible, but in practice, the CO<sub>2</sub> obtained will contain a few percent of impurities/contaminants. The cleaner the CO<sub>2</sub> obtained, the lower the efficiency of the capture process will be [5].

CO<sub>2</sub>, SO<sub>2</sub> and CH<sub>4</sub> are components of CCS and CO<sub>2</sub>-EOR [6,7]. SO<sub>2</sub> is a very toxic impurity coming mainly from the burning of sulfur-containing fuels; recent studies have indicated that it benefits some aspects of operation at CCS facilities, and CO<sub>2</sub>/SO<sub>2</sub> co-capture has been proposed [8-12]. CH<sub>4</sub>, coming for instance from coal gasification processes, is one of the most powerful greenhouse gases; its comparative impact is more than 25 times greater than that of the same mass of CO<sub>2</sub> over a 100-year period [13]. We consider in this work the possibility of mixing and joint management of emissions from different sources, what could lead to the simultaneous presence of

both impurities in the CCS or EOR facilities. The thermodynamic and hydraulic study carried out in this work helps to decide if CO<sub>2</sub>/SO<sub>2</sub> cotransport, coinjection and costorage in presence of CH<sub>4</sub> is appropriate, thus avoiding CO<sub>2</sub>, SO<sub>2</sub> and CH<sub>4</sub> emissions into the atmosphere and reducing purification costs. To our knowledge, thermodynamic data of multicomponent mixtures containing CO<sub>2</sub>, SO<sub>2</sub> and CH<sub>4</sub> under conditions relevant to these technologies are missing from the literature. These data are needed to be able to select and validate the models that allow calculation of a fluid's physical properties to carry out the design and operation of such processes.

Thus, the first aim of the present study was the experimental determination of new and accurate pressure-density-temperature,  $p\rho T$ ; vapor–liquid equilibrium, VLE; and pressure-speed of sound-temperature,  $pcT$ , data for two CO<sub>2</sub>+SO<sub>2</sub>+CH<sub>4</sub> mixtures: the “co-capture” mixture contained impurity concentrations corresponding to different emissions from some energy processes without further purification [10], and the “emissions” mixture contained SO<sub>2</sub> and CH<sub>4</sub> concentrations which were equivalent to the total releases of SO<sub>2</sub> and CH<sub>4</sub> from the European Union (EU), calculated using the data for the total emissions in the EU of the gases inventoried in Ref. [14]. The working temperature varied from 263 to 373 K, and the pressure was up to 30 MPa for the density measurements and up to 190 MPa for the speed of sound measurements. For the speed of sound measurements, the mixtures were doped with  $\cong 0.8$  mol% CH<sub>3</sub>OH, given their opacity to sound at 5 MHz (which is our working frequency) in most of the studied ranges of conditions (see Section 3.1) [8,9,15]. Despite the doping, the apparatus did not provide proper signals in the low-pressure range. As low-pressure values are important for CCS and CO<sub>2</sub>-EOR, experimental  $pcT$  data were used to obtain extrapolated  $c$  values at lower pressures. These data are necessary, along with density information, to calculate other thermodynamic properties, such as the heat capacity at constant pressure and the Joule-Thomson coefficient of the mixtures, which are used to

determine the thermal behavior of the fluid during depressurization, either operational or accidental.

The experimental conditions in this work extend those of CCS and CO<sub>2</sub>-EOR because the second aim of this work was to evaluate two equations of state, EoSs, as predictive models: an extended EoS for combustion gases (a recent and unpublished version of the original EOS-CG [16]), as implemented in the available TRENDS 3.0 software [17] and a perturbed-chain statistical associating fluid theory (PC-SAFT) EoS [18]. For this purpose, we compared our experimental data with those provided by these EoSs. Binary mixture data are needed to adjust the parameters of these models. Thus, the authors carried out [8,9,15,19-21] an experimental study of the volumetric, VLE, and acoustic behaviors of CO<sub>2</sub>-rich binary systems with SO<sub>2</sub> or CH<sub>4</sub> at pressures and temperatures corresponding to the gas, liquid and supercritical states.

The third aim of the present work was to study the impact of the simultaneous presence of SO<sub>2</sub> and CH<sub>4</sub> as impurities in CO<sub>2</sub> transport, injection and storage with different concentrations and to evaluate the feasibility of CO<sub>2</sub>/SO<sub>2</sub> co-capture in presence of CH<sub>4</sub>, which reduces conditioning costs and helps avoid the SO<sub>2</sub> and CH<sub>4</sub> emissions into the atmosphere. For this purpose, we calculated several technical-operational CCS parameters for transport, injection and storage and discussed the behaviors of the studied mixtures in relation to these parameters, compared with the behaviors of pure CO<sub>2</sub> and of the CO<sub>2</sub>+SO<sub>2</sub> and CO<sub>2</sub>+CH<sub>4</sub> mixtures containing the same amounts of impurities [8,9,15,20,21]. Moreover, we used the experimental data of the ternary mixtures prepared in this work and of binary mixtures [8,9,15,20,21] to evaluate how seven selected reservoirs [22-28] (Table 1) would be affected by the presence of the studied impurities in the injected fluid. Our study is based on thermodynamic and hydraulic factors. Other factors, such as the chemical effects of the impurities, which have not been considered, must also be taken into



account to draw global conclusions about both the fluid quality requirements for the safe design and operation of CCS facilities and the feasibility of CO<sub>2</sub>/impurity co-capture.

To the best of our knowledge, the CO<sub>2</sub>+SO<sub>2</sub>+CH<sub>4</sub> system has never been investigated, and the main goal of this work is to experimentally study the volumetric, VLE and acoustic behavior of this system under conditions relevant to different technologies, mainly CCS. Moreover, the discussion of these data in terms of the evaluation of two EoSs with wide applicability and the impact of the simultaneous presence of SO<sub>2</sub> and CH<sub>4</sub> in CO<sub>2</sub> transport, injection and storage will help to achieve the expected deployment of the technologies to reduce CO<sub>2</sub> emissions and thus to mitigate climate change.

Reservoir	$p$ / MPa	$T$ / K	Depth/ m	Salinity/ mg·l <sup>-1</sup>	$\rho_{br}$ / kg·m <sup>-3</sup>	References
Sleipner	10.3	317	1000	3500	1017	[22,23]
Nagaoka	11.9	319	1100	7113	999	[22,23]
Frio	15.2	329	1546	92633	1048	[22,23]
Nisku Fm. #1	17.4	329	2050	136800	1076	[23,24]
Deadwood Fm. #2	23.6	338	2560	31050	1009	[23,25]
Basal Cambrian Fm.	27.0	348	2734	248000	1137	[23,24]
Snøhvit	29.0	373	2600		1090	[26-28]

**Table 1.** Conditions of the reservoirs studied.

## 2. MATERIALS AND METHODS

**2.1 Materials.** CO<sub>2</sub>, SO<sub>2</sub> and CH<sub>4</sub> (mole fractions > 0.99998, 0.9990 and 0.99995, respectively) were purchased from Air Liquide and used as received. CH<sub>3</sub>OH (biotech grade, mole fraction 0.9993) from Sigma Aldrich was degassed immediately before use.

**2.2. Apparatus and methods.** Given the hazard of the investigated gases –SO<sub>2</sub> is a toxic gas, and CH<sub>4</sub> is a combustible gas– and the high pressure used in this work, safety measures were incorporated into the experimental installations used, including hoods and polycarbonate

transparent barriers around the experimental facilities and safety equipment, such as portable self-contained breathing apparatuses and leak detectors.

Table 2 presents the values of the mole fraction composition,  $x_i$ , and its combined standard uncertainty,  $u(x_i)$ , for the mixtures studied in this work. The mixtures were prepared gravimetrically, and the components were introduced in the order of increasing volatility in a variable-volume cell (maximum volume of 0.51 L and maximum working pressure of 30 MPa). The procedures for preparing the mixtures and transferring them to the experimental installations are described in Ref. [9]. CH<sub>3</sub>OH (used as a dopant for  $c$  measurements) was degassed once inside the cell via 3 h of intermittent vacuuming with agitation.

Component	“Co-capture” mixtures				“Emissions” mixtures			
	$\rho$ measurements Mixture 1		$c$ measurements Mixture 2		$\rho$ measurements Mixture 3		$c$ measurements Mixture 4	
	$x_i$	$u(x_i)$	$x_i$	$u(x_i)$	$x_i$	$u(x_i)$	$x_i$	$u(x_i)$
CO <sub>2</sub>	0.9343	0.0003	0.9272	0.0005	0.9837	0.0003	0.9763	0.0005
SO <sub>2</sub>	0.0472	0.0002	0.0467	0.0003	0.0009	0.0002	0.0008	0.0003
CH <sub>4</sub>	0.0185	0.0002	0.0182	0.0002	0.0154	0.0002	0.0153	0.0002
CH <sub>3</sub> OH			0.0079	0.0004			0.0076	0.0003

**Table 2.** Mole fraction composition,  $x_i$ , and its combined standard uncertainty,  $u(x_i)$ , for the mixtures studied in this work.

The combined standard uncertainty values for the experimental data obtained in this work are calculated according to the “Evaluation of Measurement Data – Guide to the Expression of Uncertainty in Measurement (GUM)” [29] suggested by the National Institute of Standards and Technology (NIST).

The  $u(x_i)$  of each component in the mixtures was estimated from [30]:

$$u(x_i) = \left[ \frac{1}{\sum_{j=1}^N n_j} \right] \sqrt{(1 - 2x_i)u(n_i)^2 + x_i^2 \sum_{j=1}^N u(n_j)^2} \quad (1)$$

where  $n_i$  is the number of moles of component  $i$  added to the mixture based on the change in the mass of the system. The masses were determined by successive weighing in a comparator balance from Sartorius, model CCE 2004, with a repeatability better than 0.0002 g. The standard uncertainty in the calculated number of moles,  $u(n_i)$ , of each substance was estimated based on the standard uncertainty of the individual mass measurements and on the estimated uncertainty due to the presence of impurities in the pure gases used.

The experimental installation and procedure used to obtain the  $p\rho T$  data were detailed in previous publications [9,19,31]. The main component of the installation is an Anton Paar DMA HPM vibrating-tube densimeter connected to an MPDS V3 evaluation unit. The fluid flow of 0.005 MPa·s<sup>-1</sup> used during the  $p\rho T$  isotherm determination ensures quasistatic experiments and measurements at thermodynamic quasiequilibrium, as indicated by the designers of the apparatus [32]. The device operates at temperatures from 263 K to 423 K and at pressures of up to 70 MPa. The temperature was measured using two 100  $\Omega$  platinum probes, which were calibrated before the experimental measurements in this work by the Centro Español de Metrología, CEM [33]. The estimated standard uncertainty in temperature,  $u(T)$ , was 0.006 K. The stability of temperature during the measurement of a  $p\rho T x_{\text{CO}_2}$  isotherm was better than  $\pm 0.04$  K. The pressure was determined using two pressure transducers (GE Infrastructure model PTX 611), which were calibrated in our laboratories using a Wika CPH 6000 calibrator, with an accuracy of 0.025% over the whole scale. The obtained combined standard uncertainty in pressure,  $u(p)$ , was 0.0020 MPa for  $p < 6$  MPa and 0.024 MPa for  $6 \text{ MPa} \leq p \leq 70 \text{ MPa}$  [34]. The vibrating tube was calibrated with pure CO<sub>2</sub> at temperatures from 263.15 to 373.15 K and pressures of up to 70 MPa, with results similar to those obtained during the start-up of the installation [31]. The procedure to calculate the combined standard uncertainty in density,  $u(\rho)$ , for the studied mixtures is the same as that

described in Ref. [10]. The values of  $u(\rho)$  are included in the Supplementary Material, SM, Tables S1 and S2, and range from 0.22 to 0.40 kg/m<sup>3</sup>.

The VLE limits, dew pressure and bubble pressure,  $p_{\text{dew}}$  and  $p_{\text{bubble}}$ , respectively; the densities of the vapor,  $\rho_V$ , and liquid,  $\rho_L$ , phases in the VLE; and their combined standard uncertainties included in Table S3 were determined from the quasicontinuous  $p\rho T$  data using the tangents method proposed by the designers of the experimental setup [9,32]. The combined uncertainty values of the VLE data range from 0.0025 to 0.044 MPa for pressure and from 0.48 to 1.9 kg·m<sup>-3</sup> for density.

The speed of sound measurements were performed using a previously described 5 MHz pulsed ultrasonic system [15]. The apparatus operates from 253 K to 473 K, with  $u(T) = 0.015$  K. The maximum achievable pressure is 200 MPa, and the  $u(p)$  is 0.02 Mpa. The mixtures were doped with  $\cong 0.8$  mol% CH<sub>3</sub>OH to obtain proper signals at lower pressures [15]. The combined standard uncertainty of the experimental  $c$  values,  $u(c)$ , was calculated using the following equation [15,35]

$$(u(c))^2 = [(\partial c/\partial T)_{p,x}u_T]^2 + [(\partial c/\partial p)_{T,x}u_p]^2 + [(\partial c/\partial x)_{p,T}u_x]^2 + (u^*(c))^2 \quad (2)$$

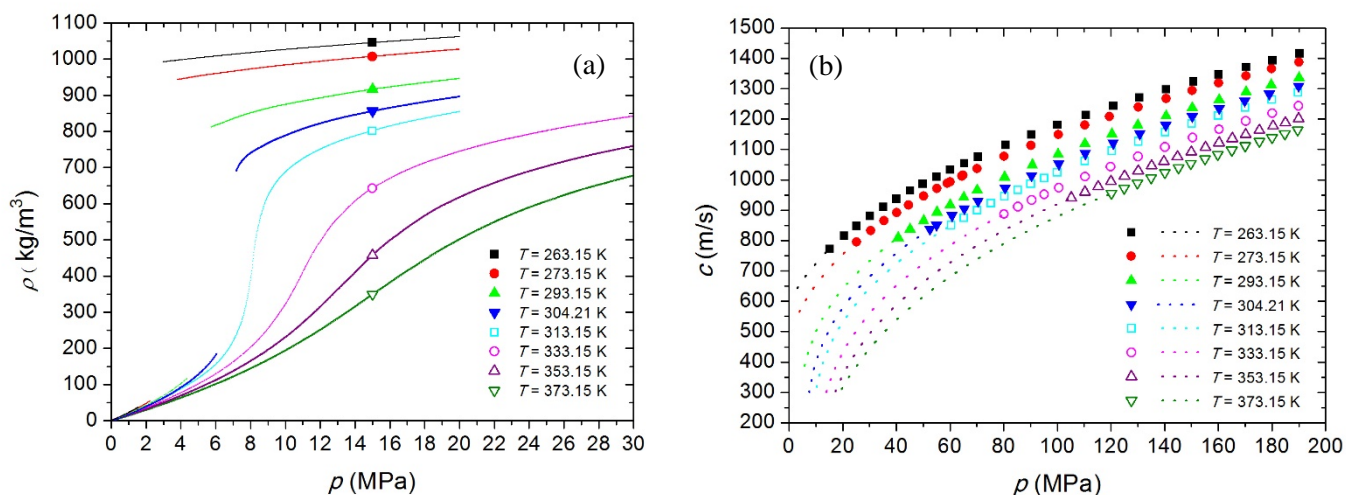
where  $u^*(c)$  is the standard repeatability uncertainty, which depends on the studied system. To determine  $u^*(c)$  for the CO<sub>2</sub>+CH<sub>3</sub>OH+SO<sub>2</sub>+CH<sub>4</sub> system, two mixtures with co-capture compositions were prepared (values of  $x_i$  and  $u(x_i)$  are provided in Table S4). For each mixture, at least two isotherms were determined at each of the temperatures (263, 293 and 313 K) at an overall range of pressures from 15.20 to 191.12 MPa (Table S5). The value determined for  $u^*(c)$  was  $7.4 \times 10^{-4} \cdot c$ , and the overall combined standard uncertainty of  $c$  was  $u(c) = 7.4 \times 10^{-4} \cdot c$ . These values lie within the range of standard uncertainties published for liquid mixtures and mixtures of compressed gases using a similar apparatus [15].

### 3. RESULTS AND DISCUSSION

In this section, we present the experimental and calculated results obtained in this work (3.1), and we discuss the predictive capability of the extended EOS-CG and PC-SAFT EoSs to reproduce them (3.2) and the influence of SO<sub>2</sub> in the presence of CH<sub>4</sub> on several transport, storage and injection parameters (3.3). Moreover, the effect of SO<sub>2</sub> and CH<sub>4</sub> in the injected fluid under real  $T$  and  $p$  conditions corresponding to seven selected saline aquifers (Table 1) is also discussed (3.3.2).

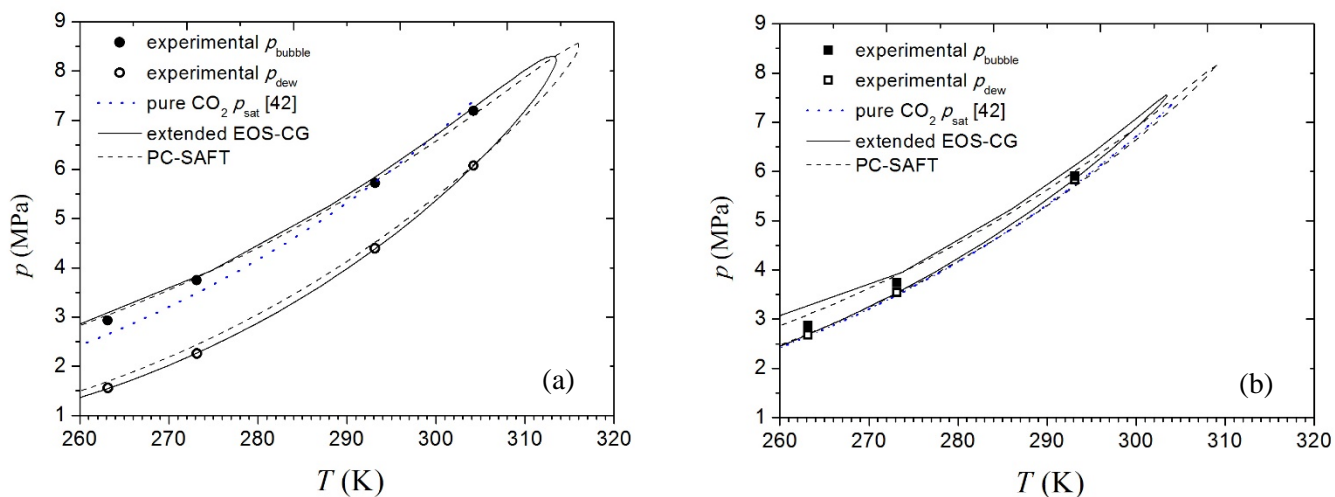
#### 3.1 Results

We measured 8  $p\rho T$  isotherms per mixture for Mixtures 1 and 3, as shown in Table 2. The density measurements were performed at nominal temperatures of  $T = 263.15, 273.15, 293.15, 304.21$  and  $313.15$  K at pressures of up to 20 MPa and at nominal temperatures of  $T = 333.15, 353.15$  and  $373.15$  K at pressures of up to 30 MPa (Figure 1 and Figure S1). The total number of points was  $\cong 19,000$ , and these data are available in Table S1. A smaller number of points is presented in Table S2 to facilitate their further use. The  $T$  and  $p$  ranges were chosen considering the operating conditions during transport by the pipeline [36-39], injection and storage, including the conditions in most geological storage sites [7,22,40,41]. Mixture 1 (co-capture) has greater  $x_{\text{SO}_2}$  and  $x_{\text{CH}_4}$  values than Mixture 3 (emissions). SO<sub>2</sub> is a “condensable” impurity, and its presence in the mixtures results in an increase in density compared to that of pure CO<sub>2</sub> [8, 9, 42]. Conversely, CH<sub>4</sub> is a “noncondensable” impurity, which leads to density decreases [20, 21, 42]. Figure S2 shows that the density of Mixture 1 is greater than that of pure CO<sub>2</sub>,  $\rho_0$ , which in turn is greater than the density of Mixture 3 at a given  $T$  and  $p$ . Therefore, the effect of CH<sub>4</sub> on the density is counteracted by the presence of SO<sub>2</sub> in the co-capture mixture but not in the emissions mixture. The  $\rho$  values obtained for each mixture increase as the pressure increases and the temperature decreases. We did not find any density data for the CO<sub>2</sub>+SO<sub>2</sub>+CH<sub>4</sub> system in the literature.



**Figure 1.** Experimental densities,  $\rho$  (a), and experimental (symbol) and extrapolated (dotted line) speeds of sound,  $c$  (b), for Mixtures 1 and 2, respectively, versus pressure,  $p$ , at the nominal temperatures  $T$ .

From the experimental data, we obtained  $p_{\text{dew}}$ ,  $p_{\text{bubble}}$ ,  $\rho_V$ , and  $\rho_L$  values for Mixture 1 at 263.13, 273.16, 293.15 and 304.21 K and for Mixture 3 at 263.16, 273.15 and 293.15 K. The results are listed in Table S3 and presented in Figure 2. The remaining isotherms were supercritical with continuous lines and a slope that reaches a maximum at the critical conditions of the mixture and diminishes as the temperature increases. No VLE data on this system were found in the literature.



**Figure 2.** VLE for the CO<sub>2</sub>+SO<sub>2</sub>+CH<sub>4</sub> system and for pure CO<sub>2</sub>. Dew and bubble pressures versus temperature for Mixtures 1 (a) and 3 (b). PC-SAFT EoS was applied with parameters from Table S11.

In a previous work [15], we determined that mixtures with greater than 90 mol% CO<sub>2</sub> did not show proper sound signals at 5 MHz, and to obtain proper signals the mixtures were doped with CH<sub>3</sub>OH. We studied the CO<sub>2</sub>+SO<sub>2</sub> mixture with  $x_{\text{SO}_2} = 0.1032$  over the same  $T$  and  $p$  ranges used in this work and we showed that the difference in  $c$  between the mixture doped with 0.8 mol% CH<sub>3</sub>OH and the undoped mixture was small in the experimental results (0.17% on average) and was negligible in the modeling results. Afterwards, we used this method for the experimental acoustic investigation of the CO<sub>2</sub>+SO<sub>2</sub> system over wide ranges of composition,  $T$  and  $p$  [8,9]. In relation to the opacity, CO<sub>2</sub>+SO<sub>2</sub>+CH<sub>4</sub> mixtures showed an analogous behavior, and they were doped as well. To evaluate the effect of CH<sub>3</sub>OH used as a dopant we selected the co-capture mixture, given that a higher concentration of SO<sub>2</sub> provides better sound signals in wider ranges of pressure at each temperature [8,9,15]. The procedure was the same as in Ref. [15]. We prepared two CO<sub>2</sub>+SO<sub>2</sub>+CH<sub>4</sub> mixtures with co-capture compositions and two other mixtures with co-capture compositions doped with 0.79 mol% CH<sub>3</sub>OH (values for  $x_i$  and  $u(x_i)$  are provided in Table S4). The value of  $c$  was measured in both types of mixtures at 263, 293 and 313 K and over a range of pressures from 84.91 to 190.29 MPa (undoped) and from 15.20 to 191.12 MPa (doped), with each isotherm determined at least twice (Table S5). Comparison of the results for both types of mixtures in the common pressure ranges permitted us to quantify the effect of CH<sub>3</sub>OH on the experimental values of  $c$ . The overall mean relative deviation,  $\overline{MRD}_c$ , was only 0.13%, which is lower than the value obtained in the study on CO<sub>2</sub>+SO<sub>2</sub> [15].

We determined 8  $pcTx_{\text{CO}_2}$  isotherms per mixture for Mixtures 2 (co-capture) and 4 (emissions), both CH<sub>3</sub>OH-doped (Table 2), at the same nominal temperatures for which the density was determined and at pressures of up to 190 MPa (Table S6, Figure 1, Figure S3). A polynomial model was fitted to the experimental values of  $c$  for each composition and  $T$  [15]:

$$(p - p^\#) = \sum_{i=1}^3 a_i (c - c^\#)^i \quad (3)$$

where  $p^\#$  is an appropriate reference pressure for each isotherm and  $c^\#$  is the speed of sound at  $p = p^\#$ . Table S7 shows the coefficients for equation (3), the values of  $p^\#$ , and the mean relative deviations,  $MRD_c$  (%), between the experimental and fitted values.  $\overline{MRD}_c$  was 0.007%, which is lower than  $u(c)$  for the experimental data. The values of  $c$  were extrapolated to the low-pressure region where, in spite of the doping, no sound signal was obtained but where values of this property are important for CCS and CO<sub>2</sub>-EOR technologies. For this purpose, polynomial (3) and the coefficients from Table S7 were used, and the extrapolated values are reported in Table S8. These data were validated with the extended EOS-CG, as explained in the next section.

The variation in  $c$  in the mixtures with composition,  $T$  and  $p$  was similar to that observed for density. We did not find any data in the literature on the speed of sound in CO<sub>2</sub>+SO<sub>2</sub>+CH<sub>4</sub> and CO<sub>2</sub>+CH<sub>3</sub>OH+SO<sub>2</sub>+CH<sub>4</sub> systems.

### 3.2 Comparison of experimental and modeling data

CCS technology involves a wide range of fluid conditions that require the use of a predictive tool, such as an EoS, to calculate the necessary properties [7,43-45]. The original EOS-CG mixture model [16], based on the GERG EoS [46], is an EoS mainly developed for application to humid gases, combustion gases and CO<sub>2</sub>-rich mixtures of interest for CCS. The original EOS-CG does not include SO<sub>2</sub> and CH<sub>4</sub>. In this work, we use both an unpublished extended EOS-CG, which includes the binary models for the CO<sub>2</sub>+SO<sub>2</sub> and CO<sub>2</sub>+CH<sub>4</sub> subsystems, and the PC-SAFT EoS [18]. We evaluated these EoSs by comparing the values obtained from them with our experimental data. The differences are given as the mean relative deviation,  $MRD_X$ . The CH<sub>3</sub>OH-doped mixtures



used for  $c$  measurements were modeled as pseudoternary  $\text{CO}_2+\text{SO}_2+\text{CH}_4$  mixtures, with the mole fractions of  $\text{CH}_3\text{OH}$  added to those of  $\text{CO}_2$ .

The extended EOS-CG was applied as implemented in available TREND 3.0 software (Thermodynamic Reference & Engineering Data) [17]. An extended version of EOS-CG that covers additional minor components is programmed in this software. The binary models for the  $\text{CO}_2+\text{SO}_2$  and  $\text{CO}_2+\text{CH}_4$  subsystems were developed at Ruhr University Bochum and are currently unpublished. For the  $\text{CO}_2$ ,  $\text{SO}_2$  and  $\text{CH}_4$  pure fluids, the model uses the Span and Wagner EoS [42], the Gao et al. EoS [47] and the Setzmann and Wagner EoS [48], respectively. The  $MRD_X$  values for the ternary mixtures are shown in Tables S9 and S10. With respect to  $\rho$  (Table S9 and Figure S4), the  $MRD_\rho$  values did not show a clear trend with composition, but they increased at temperatures near the critical temperatures of the mixtures. Regarding the VLE (Table S10 and Figure 2), the deviations did not show clear trends, except for  $p_{bubble}$ , which is much better reproduced for Mixture 1 (co-capture) than for Mixture 3 (emissions). Finally, for  $c$  (Table S9, Figure S5), we did not find remarkable trends with composition, but the values decreased with increasing  $T$  in the emissions mixture. For the extrapolated values (Table S9), the deviations are higher for Mixture 3 than for Mixture 1, except at 263 and 313 K. This comparison served to validate the extrapolated data.

The calculations with the PC-SAFT EoS were performed using VLXE software [49]. The methodology was described previously [15]. The pure compound parameters; the binary interaction parameters,  $k_{ij}$ ; and the  $\Delta v_c$  values are listed in Table S11. The  $\text{CO}_2\text{-SO}_2$  and  $\text{CO}_2\text{-CH}_4$   $k_{ij}$  values are equal to those used in previous works [8,9,15,20]. We set  $\text{SO}_2\text{-CH}_4$   $k_{ij}$  to zero because a binary interaction parameter obtained from fitting our experimental data did not significantly modify the results. The comparison between the calculated and experimental values

determined in this work is shown in Tables S9 and S10 and Figures 2, S4 and S5. The  $MRD_\rho$  values near the critical temperature,  $T_c$ , and at supercritical  $T$  values were higher than those at subcritical  $T$  values, resulting in higher deviations than those for EOS-CG at all isotherms. There was no clear trend with the composition. Regarding the VLE, the deviations in the predictions of  $\rho_V$  and  $\rho_L$  did not show trends with composition, but the highest deviations in  $p_{dew}$  and  $p_{bubble}$  were obtained for the co-capture mixture and the emissions mixture, respectively. Relative to the experimental results,  $MRD_c$  decreased with increasing  $T$  and was slightly higher for Mixture 3 than for Mixture 1. For the extrapolated results, the lowest values of  $MRD_c$  were found at 263 K and 273 K for the two mixtures.

In addition, we evaluated the predictive capability of PC-SAFT using different parameters found in the literature [50-52] by comparing the predicted data with our experimental data, and the  $MRD_X$  values obtained are listed in Table S12. From these results, the overall conclusion is that PC-SAFT, with the parameters from the first two rows of Table S12, better reproduces our experimental values than PC-SAFT with the rest of the parameters found in the literature [51,52].

Table 3 collects the global average values,  $\overline{MRD_X}$ , of the mean relative deviations obtained for each property with both EoSs.

EoS	$\overline{MRD_\rho}$ (%)	$\overline{MRD_{c,exp}}$ (%)	$\overline{MRD_{c,ext}}$ (%)	$\overline{MRD_{p_{dew}}}$ (%)	$\overline{MRD_{p_{bubble}}}$ (%)	$\overline{MRD_{\rho_V}}$ (%)	$\overline{MRD_{\rho_L}}$ (%)
extended EOS-CG	0.46	0.32	0.42	0.22	3.16	0.58	0.16
PC-SAFT	1.82	4.48	3.22	3.32	2.95	5.14	1.27

**Table 3.** Global average values,  $\overline{MRD_X}$ , of the mean relative deviations. Subscripts exp and ext mean experimental and extrapolated, respectively.

### 3.3 Influence of SO<sub>2</sub> in the presence of CH<sub>4</sub> on transport, injection and storage of CCS technology.

The presence of impurities in anthropogenic CO<sub>2</sub> greatly affects the volumetric, VLE and acoustic properties, as demonstrated in Section 3.1. In this section, several technical parameters related to transport, injection and storage in CCS technology will be discussed to quantify the effect of both the presence and the concentrations of SO<sub>2</sub> and CH<sub>4</sub> in the managed fluid. For this purpose, the technical parameters for CO<sub>2</sub>+SO<sub>2</sub>+CH<sub>4</sub> Mixtures 1 (co-capture) and 3 (emissions) were compared with those calculated for pure CO<sub>2</sub> [42] and those for both binary mixtures, CO<sub>2</sub>+SO<sub>2</sub> and CO<sub>2</sub>+CH<sub>4</sub>, with similar contents of SO<sub>2</sub> and CH<sub>4</sub> as the ternary mixtures, taken from Ref. [8,9,20,21].

The transport parameters were the minimum operational pressure,  $p_{\min}$ ; the pressure and density profiles along the pipeline,  $p(d)$ , where  $d$  is the distance; and the inner diameter of the pipeline,  $D$ , and were calculated at temperatures from 263 to 304 K. Regarding injection and storage, normalized parameters,  $X/X_0$ , were evaluated, where  $X$  is the value corresponding to the mixtures and  $X_0$  corresponds to pure CO<sub>2</sub>. The parameters were the storage capacity,  $M$ ; the rising velocity of the plume inside deep saline aquifers,  $v$ ; and the permeation flux,  $\dot{M}$  and were evaluated at temperatures from 313 to 373 and pressures  $p \geq 7$  MPa. All of the above parameters and other required values, such as the Reynolds number, friction factor, pressure drop per meter and normalized floatability in saline aquifers, were calculated using the recommended equations [21,53,54], as shown in Table S13. In these equations, the values for  $\rho$  were those from Table S1 for ternary mixtures and values from the literature [8,9,20,21] for binary mixtures;  $\rho_0$  data were taken from the literature [42]. The brine densities,  $\rho_{\text{Br}}$ , of the saline aquifers in Table 1 were estimated as in Ref. [9] using the salinity, temperature and pressure inside the reservoir.

The viscosity values for pure CO<sub>2</sub>,  $\eta_0$ , were calculated using REFPROP 9.1 software [55]. We did not find experimental viscosity data,  $\eta$ , in the literature for the binary and ternary mixtures used in this work, so we used calculated values for the binary mixtures using an improved extended corresponding states method to estimate the viscosity [56], as implemented in REFPROP 9.1 [55], similar to previous works [8,9,20,21]. However, this software does not allow us to obtain  $\eta$  for ternary mixtures; thus, we calculated these values at pressures  $\geq 7$  MPa using the equation from Grunberg and Nissan [57] applied to the ternary mixture according to the formulation of Shu et al. [58]:

$$\ln\eta = \sum_{i=1}^n x_i \ln\eta_i + \sum_i^n \sum_{j>i}^n x_i x_j A_{ij} + \sum_i^n \sum_{j>i}^n \sum_{k>j}^n x_i x_j x_k A_{ijk} \quad (4)$$

where  $\eta$  is the viscosity ( $\mu\text{Pa}\cdot\text{s}$ ) of Mixture 1 or 3;  $\eta_i$  is the viscosity ( $\mu\text{Pa}\cdot\text{s}$ ) of the pure components;  $x_i$ ,  $x_j$  and  $x_k$  are the mole fractions of the  $i$ ,  $j$  and  $k$  components, respectively;  $A_{ij}$  is a binary interaction parameter;  $A_{ijk}$  is a ternary interaction parameter; and  $n$  is the number of components in the mixture. The Grunberg and Nissan equation is widely used in the literature for water-free liquid mixtures [59].  $A_{ij}$  for the SO<sub>2</sub>-CH<sub>4</sub> interaction and  $A_{ijk}$  were set to zero because of the small mole fractions of these compounds in the ternary mixtures. The values of  $A_{ij}$  for CO<sub>2</sub>-SO<sub>2</sub> and CO<sub>2</sub>-CH<sub>4</sub> binary interactions at each temperature were adjusted from the viscosity data of the corresponding binary mixtures obtained from REFPROP 9.1 [55] and are shown in Table S14 together with the mean relative deviations,  $MRD_\eta$  (%), between the REFPROP 9.1 [55] values and those obtained from equation (4).

### 3.3.1 Influence of SO<sub>2</sub> in the presence of CH<sub>4</sub> on transport.

*Minimum operational pressure,  $p_{\min}$ .* The managed fluid must be transported in a dense or supercritical phase, given that biphasic flow reduces the efficiency of the transport and can damage

the facilities by cavitation and turbulence [39]. Therefore, the minimum operational pressure is determined by the fluid  $p_{\text{bubble}}$  (plus a margin for safety). The presence of a condensable impurity such as  $\text{SO}_2$  decreases the  $p_{\text{bubble}}$  value of the mixture with respect to the saturation pressure,  $p_{\text{sat}}$ , of pure  $\text{CO}_2$  at each  $T$ , while in the presence of a noncondensable impurity, such as  $\text{CH}_4$ , the  $p_{\text{bubble}}$  value increases (Table S15). These opposite effects compete in the studied ternary Mixtures 1 (co-capture) and 3 (emissions). As a result, the  $p_{\text{bubble}}$  values of Mixture 3 at all studied subcritical temperatures and those of Mixture 1 at 263.15 and 273.15 K were higher than the respective pure  $\text{CO}_2$   $p_{\text{sat}}$  values. For Mixture 1,  $p_{\text{bubble}}$  is equal to  $p_{\text{sat}}$  of  $\text{CO}_2$  at 293.15, and at 304.21 K (pure  $\text{CO}_2$   $T_c$ ) [56],  $p_{\text{bubble}}$  is lower than the critical pressure,  $p_c$ , for the pure fluid, which is 7.383 MPa [60] (Table S15). A higher  $p_{\text{bubble}}$  value has a negative effect on transport since it requires the use of higher minimum operational pressures; however, lower  $p_{\text{bubble}}$  values are favorable.

*Pressure and density drops along the pipeline and pipeline inner diameter,  $D$ .* Figure S6 presents the pressure and density profiles along the pipeline for the studied Mixtures 1 (co-capture) and 3 (emissions) compared with those of pure  $\text{CO}_2$  at all studied transport temperatures. A pipeline inner diameter of 0.508 m (20 inch), a mass flow of 317 kg/s (10 Mt/year), a roughness height of the pipeline of  $4 \times 10^{-5}$  m (0.00015 ft) and an inlet pressure of 20.00 MPa were considered. Figure S7 shows similar representations at 293.15 K along with profiles for the binary  $\text{CO}_2 + \text{SO}_2$  (4.68 mol% or 0.69 mol%) [8] and  $\text{CO}_2 + \text{CH}_4$  (1.91 mol%) [21] mixtures. Figure S8 shows the pipeline inner diameter,  $D$ , as a function of the mass flow,  $m$ , for the studied ternary mixtures compared with pure  $\text{CO}_2$  at several values of  $T$  and  $p$ , and Figure S9 presents  $D$  versus  $m$  for the ternary mixtures, the binary mixtures and pure  $\text{CO}_2$  at 293.15 K and 14 MPa. Noncondensable  $\text{CH}_4$  increases the pressure and density drops, as well as the needed inner diameter for a given flow,

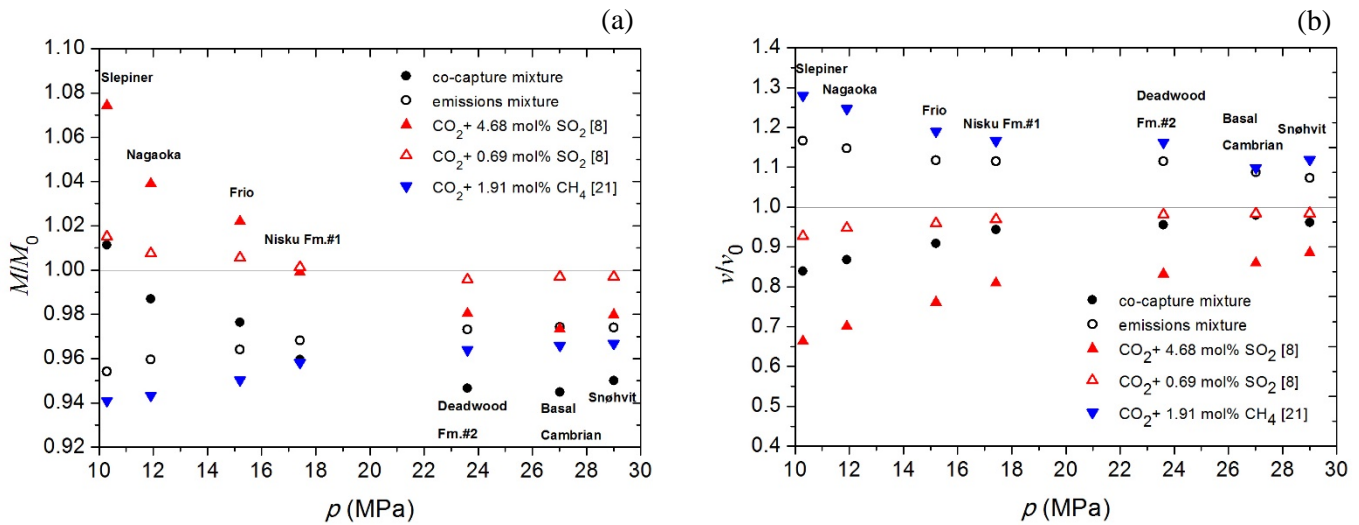
with respect to those of pure CO<sub>2</sub>, while condensable SO<sub>2</sub> decreases all three values due to the influence of these impurities on the density and the viscosity of the mixture. These opposite effects compete in the ternary mixtures. For Mixture 1 (4.72 mol% of SO<sub>2</sub> and 1.85 mol% of CH<sub>4</sub>), the effect of SO<sub>2</sub> predominates, so the pressure and density decrease more slowly than for pure CO<sub>2</sub>, and the needed inner diameter is smaller. However, for Mixture 3 (0.09 mol% of SO<sub>2</sub> and 1.54 mol% of CH<sub>4</sub>), the effect of CH<sub>4</sub> is the most important, so the pressure and density drop faster than those of pure CO<sub>2</sub>, and the pipeline inner diameter must be larger. Hence, the co-capture mixture presents favorable properties for transport with respect to pure CO<sub>2</sub>, while the emissions mixture is unfavorable.

### **3.3.2 Influence of SO<sub>2</sub> in the presence of CH<sub>4</sub> on injection and storage.**

*Normalized storage capacity,  $M/M_0$ .* The reservoir temperature and pressure and the presence of impurities in the injected stream affect the density of the fluid and thus the amount of fluid that can be stored. When the impurity  $T_c$  is higher than the CO<sub>2</sub>  $T_c$ , as is the case for SO<sub>2</sub>, the  $M/M_0 - p$  isotherm of the CO<sub>2</sub>+SO<sub>2</sub> mixture exhibits a maximum [9,61], whereas if the impurities are noncondensable gases, such as CH<sub>4</sub>, a minimum appears in the isotherm [19,21]. The  $M/M_0 - p$  isotherms for the co-capture mixture in Figure S10 show maxima, with values that decrease and positions that shift to higher pressures with increasing temperature. However, the isotherms for the emissions mixture show minima with increasing values and positions that shift to higher pressures when  $T$  increases. Thus, SO<sub>2</sub> compensates for the CH<sub>4</sub> effect in the co-capture mixture, although values of  $M/M_0 > 1$  are obtained only at 313.15 K and 7 MPa <  $p$  < 10 MPa and at 333.15 K and 9 MPa <  $p$  < 14 MPa. However, the SO<sub>2</sub> concentration in the emissions mixture does not completely compensate for the negative effect of CH<sub>4</sub>; thus, the values of this parameter are lower than 1 along the whole range of studied conditions. At high pressures, the influences of

$T$  and  $p$  diminish, and the emissions composition leads to higher values of  $M$  in comparison to the co-capture composition.

In terms of the quantity of the stored fluid in the seven actual reservoirs shown in Table 1, the presence of 1.91 mol%  $\text{CH}_4$  leads to reductions between 3 and 6% (Figure 3). These reductions can be overcome by coinjecting 4.72 mol%  $\text{SO}_2$  (co-capture mixture) in Sleipner (1000 m depth) but not in the other reservoirs. It can also be observed that the co-capture mixture is the least favorable for storage in the three deeper sites.



**Figure 3.** Normalized storage capacity,  $M/M_0$  (a), and normalized rising velocity in saline aquifers,  $v/v_0$  (b) for different mixtures under the reservoir conditions presented in Table 1 [22-28].

*Normalized rising velocity in saline aquifers,  $v/v_0$ .*  $\text{CO}_2+\text{SO}_2$  mixtures with  $x_{\text{SO}_2}$  values similar to those for Mixtures 1 and 3 result in minima in the  $v/v_0 - p$  isotherms and values of  $v/v_0 < 1$  over the studied  $T$  and  $p$  ranges [9], while  $\text{CO}_2+\text{CH}_4$  mixtures with 1.91 mol%  $\text{CH}_4$  lead to maxima and values of  $v/v_0 > 1$  [19,21]. Figure S10 shows that 4.72 mol%  $\text{SO}_2$  overcomes the effect of 1.85 mol%  $\text{CH}_4$  in the co-capture mixture, giving minima in the  $v/v_0 - p$  isotherms and values of  $v/v_0 < 1$ , corresponding to an increasing solvent effect by favoring the  $\text{CO}_2$ -brine contact.

However, 0.09 mol% SO<sub>2</sub> is not sufficient to completely compensate for the negative effect on this parameter due to 1.54 mol% CH<sub>4</sub> in the emissions mixture (Figure S10).

In the reservoirs represented in Figure 3, the presence of methane leads to values of  $v > v_0$ , except for the co-capture mixture, in which the effect of this impurity is overcome by the presence of SO<sub>2</sub>. The presence of the studied impurities in shallow reservoirs leads to differences in  $v/v_0$  of up to 61% (Figure 3), and these differences become less significant in deep locations.

*Normalized permeation flux,  $\dot{M}/\dot{M}_0$ .* Most values of the  $\dot{M}/\dot{M}_0 - p$  isotherms (Figure S10) are higher, and thus better, than those of  $M/M_0 - p$  at the same values of  $p$  and  $T$ , which means that the viscosity of Mixtures 1 and 3 favors their permeation flux under the studied conditions. Thus, Mixture 1 shows values of  $\dot{M}/\dot{M}_0 > 1$  at temperatures of 313.15 K and 333.15 K and pressures of  $9 \text{ MPa} \leq p \leq 17 \text{ MPa}$ , while Mixture 3 has values of  $\dot{M}/\dot{M}_0 > 1$  at 313.15 K and  $p > \approx 10.5 \text{ MPa}$  and at 333.15 K and  $p > \approx 18 \text{ MPa}$ ;  $\dot{M}/\dot{M}_0 \cong 1$  in deeper reservoirs.

Figure S11 shows that almost all of the systems studied in this work show better permeation flux values than those for pure CO<sub>2</sub> when injected into the four shallower reservoirs, while none of the mixtures are favorable in the deepest reservoir, Snøhvit. In the case of Deadwood and Basal Cambrian, only the SO<sub>2</sub>-free mixture and the emissions mixture have improved permeation flux values relative to pure CO<sub>2</sub>.

#### 4. CONCLUSIONS

From our experimental thermodynamic study of CO<sub>2</sub>+4.72 mol% SO<sub>2</sub>+1.85 mol% CH<sub>4</sub> (co-capture mixture) and CO<sub>2</sub>+0.09 mol% SO<sub>2</sub>+1.54 mol% CH<sub>4</sub> (emissions mixture) we determined the influence of the simultaneous presence of a condensable compound, SO<sub>2</sub>, and a non-condensable, CH<sub>4</sub>, in the studied CO<sub>2</sub>-rich mixtures within the operational ranges of technologies as CCS and CO<sub>2</sub>-EOR. We conclude that the density decreasing effect of CH<sub>4</sub> is counteracted by



the presence of SO<sub>2</sub> in the co-capture mixture, leading to density values higher than those of pure CO<sub>2</sub>, but not in the emissions mixture. CH<sub>4</sub> increases the bubble pressure above the pure CO<sub>2</sub>  $p_{\text{sat}}$  in both mixtures, despite the contrary effect of SO<sub>2</sub>. In relation to dew limits, the SO<sub>2</sub> (increasing) and CH<sub>4</sub> (decreasing) effects predominate in the co-capture mixture and in the emissions mixture, respectively. The speed of sound is only slightly affected by the presence and the amount of the studied minority compounds.

An unpublished extended EOS-CG, as implemented in available TREND 3.0 software, and the PC-SAFT EoS were validated for the studied systems and conditions. We conclude that the extended EOS-CG reproduces our experimental data much better than the PC-SAFT with the parameters listed in Table S11. Moreover, predictions by the PC-SAFT using the parameters listed in Table S11 and those in the second row of Table S12 were better than the predictions obtained using other parameters from the literature.

We assessed the convenience of the transport, injection and storage of CO<sub>2</sub> containing SO<sub>2</sub> and CH<sub>4</sub> at the concentrations used in this study, as well as the feasibility of CO<sub>2</sub>/SO<sub>2</sub> co-capture and storage in presence of CH<sub>4</sub>. We conclude that the co-capture mixture, contrary to the emissions mixture, presents favorable properties with respect to pure CO<sub>2</sub> in relation to the required pipeline diameter and pressure and density drops during transport. Only the co-capture mixture at 304.21 K allows a lower minimum operational pressure than that used for pure CO<sub>2</sub>. Furthermore, only the co-capture mixture injected in Sleipner would improve the storage efficiency relative to that of pure CO<sub>2</sub>; however, this mixture decreases the rising velocity in all the studied reservoirs, thus improving their safety. In addition, this mixture favors the permeation flux in the four shallower studied reservoirs.

We conclude that the effect of SO<sub>2</sub> in the co-capture mixture overcomes the negative impact of CH<sub>4</sub> in most of the studied aspects –but the chemical reactivity was not taken into consideration– even though the global conclusions must be derived from the balance of all components involved in the technologies.

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## **SUPPLEMENTARY MATERIAL**

Additional tables and figures regarding the experimental data, EoS modeling and transport, injection and storage parameters are presented.

## **NOMENCLATURE**

$a_i$	Coefficients in polynomials fitted to the speed of sound values.
$A_{ij}$	Binary interaction parameter for viscosity calculations.
$A_{ijk}$	Ternary interaction parameter for viscosity calculations.
$c$	Speed of sound.
CCS	Carbon Capture and Storage.
$d$	Distance traveled by the stream along a pipeline.
$D$	Inner diameter of the pipeline.
$M/M_0$	Normalized storage capacity of a reservoir.

$\dot{M}/\dot{M}_0$	Normalized permeation flux of the plume in a reservoir.
$MRD_X$	Mean relative deviation for property $X$ .
$\overline{MRD_X}$	Global average values of the mean relative deviation for a property $X$ .
$p$	Pressure
$p^\#$	Reference pressure in polynomials fitted to the speed of sound values.
$p_{bubble}$	Bubble pressure.
$p_{dew}$	Dew pressure.
$p_{sat}$	Saturation pressure.
$T$	Temperature.
$u(X)$	Combined uncertainty for property $X$ .
$v/v_0$	Normalized rising velocity of the plume in saline aquifers.
VLE	Vapor-liquid equilibrium.
$x$	Mole fraction.
$\eta$	Viscosity.
$\rho$	Density.

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Thermodynamic properties of CO<sub>2</sub>+SO<sub>2</sub>+CH<sub>4</sub> mixtures  
over wide ranges of temperature and pressure. Evaluation  
of CO<sub>2</sub>/SO<sub>2</sub> co-capture in presence of CH<sub>4</sub> for CCS.

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**SUPPLEMENTARY MATERIAL**

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**Table S1.**  $p\rho T$  experimental data for the CO<sub>2</sub>+SO<sub>2</sub>+CH<sub>4</sub> mixtures. ( $u(\rho)$ : Combined standard uncertainty)

$x_{\text{CO}_2} = 0.9343; x_{\text{SO}_2} = 0.0472; x_{\text{CH}_4} = 0.0185$											
$T = 263.13 \pm 0.03 \text{ K}$			$T = 273.16 \pm 0.02 \text{ K}$			$T = 293.15 \pm 0.02 \text{ K}$			$T = 304.21 \pm 0.04 \text{ K}$		
$p$ (MPa)	$\rho$ (kg.m <sup>-3</sup> )	$u(\rho)$ (kg.m <sup>-3</sup> )	$p$ (MPa)	$\rho$ (kg.m <sup>-3</sup> )	$u(\rho)$ (kg.m <sup>-3</sup> )	$p$ (MPa)	$\rho$ (kg.m <sup>-3</sup> )	$u(\rho)$ (kg.m <sup>-3</sup> )	$p$ (MPa)	$\rho$ (kg.m <sup>-3</sup> )	$u(\rho)$ (kg.m <sup>-3</sup> )
0.100	2.06	0.23	0.100	2.02	0.23	0.100	1.91	0.23	0.100	1.89	0.23
0.115	2.38	0.23	0.124	2.52	0.23	0.143	2.71	0.23	0.130	2.36	0.23
0.129	2.70	0.23	0.148	2.96	0.23	0.186	3.48	0.23	0.160	2.94	0.23
0.144	2.97	0.23	0.172	3.47	0.23	0.229	4.29	0.23	0.190	3.52	0.23
0.159	3.29	0.23	0.196	3.97	0.23	0.272	5.13	0.23	0.220	4.03	0.23
0.173	3.59	0.23	0.220	4.45	0.23	0.315	5.94	0.23	0.250	4.56	0.23
0.188	3.86	0.22	0.244	4.92	0.23	0.358	6.71	0.23	0.280	5.12	0.23
0.203	4.17	0.22	0.268	5.42	0.23	0.401	7.55	0.23	0.310	5.69	0.23
0.218	4.50	0.23	0.292	5.91	0.23	0.444	8.43	0.23	0.340	6.20	0.23
0.232	4.82	0.23	0.316	6.41	0.23	0.487	9.26	0.23	0.370	6.72	0.23
0.247	5.14	0.23	0.340	6.87	0.23	0.531	10.05	0.23	0.400	7.33	0.23
0.262	5.44	0.23	0.364	7.40	0.23	0.574	10.89	0.23	0.430	7.82	0.23
0.276	5.71	0.22	0.388	7.88	0.23	0.617	11.75	0.23	0.460	8.40	0.23
0.291	6.04	0.22	0.412	8.36	0.23	0.660	12.56	0.23	0.490	8.93	0.23
0.306	6.37	0.23	0.436	8.84	0.23	0.703	13.43	0.23	0.520	9.55	0.23
0.320	6.70	0.23	0.460	9.37	0.23	0.746	14.29	0.23	0.550	10.10	0.23
0.335	7.03	0.23	0.484	9.85	0.23	0.789	15.11	0.23	0.580	10.68	0.23
0.350	7.33	0.23	0.508	10.37	0.23	0.832	15.97	0.23	0.610	11.18	0.23
0.365	7.63	0.23	0.532	10.88	0.23	0.875	16.88	0.23	0.640	11.79	0.23
0.379	7.97	0.23	0.556	11.40	0.23	0.918	17.78	0.23	0.670	12.34	0.23
0.394	8.26	0.23	0.580	11.97	0.23	0.961	18.66	0.23	0.700	12.90	0.23
0.409	8.58	0.23	0.604	12.43	0.23	1.004	19.51	0.23	0.729	13.47	0.23
0.423	8.91	0.23	0.628	12.98	0.23	1.047	20.44	0.23	0.759	14.04	0.23
0.438	9.21	0.23	0.652	13.48	0.23	1.090	21.36	0.23	0.789	14.63	0.23
0.453	9.55	0.23	0.676	14.04	0.23	1.133	22.25	0.23	0.819	15.19	0.23
0.467	9.88	0.23	0.700	14.56	0.23	1.176	23.18	0.23	0.849	15.74	0.23
0.482	10.18	0.23	0.724	15.01	0.23	1.219	24.06	0.23	0.879	16.38	0.23
0.497	10.48	0.23	0.748	15.62	0.23	1.262	24.99	0.23	0.909	16.94	0.23
0.512	10.85	0.23	0.772	16.11	0.23	1.305	25.89	0.23	0.939	17.56	0.23
0.526	11.19	0.23	0.796	16.70	0.23	1.348	26.90	0.23	0.969	18.12	0.23
0.541	11.50	0.23	0.820	17.24	0.23	1.392	27.84	0.23	0.999	18.68	0.23
0.556	11.83	0.23	0.844	17.73	0.23	1.435	28.81	0.23	1.029	19.27	0.23
0.570	12.15	0.23	0.868	18.27	0.23	1.478	29.75	0.23	1.059	19.87	0.23
0.585	12.49	0.23	0.892	18.83	0.23	1.521	30.71	0.23	1.089	20.48	0.23
0.600	12.83	0.23	0.916	19.40	0.23	1.564	31.68	0.23	1.119	21.09	0.23

0.614	13.17	0.23	0.940	19.91	0.23	1.607	32.61	0.23	1.149	21.70	0.23
0.629	13.48	0.23	0.964	20.44	0.23	1.650	33.59	0.23	1.179	22.24	0.23
0.644	13.78	0.23	0.988	20.99	0.23	1.693	34.57	0.23	1.209	22.88	0.23
0.658	14.14	0.23	1.012	21.55	0.23	1.736	35.58	0.23	1.239	23.44	0.23
0.673	14.49	0.23	1.036	22.06	0.23	1.779	36.57	0.23	1.269	24.04	0.23
0.688	14.78	0.23	1.060	22.69	0.23	1.822	37.55	0.23	1.299	24.65	0.23
0.703	15.15	0.23	1.084	23.24	0.23	1.865	38.55	0.23	1.329	25.28	0.23
0.717	15.45	0.23	1.108	23.79	0.23	1.908	39.66	0.23	1.359	25.85	0.23
0.732	15.81	0.23	1.132	24.35	0.23	1.951	40.63	0.23	1.389	26.50	0.23
0.747	16.13	0.23	1.156	24.93	0.23	1.994	41.68	0.23	1.419	27.13	0.23
0.761	16.50	0.23	1.180	25.44	0.23	2.037	42.72	0.23	1.449	27.73	0.23
0.776	16.84	0.23	1.204	26.05	0.23	2.080	43.74	0.23	1.479	28.36	0.23
0.791	17.16	0.23	1.228	26.63	0.23	2.123	44.92	0.23	1.509	28.97	0.23
0.805	17.49	0.23	1.252	27.20	0.23	2.166	45.99	0.23	1.539	29.59	0.23
0.820	17.82	0.23	1.276	27.78	0.23	2.209	47.10	0.23	1.569	30.24	0.23
0.835	18.15	0.23	1.301	28.34	0.23	2.253	48.16	0.23	1.599	30.91	0.23
0.850	18.57	0.23	1.325	28.89	0.23	2.296	49.19	0.23	1.629	31.47	0.23
0.864	18.92	0.23	1.349	29.53	0.23	2.339	50.27	0.23	1.659	32.17	0.23
0.879	19.26	0.23	1.373	30.10	0.23	2.382	51.40	0.23	1.689	32.77	0.23
0.894	19.55	0.23	1.397	30.70	0.23	2.425	52.49	0.23	1.719	33.40	0.23
0.908	19.91	0.23	1.421	31.24	0.23	2.468	53.60	0.23	1.749	34.07	0.23
0.923	20.27	0.23	1.445	31.88	0.23	2.511	54.69	0.23	1.779	34.67	0.23
0.938	20.68	0.23	1.469	32.44	0.23	2.554	55.87	0.23	1.809	35.30	0.23
0.952	21.08	0.23	1.493	33.05	0.23	2.597	57.00	0.23	1.839	35.96	0.23
0.967	21.44	0.23	1.517	33.68	0.23	2.640	58.15	0.23	1.869	36.63	0.23
0.982	21.81	0.23	1.541	34.32	0.23	2.683	59.39	0.23	1.898	37.26	0.23
0.997	22.19	0.23	1.565	34.91	0.23	2.726	60.59	0.23	1.928	37.92	0.23
1.011	22.57	0.23	1.589	35.51	0.23	2.769	61.76	0.23	1.958	38.58	0.23
1.026	22.94	0.23	1.613	36.18	0.23	2.812	62.98	0.23	1.988	39.21	0.23
1.041	23.30	0.23	1.637	36.80	0.23	2.855	64.16	0.23	2.018	39.87	0.23
1.055	23.67	0.23	1.661	37.41	0.23	2.898	65.36	0.23	2.048	40.54	0.23
1.070	24.05	0.23	1.685	38.03	0.23	2.941	66.59	0.23	2.078	41.21	0.23
1.085	24.43	0.23	1.709	38.70	0.23	2.984	67.81	0.23	2.108	41.88	0.23
1.099	24.80	0.23	1.733	39.30	0.23	3.027	69.05	0.23	2.138	42.59	0.23
1.114	25.16	0.23	1.757	39.99	0.23	3.070	70.31	0.23	2.168	43.25	0.23
1.129	25.53	0.23	1.781	40.61	0.23	3.114	71.54	0.23	2.198	43.93	0.23
1.143	25.91	0.23	1.805	41.24	0.23	3.157	72.84	0.23	2.228	44.61	0.23
1.158	26.29	0.23	1.829	41.95	0.23	3.200	74.11	0.23	2.258	45.30	0.23
1.173	26.66	0.23	1.853	42.62	0.23	3.243	75.41	0.23	2.288	45.99	0.23
1.188	27.02	0.23	1.877	43.29	0.23	3.286	76.76	0.23	2.318	46.67	0.23
1.202	27.39	0.23	1.901	43.94	0.23	3.329	78.07	0.23	2.348	47.38	0.23
1.217	27.77	0.23	1.925	44.66	0.23	3.372	79.40	0.23	2.378	48.08	0.23
1.232	28.15	0.23	1.949	45.30	0.23	3.415	80.77	0.23	2.408	48.80	0.23
1.246	28.55	0.23	1.973	45.99	0.23	3.458	82.17	0.23	2.438	49.45	0.23
1.261	28.92	0.23	1.997	46.67	0.23	3.501	83.59	0.23	2.468	50.19	0.23



1.276	29.29	0.23	2.021	47.40	0.23	3.544	85.02	0.23	2.498	50.87	0.23
1.290	29.67	0.23	2.045	48.01	0.23	3.587	86.52	0.23	2.528	51.60	0.23
1.305	30.05	0.23	2.069	48.73	0.23	3.630	88.01	0.23	2.558	52.29	0.23
1.320	30.45	0.23	2.093	49.41	0.23	3.673	89.51	0.23	2.588	53.02	0.23
1.335	30.84	0.23	2.117	50.16	0.23	3.716	91.01	0.23	2.618	53.77	0.23
1.349	31.25	0.23	2.141	50.86	0.23	3.759	92.52	0.23	2.648	54.49	0.23
1.364	31.66	0.23	2.165	51.61	0.23	3.802	94.03	0.23	2.678	55.18	0.23
1.379	32.03	0.23	2.189	52.35	0.23	3.845	95.58	0.23	2.708	55.94	0.23
1.393	32.42	0.23	2.213	53.13	0.23	3.888	97.13	0.23	2.738	56.66	0.23
1.408	32.82	0.23	2.237	53.91	0.23	3.931	98.74	0.23	2.768	57.37	0.23
1.423	33.22	0.23	3.814	942.74	0.37	3.975	100.35	0.23	2.798	58.14	0.23
1.437	33.63	0.23	3.832	943.68	0.37	4.018	102.05	0.23	2.828	58.88	0.23
1.452	34.05	0.23	3.850	943.22	0.37	4.061	103.73	0.23	2.858	59.64	0.23
1.467	34.43	0.23	3.868	943.88	0.37	4.104	105.45	0.23	2.888	60.39	0.23
1.482	34.83	0.23	3.886	943.42	0.37	4.147	107.21	0.23	2.918	61.11	0.23
1.496	35.28	0.23	3.904	943.48	0.37	4.190	108.96	0.23	2.948	61.94	0.23
1.511	35.68	0.23	3.922	943.76	0.37	4.233	110.81	0.23	2.978	62.69	0.23
1.526	36.09	0.23	3.940	943.74	0.37	4.276	112.68	0.23	3.008	63.50	0.23
1.540	36.51	0.23	3.958	944.63	0.37	4.319	114.54	0.23	3.038	64.27	0.23
2.984	991.93	0.38	3.976	944.15	0.37	4.362	116.60	0.23	3.068	65.07	0.23
2.995	991.93	0.38	3.994	944.26	0.37	5.743	811.46	0.34	3.097	65.86	0.23
3.005	992.01	0.38	4.012	944.41	0.37	5.758	811.38	0.34	3.127	66.64	0.23
3.014	992.10	0.38	4.030	944.59	0.37	5.774	811.61	0.34	3.157	67.43	0.23
3.026	992.18	0.38	4.048	944.78	0.37	5.790	812.06	0.34	3.187	68.29	0.23
3.054	992.34	0.38	4.066	945.00	0.37	5.806	812.66	0.34	3.217	69.08	0.23
3.075	992.42	0.38	4.084	945.17	0.37	5.822	813.25	0.34	3.247	69.86	0.23
3.090	992.51	0.38	4.102	945.32	0.37	5.838	813.64	0.34	3.277	70.67	0.23
3.101	992.59	0.38	4.120	945.44	0.37	5.854	813.95	0.34	3.307	71.44	0.23
3.114	992.67	0.38	4.138	945.57	0.37	5.870	814.26	0.34	3.337	72.28	0.23
3.126	992.75	0.38	4.156	945.97	0.37	5.886	814.57	0.34	3.367	73.14	0.23
3.146	992.92	0.38	4.174	946.09	0.37	5.901	814.86	0.34	3.397	73.96	0.23
3.166	993.08	0.38	4.192	945.99	0.37	5.917	815.15	0.34	3.427	74.82	0.23
3.186	993.17	0.38	4.210	946.11	0.37	5.933	815.44	0.34	3.457	75.67	0.23
3.210	993.33	0.38	4.228	946.55	0.37	5.949	815.73	0.34	3.487	76.54	0.23
3.230	993.41	0.38	4.246	946.51	0.37	5.965	816.02	0.34	3.517	77.36	0.23
3.245	993.70	0.38	4.264	946.81	0.37	5.981	816.31	0.34	3.547	78.24	0.23
3.264	993.81	0.38	4.282	946.92	0.37	5.997	816.60	0.34	3.577	79.05	0.23
3.282	993.72	0.38	4.300	947.00	0.37	6.013	816.89	0.34	3.607	79.93	0.23
3.301	993.88	0.38	4.318	947.29	0.37	6.028	817.16	0.34	3.637	80.79	0.23
3.320	993.99	0.38	4.336	947.06	0.37	6.044	817.43	0.34	3.667	81.71	0.23
3.338	994.29	0.38	4.354	947.39	0.37	6.060	817.70	0.34	3.697	82.53	0.23
3.357	994.26	0.38	4.372	947.44	0.37	6.076	817.97	0.34	3.727	83.44	0.23
3.375	994.16	0.38	4.390	947.60	0.37	6.092	818.24	0.34	3.757	84.34	0.23
3.394	994.30	0.38	4.408	947.42	0.37	6.108	818.50	0.34	3.787	85.24	0.23
3.413	994.58	0.38	4.426	948.07	0.37	6.124	818.76	0.34	3.817	86.11	0.23

3.431	994.66	0.38	4.444	948.34	0.37	6.140	819.03	0.34	3.847	87.09	0.23
3.450	994.70	0.38	4.462	948.46	0.37	6.155	819.29	0.34	3.877	87.99	0.23
3.469	994.87	0.38	4.480	948.57	0.37	6.171	819.53	0.34	3.907	88.87	0.23
3.487	994.90	0.38	4.498	948.72	0.37	6.187	819.76	0.34	3.937	89.85	0.23
3.506	995.09	0.38	4.516	948.86	0.37	6.203	819.98	0.34	3.967	90.78	0.23
3.525	995.24	0.38	4.534	949.02	0.37	6.219	820.21	0.34	3.997	91.70	0.23
3.543	995.17	0.38	4.552	949.20	0.37	6.235	820.44	0.34	4.027	92.66	0.23
3.562	995.39	0.38	4.570	949.28	0.37	6.251	820.72	0.34	4.057	93.62	0.23
3.580	995.46	0.38	4.588	949.44	0.37	6.267	821.03	0.34	4.087	94.59	0.23
3.599	995.64	0.38	4.606	949.60	0.37	6.282	821.32	0.34	4.117	95.50	0.23
3.618	995.55	0.38	4.624	949.70	0.37	6.298	821.60	0.34	4.147	96.50	0.23
3.636	995.76	0.38	4.642	949.91	0.37	6.314	821.86	0.34	4.177	97.46	0.23
3.655	995.82	0.38	4.660	950.00	0.37	6.330	822.13	0.34	4.207	98.49	0.23
3.674	995.76	0.38	4.678	950.19	0.37	6.346	822.41	0.34	4.237	99.46	0.23
3.692	995.64	0.38	4.696	950.28	0.37	6.362	822.68	0.34	4.267	100.49	0.23
3.711	996.15	0.38	4.714	950.46	0.37	6.378	822.93	0.34	4.296	101.51	0.23
3.730	996.27	0.38	4.732	950.61	0.37	6.394	823.18	0.34	4.326	102.50	0.23
3.748	996.37	0.38	4.750	950.75	0.37	6.409	823.50	0.34	4.356	103.55	0.23
3.767	996.31	0.38	4.768	950.91	0.37	6.425	823.84	0.34	4.386	104.61	0.23
3.785	996.42	0.38	4.786	950.98	0.37	6.441	824.15	0.34	4.416	105.62	0.23
3.804	996.70	0.38	4.804	951.11	0.37	6.457	824.51	0.34	4.446	106.67	0.23
3.823	996.78	0.38	4.822	951.27	0.37	6.473	824.85	0.34	4.476	107.77	0.23
3.841	996.86	0.38	4.840	951.39	0.37	6.489	825.16	0.34	4.506	108.81	0.23
3.860	996.95	0.38	4.858	951.53	0.37	6.505	825.49	0.34	4.536	109.93	0.23
3.879	997.03	0.38	4.876	951.68	0.37	6.521	825.80	0.34	4.566	110.99	0.23
3.897	997.11	0.38	4.894	951.81	0.37	6.536	826.11	0.34	4.596	112.13	0.23
3.916	997.27	0.38	4.912	952.02	0.37	6.552	826.45	0.34	4.626	113.19	0.23
3.935	997.32	0.38	4.930	952.15	0.37	6.568	826.74	0.34	4.656	114.32	0.23
3.953	997.44	0.38	4.948	952.27	0.37	6.584	827.05	0.34	4.686	115.45	0.23
3.972	997.52	0.38	4.966	952.42	0.37	6.600	827.35	0.34	4.716	116.64	0.23
3.990	997.64	0.38	4.984	952.53	0.37	6.616	827.67	0.34	4.746	117.74	0.23
4.009	997.74	0.38	5.002	952.67	0.37	6.632	827.98	0.34	4.776	118.92	0.23
4.028	997.77	0.38	5.020	952.78	0.37	6.648	828.29	0.34	4.806	120.07	0.23
4.046	997.93	0.38	5.038	952.92	0.37	6.663	828.60	0.34	4.836	121.25	0.23
4.065	998.04	0.38	5.056	953.10	0.37	6.679	828.87	0.34	4.866	122.44	0.23
4.084	998.10	0.38	5.074	953.22	0.37	6.695	829.16	0.34	4.896	123.71	0.23
4.102	998.18	0.38	5.092	953.33	0.37	6.711	829.48	0.34	4.926	124.90	0.23
4.121	998.34	0.38	5.110	953.50	0.37	6.727	829.77	0.34	4.956	126.18	0.23
4.140	998.42	0.38	5.128	953.63	0.37	6.743	830.09	0.34	4.986	127.41	0.23
4.158	998.51	0.38	5.146	953.74	0.37	6.759	830.36	0.34	5.016	128.65	0.23
4.177	998.59	0.38	5.164	953.90	0.37	6.775	830.65	0.34	5.046	129.96	0.23
4.196	998.67	0.38	5.182	954.02	0.37	6.790	830.95	0.34	5.076	131.24	0.23
4.214	998.75	0.38	5.200	954.14	0.37	6.806	831.25	0.34	5.106	132.57	0.23
4.233	998.94	0.38	5.218	954.30	0.37	6.822	831.57	0.34	5.136	133.89	0.23
4.251	999.06	0.38	5.236	954.39	0.37	6.838	831.88	0.34	5.166	135.18	0.23

4.270	999.25	0.38	5.254	954.53	0.37	6.854	832.14	0.34	5.196	136.58	0.23
4.289	999.33	0.38	5.272	954.65	0.37	6.870	832.36	0.34	5.226	137.98	0.23
4.307	999.46	0.38	5.290	954.82	0.37	6.886	832.66	0.34	5.256	139.37	0.23
4.326	999.49	0.38	5.308	954.92	0.37	6.902	832.95	0.34	5.286	140.82	0.23
4.345	999.66	0.38	5.326	955.00	0.37	6.917	833.26	0.34	5.316	142.25	0.23
4.363	999.74	0.38	5.344	955.18	0.37	6.933	833.54	0.34	5.346	143.60	0.23
4.382	999.82	0.38	5.362	955.26	0.37	6.949	833.82	0.34	5.376	145.08	0.24
4.401	999.90	0.38	5.380	955.42	0.37	6.965	834.10	0.34	5.406	146.58	0.24
4.419	1000.07	0.38	5.398	955.59	0.37	6.981	834.39	0.34	5.436	148.09	0.24
4.438	1000.15	0.38	5.416	955.68	0.37	6.997	834.68	0.34	5.466	149.59	0.24
4.456	1000.23	0.38	5.434	955.84	0.37	7.013	834.95	0.34	5.495	151.16	0.24
4.475	1000.31	0.38	5.452	955.91	0.37	7.029	835.22	0.34	5.525	152.74	0.24
4.494	1000.42	0.38	5.470	956.06	0.37	7.045	835.50	0.34	5.555	154.21	0.24
4.512	1000.56	0.38	5.488	956.14	0.37	7.060	835.77	0.34	5.585	155.73	0.24
4.531	1000.64	0.38	5.506	956.29	0.37	7.076	836.06	0.34	5.615	157.37	0.24
4.550	1000.77	0.38	5.524	956.43	0.37	7.092	836.37	0.34	5.645	159.04	0.24
4.568	1000.85	0.38	5.542	956.57	0.37	7.108	836.62	0.34	5.675	160.75	0.24
4.587	1000.97	0.38	5.560	956.69	0.37	7.124	836.87	0.34	5.705	162.45	0.24
4.606	1001.05	0.38	5.578	956.78	0.37	7.140	837.15	0.34	5.735	164.20	0.24
4.624	1001.14	0.38	5.596	956.92	0.37	7.156	837.45	0.34	5.765	165.95	0.24
4.643	1001.28	0.38	5.614	957.05	0.37	7.172	837.70	0.34	5.795	167.76	0.24
4.661	1001.34	0.38	5.632	957.18	0.37	7.187	837.94	0.34	5.825	169.60	0.24
4.680	1001.47	0.38	5.650	957.27	0.37	7.203	838.22	0.35	5.855	171.53	0.24
4.699	1001.55	0.38	5.668	957.36	0.37	7.219	838.51	0.35	5.885	173.45	0.24
4.717	1001.64	0.38	5.686	957.50	0.37	7.235	838.75	0.35	5.915	175.41	0.24
4.736	1001.79	0.38	5.704	957.62	0.37	7.251	839.04	0.35	5.945	177.52	0.24
4.755	1001.84	0.38	5.722	957.74	0.37	7.267	839.30	0.35	5.975	179.55	0.24
4.773	1001.97	0.38	5.740	957.86	0.37	7.283	839.53	0.35	6.005	181.52	0.24
4.792	1002.10	0.38	5.758	957.98	0.37	7.299	839.83	0.35	6.035	183.64	0.24
4.811	1002.15	0.38	5.776	958.10	0.37	7.314	840.08	0.35	6.065	185.82	0.24
4.829	1002.20	0.38	5.794	958.22	0.37	7.330	840.31	0.35	7.190	691.38	0.52
4.848	1002.33	0.38	5.812	958.34	0.37	7.346	840.59	0.35	7.206	693.91	0.52
4.866	1002.45	0.38	5.831	958.45	0.37	7.362	840.83	0.35	7.222	695.69	0.51
4.885	1002.54	0.38	5.849	958.57	0.37	7.378	841.07	0.35	7.238	697.24	0.51
4.904	1002.69	0.38	5.867	958.69	0.37	7.394	841.35	0.35	7.254	698.70	0.50
4.922	1002.75	0.38	5.885	958.80	0.37	7.410	841.62	0.35	7.270	700.16	0.49
4.941	1002.88	0.38	5.903	958.92	0.37	7.426	841.89	0.35	7.286	701.60	0.49
4.960	1002.94	0.38	5.921	959.03	0.37	7.441	842.16	0.35	7.302	702.92	0.48
4.978	1003.06	0.38	5.939	959.15	0.37	7.457	842.39	0.35	7.318	704.27	0.47
4.997	1003.11	0.38	5.957	959.27	0.37	7.473	842.62	0.35	7.334	705.59	0.46
5.016	1003.23	0.38	5.975	959.38	0.37	7.489	842.89	0.35	7.350	706.86	0.45
5.034	1003.35	0.38	5.993	959.50	0.37	7.505	843.15	0.35	7.366	708.09	0.44
5.053	1003.44	0.38	6.011	959.61	0.37	7.521	843.41	0.35	7.382	709.27	0.42
5.071	1003.50	0.38	6.029	959.72	0.37	7.537	843.67	0.35	7.398	710.52	0.35
5.090	1003.63	0.38	6.047	959.84	0.37	7.553	843.90	0.35	7.414	711.64	0.34

5.109	1003.76	0.38	6.065	959.95	0.37	7.568	844.10	0.35	7.430	712.81	0.34
5.127	1003.79	0.38	6.083	960.06	0.37	7.584	844.40	0.35	7.447	713.90	0.34
5.146	1003.91	0.38	6.101	960.18	0.37	7.600	844.68	0.35	7.463	714.90	0.33
5.165	1004.03	0.38	6.119	960.27	0.37	7.616	844.92	0.35	7.479	715.96	0.33
5.183	1004.15	0.38	6.137	960.34	0.37	7.632	845.17	0.35	7.495	717.03	0.33
5.202	1004.18	0.38	6.155	960.45	0.37	7.648	845.41	0.35	7.511	718.09	0.33
5.221	1004.30	0.38	6.173	960.56	0.37	7.664	845.65	0.35	7.527	719.07	0.33
5.239	1004.42	0.38	6.191	960.68	0.37	7.680	845.88	0.35	7.543	720.02	0.33
5.258	1004.50	0.38	6.209	960.80	0.37	7.695	846.11	0.35	7.559	720.98	0.33
5.276	1004.58	0.38	6.227	960.91	0.37	7.711	846.34	0.35	7.575	721.85	0.33
5.295	1004.70	0.38	6.245	961.02	0.37	7.727	846.57	0.35	7.591	722.73	0.33
5.314	1004.81	0.38	6.263	961.13	0.37	7.743	846.80	0.35	7.607	723.61	0.33
5.332	1004.92	0.38	6.281	961.23	0.37	7.759	847.02	0.35	7.623	724.42	0.33
5.351	1004.95	0.38	6.299	961.37	0.37	7.775	847.29	0.35	7.639	725.23	0.33
5.370	1005.07	0.38	6.317	961.48	0.37	7.791	847.55	0.35	7.655	726.08	0.33
5.388	1005.17	0.38	6.335	961.64	0.37	7.807	847.77	0.35	7.671	726.85	0.33
5.407	1005.28	0.38	6.353	961.75	0.37	7.822	847.99	0.35	7.687	727.62	0.33
5.426	1005.39	0.38	6.371	961.85	0.37	7.838	848.25	0.35	7.703	728.35	0.33
5.444	1005.50	0.38	6.389	961.96	0.37	7.854	848.49	0.35	7.719	729.08	0.33
5.463	1005.57	0.38	6.407	962.05	0.37	7.870	848.71	0.35	7.735	729.86	0.33
5.481	1005.63	0.38	6.425	962.15	0.37	7.886	848.93	0.35	7.751	730.62	0.33
5.500	1005.74	0.38	6.443	962.33	0.37	7.902	849.18	0.35	7.767	731.31	0.33
5.519	1005.85	0.38	6.461	962.43	0.37	7.918	849.41	0.35	7.783	731.97	0.33
5.537	1005.96	0.38	6.479	962.55	0.37	7.934	849.61	0.35	7.799	732.67	0.33
5.556	1006.07	0.38	6.497	962.66	0.37	7.949	849.83	0.35	7.815	733.37	0.33
5.575	1006.15	0.38	6.515	962.79	0.37	7.965	850.07	0.35	7.831	734.02	0.33
5.593	1006.19	0.38	6.533	962.89	0.37	7.981	850.31	0.35	7.847	734.65	0.33
5.612	1006.30	0.38	6.551	963.04	0.37	7.997	850.54	0.35	7.863	735.29	0.33
5.631	1006.40	0.38	6.569	963.19	0.37	8.013	850.77	0.35	7.879	735.97	0.33
5.649	1006.51	0.38	6.587	963.29	0.37	8.029	850.97	0.35	7.895	736.59	0.33
5.668	1006.61	0.38	6.605	963.38	0.37	8.045	851.17	0.35	7.911	737.17	0.33
5.687	1006.71	0.38	6.623	963.53	0.37	8.061	851.40	0.35	7.928	737.80	0.33
5.705	1006.81	0.38	6.641	963.64	0.37	8.077	851.62	0.35	7.944	738.41	0.33
5.724	1006.91	0.38	6.659	963.77	0.37	8.092	851.86	0.35	7.960	739.01	0.33
5.742	1007.00	0.38	6.677	963.88	0.37	8.108	852.09	0.35	7.976	739.58	0.33
5.761	1007.10	0.38	6.695	964.02	0.37	8.124	852.32	0.35	7.992	740.12	0.33
5.780	1007.20	0.38	6.713	964.13	0.37	8.140	852.54	0.35	8.008	740.68	0.33
5.798	1007.29	0.38	6.731	964.21	0.37	8.156	852.74	0.35	8.024	741.24	0.33
5.817	1007.38	0.38	6.749	964.37	0.37	8.172	852.93	0.35	8.040	741.80	0.33
5.836	1007.46	0.38	6.767	964.45	0.37	8.188	853.14	0.35	8.056	742.36	0.33
5.854	1007.53	0.38	6.785	964.61	0.37	8.204	853.36	0.35	8.072	742.89	0.33
5.873	1007.67	0.38	6.803	964.69	0.37	8.219	853.58	0.35	8.088	743.42	0.33
5.892	1007.77	0.38	6.821	964.84	0.37	8.235	853.81	0.35	8.104	743.95	0.33
5.910	1007.86	0.38	6.839	964.92	0.37	8.251	854.03	0.35	8.120	744.47	0.33
5.929	1007.95	0.38	6.857	965.06	0.37	8.267	854.25	0.35	8.136	744.99	0.33

5.947	1008.04	0.38	6.875	965.20	0.37	8.283	854.46	0.35	8.152	745.50	0.33
5.966	1008.05	0.38	6.893	965.27	0.37	8.299	854.68	0.35	8.168	746.00	0.33
5.985	1008.18	0.38	6.911	965.42	0.37	8.315	854.90	0.35	8.184	746.46	0.33
6.003	1008.28	0.38	6.929	965.49	0.37	8.331	855.11	0.35	8.200	746.92	0.33
6.022	1008.40	0.38	6.947	965.62	0.37	8.346	855.33	0.35	8.216	747.40	0.33
6.041	1008.51	0.38	6.965	965.76	0.37	8.362	855.54	0.35	8.232	747.88	0.33
6.059	1008.60	0.38	6.983	965.89	0.37	8.378	855.75	0.35	8.248	748.36	0.33
6.078	1008.69	0.38	7.001	965.96	0.37	8.394	855.97	0.35	8.264	748.82	0.33
6.097	1008.78	0.38	7.019	966.10	0.37	8.410	856.17	0.35	8.280	749.29	0.33
6.115	1008.86	0.38	7.037	966.24	0.37	8.426	856.38	0.35	8.296	749.73	0.33
6.134	1008.96	0.38	7.055	966.37	0.37	8.442	856.58	0.35	8.312	750.15	0.33
6.152	1009.05	0.38	7.073	966.43	0.37	8.458	856.79	0.35	8.328	750.58	0.33
6.171	1009.13	0.38	7.091	966.56	0.37	8.473	856.99	0.35	8.344	751.04	0.33
6.190	1009.22	0.38	7.109	966.70	0.37	8.489	857.20	0.35	8.360	751.50	0.33
6.208	1009.31	0.38	7.127	966.75	0.37	8.505	857.40	0.35	8.376	751.95	0.33
6.227	1009.39	0.38	7.145	966.88	0.37	8.521	857.59	0.35	8.392	752.36	0.33
6.246	1009.47	0.38	7.163	967.01	0.37	8.537	857.79	0.35	8.408	752.78	0.33
6.264	1009.56	0.38	7.181	967.14	0.37	8.553	857.99	0.35	8.425	753.19	0.33
6.283	1009.64	0.38	7.199	967.27	0.37	8.569	858.22	0.35	8.441	753.62	0.33
6.302	1009.76	0.38	7.217	967.39	0.37	8.585	858.45	0.35	8.457	754.04	0.33
6.320	1009.88	0.38	7.235	967.46	0.37	8.600	858.65	0.35	8.473	754.47	0.33
6.339	1009.96	0.38	7.253	967.62	0.37	8.616	858.84	0.35	8.489	754.88	0.33
6.357	1010.04	0.38	7.271	967.68	0.37	8.632	859.04	0.35	8.505	755.29	0.33
6.376	1010.12	0.38	7.289	967.80	0.37	8.648	859.23	0.35	8.521	755.69	0.33
6.395	1010.20	0.38	7.307	967.92	0.37	8.664	859.42	0.35	8.537	756.09	0.33
6.413	1010.27	0.38	7.325	968.04	0.37	8.680	859.61	0.35	8.553	756.48	0.33
6.432	1010.35	0.38	7.343	968.16	0.37	8.696	859.80	0.35	8.569	756.87	0.33
6.451	1010.45	0.38	7.361	968.28	0.37	8.712	859.99	0.35	8.585	757.25	0.33
6.469	1010.59	0.38	7.379	968.36	0.37	8.727	860.21	0.35	8.601	757.64	0.33
6.488	1010.67	0.38	7.397	968.44	0.37	8.743	860.43	0.35	8.617	758.02	0.33
6.507	1010.76	0.38	7.415	968.57	0.37	8.759	860.63	0.35	8.633	758.41	0.33
6.525	1010.84	0.38	7.433	968.68	0.37	8.775	860.81	0.35	8.649	758.76	0.33
6.544	1010.91	0.38	7.451	968.80	0.37	8.791	860.99	0.35	8.665	759.10	0.33
6.562	1010.98	0.38	7.469	968.92	0.37	8.807	861.17	0.35	8.681	759.45	0.33
6.581	1011.13	0.38	7.487	969.04	0.37	8.823	861.35	0.35	8.697	759.83	0.33
6.600	1011.22	0.38	7.505	969.17	0.37	8.839	861.54	0.35	8.713	760.28	0.33
6.618	1011.29	0.38	7.523	969.26	0.37	8.854	861.74	0.35	8.729	760.72	0.33
6.637	1011.36	0.38	7.541	969.34	0.37	8.870	861.95	0.35	8.745	761.21	0.33
6.656	1011.47	0.38	7.559	969.46	0.37	8.886	862.16	0.35	8.761	761.66	0.33
6.674	1011.59	0.38	7.577	969.58	0.37	8.902	862.37	0.35	8.777	762.12	0.33
6.693	1011.66	0.38	7.595	969.69	0.37	8.918	862.58	0.35	8.793	762.56	0.33
6.712	1011.74	0.38	7.613	969.81	0.37	8.934	862.76	0.35	8.809	763.04	0.33
6.730	1011.81	0.38	7.631	969.93	0.37	8.950	862.94	0.35	8.825	763.50	0.33
6.749	1011.88	0.38	7.649	970.04	0.37	8.966	863.11	0.35	8.841	763.92	0.33
6.767	1012.02	0.38	7.667	970.15	0.37	8.981	863.31	0.35	8.857	764.35	0.33

6.786	1012.12	0.38	7.685	970.27	0.37	8.997	863.51	0.35	8.873	764.81	0.33
6.805	1012.19	0.38	7.703	970.38	0.37	9.013	863.70	0.35	8.889	765.26	0.33
6.823	1012.26	0.38	7.721	970.50	0.37	9.029	863.88	0.35	8.905	765.65	0.33
6.842	1012.33	0.38	7.739	970.61	0.37	9.045	864.04	0.35	8.922	766.06	0.33
6.861	1012.42	0.38	7.757	970.72	0.37	9.061	864.21	0.35	8.938	766.49	0.33
6.879	1012.55	0.38	7.775	970.84	0.37	9.077	864.41	0.35	8.954	766.90	0.33
6.898	1012.62	0.38	7.793	970.96	0.38	9.093	864.60	0.35	8.970	767.31	0.33
6.917	1012.69	0.38	7.811	970.99	0.38	9.109	864.80	0.35	8.986	767.74	0.33
6.935	1012.76	0.38	7.829	971.11	0.38	9.124	864.99	0.35	9.002	768.12	0.33
6.954	1012.86	0.38	7.847	971.28	0.38	9.140	865.19	0.35	9.018	768.56	0.33
6.972	1012.98	0.38	7.865	971.39	0.38	9.156	865.38	0.35	9.034	769.00	0.33
6.991	1013.05	0.38	7.883	971.47	0.38	9.172	865.54	0.35	9.050	769.41	0.33
7.010	1013.12	0.38	7.901	971.61	0.38	9.188	865.71	0.35	9.066	769.81	0.33
7.028	1013.26	0.38	7.919	971.72	0.38	9.204	865.87	0.35	9.082	770.17	0.33
7.047	1013.35	0.38	7.937	971.83	0.38	9.220	866.06	0.35	9.098	770.53	0.33
7.066	1013.42	0.38	7.955	971.93	0.38	9.236	866.25	0.35	9.114	770.93	0.33
7.084	1013.49	0.38	7.973	972.03	0.38	9.251	866.44	0.35	9.130	771.31	0.33
7.103	1013.56	0.38	7.991	972.13	0.38	9.267	866.62	0.35	9.146	771.70	0.33
7.122	1013.64	0.38	8.009	972.23	0.38	9.283	866.80	0.35	9.162	772.09	0.33
7.140	1013.78	0.38	8.027	972.33	0.38	9.299	866.99	0.35	9.178	772.46	0.33
7.159	1013.85	0.38	8.045	972.49	0.38	9.315	867.17	0.35	9.194	772.81	0.33
7.177	1013.93	0.38	8.063	972.61	0.38	9.331	867.35	0.35	9.210	773.20	0.33
7.196	1014.00	0.38	8.081	972.63	0.38	9.347	867.53	0.35	9.226	773.57	0.33
7.215	1014.08	0.38	8.099	972.80	0.38	9.363	867.71	0.35	9.242	773.92	0.33
7.233	1014.19	0.38	8.117	972.90	0.38	9.378	867.89	0.35	9.258	774.29	0.33
7.252	1014.30	0.38	8.135	973.00	0.38	9.394	868.07	0.35	9.274	774.67	0.33
7.271	1014.37	0.38	8.153	973.10	0.38	9.410	868.25	0.35	9.290	775.06	0.33
7.289	1014.44	0.38	8.171	973.20	0.38	9.426	868.42	0.35	9.306	775.45	0.33
7.308	1014.58	0.38	8.189	973.37	0.38	9.442	868.60	0.35	9.322	775.80	0.33
7.327	1014.66	0.38	8.207	973.47	0.38	9.458	868.77	0.35	9.338	776.15	0.33
7.345	1014.74	0.38	8.225	973.56	0.38	9.474	868.95	0.35	9.354	776.49	0.33
7.364	1014.81	0.39	8.243	973.66	0.38	9.490	869.12	0.35	9.370	776.83	0.33
7.383	1014.89	0.39	8.261	973.75	0.38	9.505	869.29	0.35	9.386	777.15	0.33
7.401	1014.97	0.39	8.279	973.85	0.38	9.521	869.46	0.35	9.402	777.50	0.33
7.420	1015.05	0.39	8.297	974.02	0.38	9.537	869.63	0.35	9.419	777.89	0.33
7.438	1015.13	0.39	8.315	974.11	0.38	9.553	869.80	0.35	9.435	778.22	0.33
7.457	1015.25	0.39	8.333	974.19	0.38	9.569	869.97	0.35	9.451	778.55	0.33
7.476	1015.37	0.39	8.351	974.28	0.38	9.585	870.14	0.35	9.467	778.89	0.33
7.494	1015.45	0.39	8.369	974.40	0.38	9.601	870.31	0.35	9.483	779.20	0.33
7.513	1015.53	0.39	8.387	974.53	0.38	9.617	870.48	0.35	9.499	779.53	0.33
7.532	1015.60	0.39	8.405	974.62	0.38	9.632	870.64	0.35	9.515	779.85	0.33
7.550	1015.68	0.39	8.423	974.70	0.38	9.648	870.81	0.35	9.531	780.17	0.33
7.569	1015.75	0.39	8.441	974.84	0.38	9.664	870.98	0.35	9.547	780.49	0.33
7.588	1015.83	0.39	8.459	974.96	0.38	9.680	871.14	0.35	9.563	780.85	0.33
7.606	1015.96	0.39	8.477	975.05	0.38	9.696	871.30	0.35	9.579	781.16	0.33

7.625	1016.05	0.39	8.495	975.13	0.38	9.712	871.46	0.35	9.595	781.45	0.33
7.643	1016.12	0.39	8.513	975.21	0.38	9.728	871.63	0.35	9.611	781.77	0.33
7.662	1016.19	0.39	8.531	975.35	0.38	9.744	871.79	0.35	9.627	782.09	0.33
7.681	1016.28	0.39	8.549	975.45	0.38	9.759	871.94	0.35	9.643	782.43	0.33
7.699	1016.41	0.39	8.567	975.53	0.38	9.775	872.10	0.35	9.659	782.73	0.33
7.718	1016.48	0.39	8.585	975.67	0.38	9.791	872.26	0.35	9.675	783.01	0.33
7.737	1016.54	0.39	8.603	975.77	0.38	9.807	872.42	0.35	9.691	783.32	0.33
7.755	1016.61	0.39	8.621	975.90	0.38	9.823	872.58	0.35	9.707	783.64	0.33
7.774	1016.70	0.39	8.639	976.02	0.38	9.839	872.74	0.35	9.723	783.91	0.33
7.793	1016.82	0.39	8.657	976.10	0.38	9.855	872.92	0.35	9.739	784.19	0.33
7.811	1016.88	0.39	8.675	976.17	0.38	9.871	873.09	0.35	9.755	784.52	0.33
7.830	1016.99	0.39	8.693	976.28	0.38	9.886	873.27	0.35	9.771	784.82	0.33
7.848	1017.09	0.39	8.711	976.41	0.38	9.902	873.44	0.35	9.787	785.09	0.33
7.867	1017.15	0.39	8.729	976.51	0.38	9.918	873.59	0.35	9.803	785.36	0.33
7.886	1017.21	0.39	8.747	976.64	0.38	9.934	873.74	0.35	9.819	785.63	0.33
7.904	1017.33	0.39	8.765	976.72	0.38	9.950	873.89	0.35	9.835	785.92	0.33
7.923	1017.42	0.39	8.783	976.80	0.38	9.966	874.05	0.35	9.851	786.22	0.33
7.942	1017.48	0.39	8.801	976.94	0.38	9.982	874.20	0.35	9.867	786.59	0.33
7.960	1017.54	0.39	8.819	977.02	0.38	9.998	874.35	0.35	9.883	786.92	0.33
7.979	1017.65	0.39	8.837	977.15	0.38	10.013	874.50	0.35	9.900	787.22	0.33
7.998	1017.74	0.39	8.855	977.24	0.38	10.029	874.67	0.35	9.916	787.54	0.33
8.016	1017.81	0.39	8.873	977.35	0.38	10.045	874.83	0.35	9.932	787.87	0.33
8.035	1017.92	0.39	8.891	977.47	0.38	10.061	875.00	0.35	9.948	788.20	0.33
8.053	1018.00	0.39	8.909	977.54	0.38	10.077	875.17	0.35	9.964	788.48	0.33
8.072	1018.08	0.39	8.927	977.61	0.38	10.093	875.31	0.35	9.980	788.85	0.33
8.091	1018.20	0.39	8.945	977.75	0.38	10.109	875.46	0.35	9.996	789.20	0.33
8.109	1018.27	0.39	8.963	977.83	0.38	10.125	875.60	0.35	10.012	789.53	0.33
8.128	1018.33	0.39	8.981	977.94	0.38	10.140	875.75	0.35	10.028	789.82	0.33
8.147	1018.40	0.39	8.999	978.04	0.38	10.156	875.91	0.35	10.044	790.15	0.33
8.165	1018.52	0.39	9.017	978.13	0.38	10.172	876.07	0.35	10.060	790.49	0.33
8.184	1018.59	0.39	9.035	978.25	0.38	10.188	876.24	0.35	10.076	790.83	0.33
8.203	1018.67	0.39	9.053	978.38	0.38	10.204	876.40	0.35	10.092	791.15	0.33
8.221	1018.78	0.39	9.071	978.47	0.38	10.220	876.54	0.35	10.108	791.47	0.33
8.240	1018.84	0.39	9.089	978.56	0.38	10.236	876.68	0.35	10.124	791.72	0.33
8.258	1018.90	0.39	9.107	978.68	0.38	10.252	876.83	0.35	10.140	792.05	0.33
8.277	1018.97	0.39	9.125	978.74	0.38	10.268	876.97	0.35	10.156	792.38	0.34
8.296	1019.08	0.39	9.143	978.86	0.38	10.283	877.13	0.35	10.172	792.69	0.34
8.314	1019.19	0.39	9.161	978.95	0.38	10.299	877.28	0.35	10.188	793.03	0.34
8.333	1019.29	0.39	9.179	979.02	0.38	10.315	877.44	0.35	10.204	793.34	0.34
8.352	1019.34	0.39	9.197	979.14	0.38	10.331	877.60	0.35	10.220	793.66	0.34
8.370	1019.40	0.39	9.215	979.26	0.38	10.347	877.76	0.35	10.236	793.98	0.34
8.389	1019.47	0.39	9.233	979.35	0.38	10.363	877.91	0.35	10.252	794.29	0.34
8.408	1019.59	0.39	9.251	979.42	0.38	10.379	878.07	0.35	10.268	794.61	0.34
8.426	1019.65	0.39	9.269	979.53	0.38	10.395	878.22	0.35	10.284	794.92	0.34
8.445	1019.73	0.39	9.287	979.65	0.38	10.410	878.38	0.35	10.300	795.22	0.34

8.463	1019.85	0.39	9.305	979.76	0.38	10.426	878.53	0.35	10.316	795.51	0.34
8.482	1019.90	0.39	9.323	979.87	0.38	10.442	878.68	0.35	10.332	795.81	0.34
8.501	1019.99	0.39	9.341	979.94	0.38	10.458	878.84	0.35	10.348	796.13	0.34
8.519	1020.10	0.39	9.359	980.02	0.38	10.474	878.99	0.35	10.364	796.42	0.34
8.538	1020.15	0.39	9.377	980.13	0.38	10.490	879.14	0.35	10.380	796.73	0.34
8.557	1020.23	0.39	9.395	980.24	0.38	10.506	879.29	0.35	10.397	797.04	0.34
8.575	1020.34	0.39	9.413	980.35	0.38	10.522	879.44	0.35	10.413	797.31	0.34
8.594	1020.40	0.39	9.431	980.46	0.38	10.537	879.59	0.35	10.429	797.58	0.34
8.613	1020.48	0.39	9.449	980.52	0.38	10.553	879.72	0.35	10.445	797.87	0.34
8.631	1020.59	0.39	9.467	980.60	0.38	10.569	879.85	0.35	10.461	798.18	0.34
8.650	1020.64	0.39	9.485	980.70	0.38	10.585	879.98	0.35	10.477	798.52	0.34
8.668	1020.72	0.39	9.503	980.81	0.38	10.601	880.11	0.35	10.493	798.81	0.34
8.687	1020.82	0.39	9.521	980.91	0.38	10.617	880.25	0.35	10.509	799.10	0.34
8.706	1020.93	0.39	9.539	981.02	0.38	10.633	880.40	0.35	10.525	799.39	0.34
8.724	1021.02	0.39	9.557	981.12	0.38	10.649	880.54	0.35	10.541	799.67	0.34
8.743	1021.07	0.39	9.575	981.21	0.38	10.664	880.68	0.35	10.557	799.98	0.34
8.762	1021.17	0.39	9.593	981.26	0.38	10.680	880.83	0.35	10.573	800.31	0.34
8.780	1021.26	0.39	9.611	981.34	0.38	10.696	880.97	0.35	10.589	800.58	0.34
8.799	1021.31	0.39	9.629	981.44	0.38	10.712	881.11	0.35	10.605	800.85	0.34
8.818	1021.40	0.39	9.647	981.54	0.38	10.728	881.25	0.35	10.621	801.11	0.34
8.836	1021.50	0.39	9.665	981.64	0.38	10.744	881.39	0.35	10.637	801.43	0.34
8.855	1021.55	0.39	9.683	981.74	0.38	10.760	881.54	0.35	10.653	801.70	0.34
8.873	1021.62	0.39	9.701	981.83	0.38	10.776	881.70	0.35	10.669	802.01	0.34
8.892	1021.73	0.39	9.719	981.93	0.38	10.791	881.86	0.35	10.685	802.27	0.34
8.911	1021.78	0.39	9.737	982.03	0.38	10.807	882.02	0.35	10.701	802.52	0.34
8.929	1021.85	0.39	9.755	982.12	0.38	10.823	882.18	0.35	10.717	802.79	0.34
8.948	1021.96	0.39	9.773	982.22	0.38	10.839	882.30	0.35	10.733	803.13	0.34
8.967	1022.06	0.39	9.791	982.31	0.38	10.855	882.42	0.35	10.749	803.38	0.34
8.985	1022.15	0.39	9.809	982.40	0.38	10.871	882.55	0.35	10.765	803.64	0.34
9.004	1022.21	0.39	9.827	982.49	0.38	10.887	882.67	0.35	10.781	803.97	0.34
9.023	1022.29	0.39	9.845	982.59	0.38	10.903	882.79	0.35	10.797	804.22	0.34
9.041	1022.39	0.39	9.863	982.68	0.38	10.918	882.95	0.35	10.813	804.48	0.34
9.060	1022.44	0.39	9.882	982.77	0.38	10.934	883.10	0.35	10.829	804.75	0.34
9.079	1022.51	0.39	9.900	982.86	0.38	10.950	883.25	0.35	10.845	805.07	0.34
9.097	1022.61	0.39	9.918	982.94	0.38	10.966	883.40	0.35	10.861	805.32	0.34
9.116	1022.67	0.39	9.936	983.03	0.38	10.982	883.55	0.35	10.877	805.57	0.34
9.134	1022.73	0.39	9.954	983.12	0.38	10.998	883.68	0.35	10.894	805.85	0.34
9.153	1022.83	0.39	9.972	983.21	0.38	11.014	883.81	0.35	10.910	806.15	0.34
9.172	1022.93	0.39	9.990	983.29	0.38	11.030	883.95	0.35	10.926	806.41	0.34
9.190	1023.03	0.39	10.008	983.38	0.38	11.045	884.08	0.35	10.942	806.70	0.34
9.209	1023.09	0.39	10.026	983.47	0.38	11.061	884.21	0.35	10.958	806.94	0.34
9.228	1023.14	0.39	10.044	983.56	0.38	11.077	884.34	0.35	10.974	807.19	0.34
9.246	1023.25	0.39	10.062	983.64	0.38	11.093	884.47	0.35	10.990	807.49	0.34
9.265	1023.32	0.39	10.080	983.73	0.38	11.109	884.60	0.35	11.006	807.73	0.34
9.284	1023.37	0.39	10.098	983.81	0.38	11.125	884.73	0.35	11.022	807.98	0.34



9.302	1023.46	0.39	10.116	983.90	0.38	11.141	884.86	0.35	11.038	808.27	0.34
9.321	1023.56	0.39	10.134	984.03	0.38	11.157	884.99	0.35	11.054	808.51	0.34
9.339	1023.66	0.39	10.152	984.15	0.38	11.172	885.12	0.35	11.070	808.83	0.34
9.358	1023.73	0.39	10.170	984.19	0.38	11.188	885.25	0.35	11.086	809.06	0.34
9.377	1023.78	0.39	10.188	984.25	0.38	11.204	885.37	0.35	11.102	809.30	0.34
9.395	1023.87	0.39	10.206	984.33	0.38	11.220	885.51	0.35	11.118	809.60	0.34
9.414	1023.97	0.39	10.224	984.43	0.38	11.236	885.65	0.35	11.134	809.82	0.34
9.433	1024.06	0.39	10.242	984.57	0.38	11.252	885.79	0.35	11.150	810.09	0.34
9.451	1024.14	0.39	10.260	984.65	0.38	11.268	885.94	0.35	11.166	810.35	0.34
9.470	1024.19	0.39	10.278	984.70	0.38	11.284	886.08	0.35	11.182	810.61	0.34
9.489	1024.28	0.39	10.296	984.79	0.38	11.300	886.22	0.35	11.198	810.88	0.34
9.507	1024.37	0.39	10.314	984.87	0.38	11.315	886.34	0.35	11.214	811.12	0.34
9.526	1024.42	0.39	10.332	984.95	0.38	11.331	886.47	0.35	11.230	811.41	0.34
9.544	1024.49	0.39	10.350	985.09	0.38	11.347	886.59	0.35	11.246	811.64	0.34
9.563	1024.58	0.39	10.368	985.19	0.38	11.363	886.71	0.35	11.262	811.91	0.34
9.582	1024.68	0.39	10.386	985.28	0.38	11.379	886.84	0.36	11.278	812.13	0.34
9.600	1024.78	0.39	10.404	985.36	0.38	11.395	886.98	0.36	11.294	812.35	0.34
9.619	1024.83	0.39	10.422	985.44	0.38	11.411	887.11	0.36	11.310	812.61	0.34
9.638	1024.90	0.39	10.440	985.56	0.38	11.427	887.25	0.36	11.326	812.91	0.34
9.656	1025.00	0.39	10.458	985.66	0.38	11.442	887.39	0.36	11.342	813.16	0.34
9.675	1025.05	0.39	10.476	985.74	0.38	11.458	887.53	0.36	11.358	813.38	0.34
9.694	1025.11	0.39	10.494	985.83	0.38	11.474	887.65	0.36	11.374	813.65	0.34
9.712	1025.21	0.39	10.512	985.91	0.38	11.490	887.77	0.36	11.391	813.85	0.34
9.731	1025.31	0.39	10.530	986.02	0.38	11.506	887.88	0.36	11.407	814.11	0.34
9.749	1025.40	0.39	10.548	986.10	0.38	11.522	888.00	0.36	11.423	814.39	0.34
9.768	1025.46	0.39	10.566	986.18	0.38	11.538	888.11	0.36	11.439	814.63	0.34
9.787	1025.51	0.39	10.584	986.34	0.38	11.554	888.22	0.36	11.455	814.85	0.34
9.805	1025.61	0.39	10.602	986.43	0.38	11.569	888.32	0.36	11.471	815.12	0.34
9.824	1025.71	0.39	10.620	986.51	0.38	11.585	888.44	0.36	11.487	815.32	0.34
9.843	1025.80	0.39	10.638	986.60	0.38	11.601	888.59	0.36	11.503	815.56	0.34
9.861	1025.86	0.39	10.656	986.68	0.38	11.617	888.75	0.36	11.519	815.82	0.34
9.880	1025.91	0.39	10.674	986.75	0.38	11.633	888.90	0.36	11.535	816.07	0.34
9.899	1026.00	0.39	10.692	986.91	0.38	11.649	889.05	0.36	11.551	816.27	0.34
9.917	1026.09	0.39	10.710	986.97	0.38	11.665	889.20	0.36	11.567	816.54	0.34
9.936	1026.13	0.39	10.728	987.05	0.38	11.681	889.35	0.36	11.583	816.75	0.34
9.954	1026.20	0.39	10.746	987.16	0.38	11.696	889.50	0.36	11.599	816.99	0.34
9.973	1026.29	0.39	10.764	987.24	0.38	11.712	889.66	0.36	11.615	817.26	0.34
9.992	1026.39	0.39	10.782	987.33	0.38	11.728	889.76	0.36	11.631	817.51	0.34
10.010	1026.48	0.39	10.800	987.41	0.38	11.744	889.90	0.36	11.647	817.69	0.34
10.029	1026.53	0.39	10.818	987.54	0.38	11.760	890.05	0.36	11.663	817.94	0.34
10.048	1026.59	0.39	10.836	987.60	0.38	11.776	890.20	0.36	11.679	818.20	0.34
10.066	1026.68	0.39	10.854	987.68	0.38	11.792	890.35	0.36	11.695	818.45	0.34
10.085	1026.78	0.39	10.872	987.81	0.38	11.808	890.51	0.36	11.711	818.69	0.34
10.104	1026.87	0.39	10.890	987.89	0.38	11.823	890.65	0.36	11.727	818.89	0.34
10.122	1026.93	0.39	10.908	987.98	0.38	11.839	890.79	0.36	11.743	819.11	0.34

10.141	1026.98	0.39	10.926	988.06	0.38	11.855	890.89	0.36	11.759	819.35	0.34
10.159	1027.06	0.39	10.944	988.14	0.38	11.871	891.10	0.36	11.775	819.59	0.34
10.178	1027.16	0.39	10.962	988.25	0.38	11.887	891.17	0.36	11.791	819.84	0.34
10.197	1027.25	0.39	10.980	988.32	0.38	11.903	891.30	0.36	11.807	820.07	0.34
10.215	1027.33	0.39	10.998	988.40	0.38	11.919	891.45	0.36	11.823	820.31	0.34
10.234	1027.37	0.39	11.016	988.55	0.38	11.935	891.60	0.36	11.839	820.54	0.34
10.253	1027.44	0.39	11.034	988.63	0.38	11.950	891.75	0.36	11.855	820.73	0.34
10.271	1027.53	0.39	11.052	988.70	0.38	11.966	891.89	0.36	11.872	820.94	0.34
10.290	1027.63	0.39	11.070	988.79	0.38	11.982	892.04	0.36	11.888	821.18	0.34
10.309	1027.72	0.39	11.088	988.91	0.38	11.998	892.19	0.36	11.904	821.42	0.34
10.327	1027.76	0.39	11.106	988.97	0.38	12.014	892.34	0.36	11.920	821.65	0.34
10.346	1027.82	0.39	11.124	989.11	0.38	12.030	892.49	0.36	11.936	821.88	0.34
10.364	1027.91	0.39	11.142	989.17	0.38	12.046	892.64	0.36	11.952	822.11	0.34
10.383	1028.01	0.39	11.160	989.28	0.38	12.062	892.78	0.36	11.968	822.34	0.34
10.402	1028.10	0.39	11.178	989.37	0.38	12.077	892.92	0.36	11.984	822.57	0.34
10.420	1028.16	0.39	11.196	989.44	0.38	12.093	893.06	0.36	12.000	822.80	0.34
10.439	1028.20	0.39	11.214	989.53	0.38	12.109	893.20	0.36	12.016	823.03	0.34
10.458	1028.29	0.39	11.232	989.64	0.38	12.125	893.34	0.36	12.032	823.26	0.34
10.476	1028.38	0.39	11.250	989.69	0.38	12.141	893.48	0.36	12.048	823.48	0.34
10.495	1028.47	0.39	11.268	989.84	0.38	12.157	893.61	0.36	12.064	823.70	0.34
10.514	1028.55	0.39	11.286	989.90	0.38	12.173	893.76	0.36	12.080	823.91	0.34
10.532	1028.59	0.39	11.304	989.96	0.38	12.189	893.90	0.36	12.096	824.13	0.34
10.551	1028.66	0.39	11.322	990.10	0.38	12.204	894.04	0.36	12.112	824.35	0.34
10.569	1028.75	0.39	11.340	990.18	0.38	12.220	894.19	0.36	12.128	824.57	0.34
10.588	1028.84	0.39	11.358	990.26	0.38	12.236	894.33	0.36	12.144	824.80	0.34
10.607	1028.93	0.39	11.376	990.35	0.38	12.252	894.47	0.36	12.160	825.03	0.34
10.625	1028.98	0.39	11.394	990.48	0.38	12.268	894.61	0.36	12.176	825.24	0.34
10.644	1029.03	0.39	11.412	990.54	0.38	12.284	894.68	0.36	12.192	825.46	0.34
10.663	1029.12	0.39	11.430	990.67	0.38	12.300	894.86	0.36	12.208	825.67	0.34
10.681	1029.21	0.39	11.448	990.75	0.38	12.316	895.02	0.36	12.224	825.89	0.34
10.700	1029.30	0.39	11.466	990.84	0.38	12.331	895.16	0.36	12.240	826.10	0.34
10.719	1029.37	0.39	11.484	990.90	0.38	12.347	895.30	0.36	12.256	826.31	0.34
10.737	1029.42	0.39	11.502	991.00	0.38	12.363	895.44	0.36	12.272	826.53	0.34
10.756	1029.49	0.39	11.520	991.07	0.38	12.379	895.57	0.36	12.288	826.74	0.34
10.775	1029.58	0.39	11.538	991.16	0.38	12.395	895.70	0.36	12.304	826.95	0.34
10.793	1029.67	0.39	11.556	991.25	0.38	12.411	895.84	0.36	12.320	827.16	0.34
10.812	1029.77	0.39	11.574	991.38	0.38	12.427	895.97	0.36	12.336	827.37	0.34
10.830	1029.81	0.39	11.592	991.42	0.38	12.443	896.10	0.36	12.352	827.58	0.34
10.849	1029.86	0.39	11.610	991.55	0.38	12.459	896.23	0.36	12.369	827.79	0.34
10.868	1029.95	0.39	11.628	991.65	0.38	12.474	896.36	0.36	12.385	828.00	0.34
10.886	1030.03	0.39	11.646	991.72	0.38	12.490	896.48	0.36	12.401	828.20	0.34
10.905	1030.07	0.39	11.664	991.82	0.38	12.506	896.63	0.36	12.417	828.41	0.34
10.924	1030.14	0.39	11.682	991.90	0.38	12.522	896.82	0.36	12.433	828.61	0.34
10.942	1030.23	0.39	11.700	992.02	0.38	12.538	896.94	0.36	12.449	828.81	0.34
10.961	1030.32	0.39	11.718	992.06	0.38	12.554	897.06	0.36	12.465	829.02	0.34

10.980	1030.40	0.39	11.736	992.18	0.38	12.570	897.19	0.36	12.481	829.27	0.34
10.998	1030.46	0.39	11.754	992.30	0.38	12.586	897.32	0.36	12.497	829.49	0.34
11.017	1030.50	0.39	11.772	992.34	0.38	12.601	897.44	0.36	12.513	829.68	0.34
11.035	1030.58	0.39	11.790	992.45	0.38	12.617	897.56	0.36	12.529	829.88	0.34
11.054	1030.67	0.39	11.808	992.55	0.38	12.633	897.69	0.36	12.545	830.07	0.34
11.073	1030.75	0.39	11.826	992.60	0.38	12.649	897.83	0.36	12.561	830.27	0.34
11.091	1030.84	0.39	11.844	992.72	0.38	12.665	898.01	0.36	12.577	830.46	0.34
11.110	1030.93	0.39	11.862	992.79	0.38	12.681	898.15	0.36	12.593	830.66	0.34
11.129	1031.00	0.39	11.880	992.87	0.38	12.697	898.27	0.36	12.609	830.89	0.34
11.147	1031.05	0.39	11.898	992.99	0.38	12.713	898.39	0.36	12.625	831.12	0.34
11.166	1031.10	0.39	11.916	993.11	0.38	12.728	898.52	0.36	12.641	831.31	0.34
11.185	1031.18	0.39	11.934	993.14	0.38	12.744	898.64	0.36	12.657	831.49	0.34
11.203	1031.26	0.39	11.952	993.25	0.38	12.760	898.76	0.36	12.673	831.68	0.34
11.222	1031.35	0.39	11.970	993.37	0.38	12.776	898.91	0.36	12.689	831.91	0.34
11.240	1031.43	0.39	11.988	993.40	0.38	12.792	899.09	0.36	12.705	832.14	0.34
11.259	1031.51	0.39	12.006	993.52	0.38	12.808	899.22	0.36	12.721	832.33	0.34
11.278	1031.58	0.39	12.024	993.63	0.38	12.824	899.34	0.36	12.737	832.51	0.34
11.296	1031.62	0.39	12.042	993.69	0.38	12.840	899.47	0.36	12.753	832.70	0.34
11.315	1031.68	0.39	12.060	993.77	0.38	12.855	899.59	0.36	12.769	832.90	0.34
11.334	1031.76	0.39	12.078	993.88	0.38	12.871	899.71	0.36	12.785	833.12	0.34
11.352	1031.84	0.39	12.096	993.99	0.38	12.887	899.83	0.36	12.801	833.32	0.34
11.371	1031.92	0.39	12.114	994.02	0.38	12.903	899.98	0.36	12.817	833.50	0.34
11.390	1032.00	0.39	12.132	994.12	0.38	12.919	900.16	0.36	12.833	833.72	0.34
11.408	1032.08	0.39	12.150	994.22	0.38	12.935	900.28	0.36	12.849	833.94	0.34
11.427	1032.15	0.39	12.168	994.33	0.38	12.951	900.40	0.36	12.866	834.12	0.34
11.445	1032.19	0.39	12.186	994.43	0.38	12.967	900.52	0.36	12.882	834.30	0.34
11.464	1032.24	0.39	12.204	994.46	0.38	12.982	900.64	0.36	12.898	834.48	0.34
11.483	1032.32	0.39	12.222	994.56	0.38	12.998	900.76	0.36	12.914	834.66	0.34
11.501	1032.40	0.39	12.240	994.66	0.38	13.014	900.91	0.36	12.930	834.88	0.34
11.520	1032.48	0.39	12.258	994.77	0.38	13.030	901.08	0.36	12.946	835.08	0.34
11.539	1032.56	0.39	12.276	994.87	0.38	13.046	901.19	0.36	12.962	835.25	0.34
11.557	1032.65	0.39	12.294	994.92	0.38	13.062	901.31	0.36	12.978	835.46	0.34
11.576	1032.72	0.39	12.312	995.00	0.38	13.078	901.43	0.36	12.994	835.67	0.34
11.595	1032.76	0.39	12.330	995.10	0.38	13.094	901.55	0.36	13.010	835.86	0.34
11.613	1032.80	0.39	12.348	995.20	0.38	13.109	901.72	0.36	13.026	836.03	0.34
11.632	1032.88	0.39	12.366	995.24	0.38	13.125	901.86	0.36	13.042	836.24	0.34
11.650	1032.96	0.39	12.384	995.33	0.38	13.141	901.98	0.36	13.058	836.46	0.34
11.669	1033.04	0.39	12.402	995.43	0.38	13.157	902.10	0.36	13.074	836.62	0.34
11.688	1033.12	0.39	12.420	995.54	0.38	13.173	902.21	0.36	13.090	836.79	0.34
11.706	1033.20	0.39	12.438	995.65	0.38	13.189	902.32	0.36	13.106	837.00	0.34
11.725	1033.28	0.39	12.456	995.67	0.38	13.205	902.43	0.36	13.122	837.20	0.34
11.744	1033.32	0.39	12.474	995.77	0.38	13.221	902.59	0.36	13.138	837.37	0.34
11.762	1033.36	0.39	12.492	995.88	0.38	13.236	902.73	0.36	13.154	837.55	0.34
11.781	1033.43	0.39	12.510	995.98	0.38	13.252	902.84	0.36	13.170	837.76	0.34
11.800	1033.51	0.39	12.528	996.07	0.38	13.268	903.00	0.36	13.186	837.96	0.34

11.818	1033.59	0.39	12.546	996.17	0.38	13.284	903.14	0.36	13.202	838.12	0.34
11.837	1033.67	0.39	12.564	996.27	0.38	13.300	903.25	0.36	13.218	838.29	0.34
11.855	1033.75	0.39	12.582	996.36	0.38	13.316	903.36	0.36	13.234	838.49	0.34
11.874	1033.83	0.39	12.600	996.39	0.38	13.332	903.48	0.36	13.250	838.69	0.34
11.893	1033.90	0.39	12.618	996.46	0.38	13.348	903.65	0.36	13.266	838.89	0.34
11.911	1033.98	0.39	12.636	996.63	0.38	13.363	903.76	0.36	13.282	839.09	0.34
11.930	1034.04	0.39	12.654	996.64	0.38	13.379	903.88	0.36	13.298	839.24	0.34
11.949	1034.08	0.39	12.672	996.74	0.38	13.395	904.04	0.36	13.314	839.40	0.34
11.967	1034.12	0.39	12.690	996.83	0.38	13.411	904.16	0.36	13.330	839.60	0.34
11.986	1034.20	0.39	12.708	996.92	0.38	13.427	904.26	0.36	13.347	839.80	0.34
12.005	1034.28	0.39	12.726	997.01	0.38	13.443	904.37	0.36	13.363	839.96	0.34
12.023	1034.35	0.39	12.744	997.10	0.38	13.459	904.50	0.36	13.379	840.11	0.34
12.042	1034.43	0.39	12.762	997.19	0.38	13.475	904.65	0.36	13.395	840.30	0.34
12.060	1034.50	0.39	12.780	997.28	0.38	13.491	904.76	0.36	13.411	840.50	0.34
12.079	1034.58	0.39	12.798	997.37	0.38	13.506	904.89	0.36	13.427	840.69	0.34
12.098	1034.66	0.39	12.816	997.45	0.38	13.522	905.05	0.36	13.443	840.88	0.34
12.116	1034.73	0.39	12.834	997.54	0.38	13.538	905.16	0.36	13.459	841.04	0.34
12.135	1034.78	0.39	12.852	997.63	0.38	13.554	905.26	0.36	13.475	841.19	0.34
12.154	1034.82	0.39	12.870	997.71	0.38	13.570	905.37	0.36	13.491	841.35	0.34
12.172	1034.88	0.39	12.888	997.79	0.38	13.586	905.51	0.36	13.507	841.54	0.34
12.191	1034.95	0.39	12.906	997.88	0.38	13.602	905.65	0.36	13.523	841.72	0.34
12.210	1035.02	0.39	12.924	997.96	0.38	13.618	905.76	0.36	13.539	841.91	0.34
12.228	1035.10	0.39	12.942	998.04	0.38	13.633	905.90	0.36	13.555	842.09	0.35
12.247	1035.17	0.39	12.960	998.12	0.38	13.649	906.05	0.36	13.571	842.28	0.35
12.265	1035.24	0.39	12.978	998.20	0.38	13.665	906.15	0.36	13.587	842.46	0.35
12.284	1035.32	0.39	12.996	998.30	0.38	13.681	906.25	0.36	13.603	842.61	0.35
12.303	1035.39	0.39	13.014	998.44	0.38	13.697	906.35	0.36	13.619	842.75	0.35
12.321	1035.46	0.39	13.032	998.52	0.38	13.713	906.50	0.36	13.635	842.91	0.35
12.340	1035.53	0.39	13.050	998.60	0.38	13.729	906.66	0.36	13.651	843.08	0.35
12.359	1035.61	0.39	13.068	998.67	0.38	13.745	906.81	0.36	13.667	843.26	0.35
12.377	1035.68	0.39	13.086	998.75	0.38	13.760	906.92	0.36	13.683	843.43	0.35
12.396	1035.75	0.39	13.104	998.82	0.38	13.776	907.02	0.36	13.699	843.60	0.35
12.415	1035.82	0.39	13.122	998.90	0.38	13.792	907.13	0.36	13.715	843.78	0.35
12.433	1035.85	0.39	13.140	999.02	0.38	13.808	907.25	0.36	13.731	843.95	0.35
12.452	1035.89	0.39	13.158	999.12	0.38	13.824	907.40	0.36	13.747	844.13	0.35
12.471	1035.96	0.39	13.176	999.20	0.38	13.840	907.51	0.36	13.763	844.30	0.35
12.489	1036.07	0.39	13.194	999.27	0.38	13.856	907.62	0.36	13.779	844.47	0.35
12.508	1036.16	0.39	13.212	999.34	0.38	13.872	907.77	0.36	13.795	844.63	0.35
12.526	1036.19	0.39	13.230	999.41	0.38	13.887	907.89	0.36	13.811	844.80	0.35
12.545	1036.23	0.39	13.248	999.48	0.38	13.903	907.98	0.36	13.827	844.97	0.35
12.564	1036.29	0.39	13.266	999.62	0.38	13.919	908.12	0.36	13.844	845.14	0.35
12.582	1036.34	0.39	13.284	999.70	0.38	13.935	908.26	0.36	13.860	845.30	0.35
12.601	1036.41	0.39	13.302	999.77	0.38	13.951	908.35	0.36	13.876	845.47	0.35
12.620	1036.54	0.39	13.320	999.84	0.38	13.967	908.47	0.36	13.892	845.63	0.35
12.638	1036.61	0.39	13.338	999.91	0.38	13.983	908.61	0.36	13.908	845.79	0.35

12.657	1036.64	0.39	13.356	999.98	0.38	13.999	908.72	0.36	13.924	845.96	0.35
12.676	1036.72	0.39	13.374	1000.12	0.38	14.014	908.81	0.36	13.940	846.12	0.35
12.694	1036.77	0.39	13.392	1000.19	0.38	14.030	908.95	0.36	13.956	846.28	0.35
12.713	1036.82	0.39	13.410	1000.26	0.38	14.046	909.09	0.36	13.972	846.44	0.35
12.731	1036.89	0.39	13.428	1000.35	0.38	14.062	909.23	0.36	13.988	846.60	0.35
12.750	1036.97	0.39	13.446	1000.47	0.38	14.078	909.34	0.36	14.004	846.76	0.35
12.769	1037.05	0.39	13.464	1000.54	0.38	14.094	909.43	0.36	14.020	846.91	0.35
12.787	1037.13	0.39	13.482	1000.60	0.38	14.110	909.55	0.36	14.036	847.07	0.35
12.806	1037.21	0.39	13.500	1000.66	0.38	14.126	909.68	0.36	14.052	847.23	0.35
12.825	1037.30	0.39	13.518	1000.74	0.38	14.141	909.81	0.36	14.068	847.38	0.35
12.843	1037.34	0.39	13.536	1000.87	0.38	14.157	909.94	0.36	14.084	847.53	0.35
12.862	1037.41	0.39	13.554	1000.93	0.38	14.173	910.03	0.36	14.100	847.68	0.35
12.881	1037.48	0.39	13.572	1001.00	0.38	14.189	910.12	0.36	14.116	847.85	0.35
12.899	1037.55	0.39	13.590	1001.08	0.38	14.205	910.25	0.36	14.132	848.03	0.35
12.918	1037.62	0.39	13.608	1001.21	0.38	14.221	910.39	0.36	14.148	848.20	0.35
12.936	1037.70	0.39	13.626	1001.27	0.38	14.237	910.52	0.36	14.164	848.32	0.35
12.955	1037.79	0.39	13.644	1001.33	0.38	14.253	910.65	0.36	14.180	848.44	0.35
12.974	1037.82	0.39	13.662	1001.39	0.38	14.268	910.78	0.36	14.196	848.59	0.35
12.992	1037.89	0.39	13.680	1001.47	0.38	14.284	910.89	0.36	14.212	848.79	0.35
13.011	1037.96	0.39	13.698	1001.58	0.38	14.300	910.98	0.36	14.228	848.99	0.35
13.030	1038.03	0.39	13.716	1001.66	0.38	14.316	911.09	0.36	14.244	849.12	0.35
13.048	1038.11	0.39	13.734	1001.74	0.38	14.332	911.22	0.36	14.260	849.29	0.35
13.067	1038.20	0.39	13.752	1001.86	0.38	14.348	911.35	0.36	14.276	849.47	0.35
13.086	1038.28	0.39	13.770	1001.91	0.38	14.364	911.48	0.36	14.292	849.62	0.35
13.104	1038.36	0.39	13.788	1001.97	0.38	14.380	911.60	0.36	14.308	849.83	0.35
13.123	1038.42	0.39	13.806	1002.04	0.38	14.395	911.73	0.36	14.324	849.96	0.35
13.141	1038.47	0.39	13.824	1002.15	0.38	14.411	911.82	0.36	14.341	850.14	0.35
13.160	1038.53	0.39	13.842	1002.22	0.38	14.427	911.90	0.36	14.357	850.30	0.35
13.179	1038.60	0.39	13.860	1002.29	0.38	14.443	912.03	0.36	14.373	850.45	0.35
13.197	1038.69	0.39	13.878	1002.40	0.38	14.459	912.15	0.36	14.389	850.64	0.35
13.216	1038.77	0.39	13.896	1002.46	0.38	14.475	912.28	0.36	14.405	850.77	0.35
13.235	1038.84	0.39	13.915	1002.54	0.38	14.491	912.40	0.36	14.421	850.94	0.35
13.253	1038.88	0.39	13.933	1002.65	0.38	14.507	912.52	0.36	14.437	851.13	0.35
13.272	1038.93	0.39	13.951	1002.71	0.38	14.522	912.65	0.36	14.453	851.31	0.35
13.291	1039.06	0.39	13.969	1002.78	0.38	14.538	912.77	0.36	14.469	851.43	0.35
13.309	1039.11	0.39	13.987	1002.89	0.38	14.554	912.90	0.36	14.485	851.61	0.35
13.328	1039.18	0.39	14.005	1002.95	0.38	14.570	912.97	0.36	14.501	851.77	0.35
13.346	1039.26	0.39	14.023	1003.02	0.38	14.586	913.05	0.36	14.517	851.91	0.35
13.365	1039.34	0.39	14.041	1003.12	0.38	14.602	913.18	0.36	14.533	852.10	0.35
13.384	1039.40	0.39	14.059	1003.19	0.38	14.618	913.30	0.36	14.549	852.23	0.35
13.402	1039.45	0.39	14.077	1003.24	0.38	14.634	913.42	0.36	14.565	852.39	0.35
13.421	1039.50	0.39	14.095	1003.35	0.38	14.650	913.54	0.36	14.581	852.57	0.35
13.440	1039.59	0.39	14.113	1003.42	0.38	14.665	913.66	0.36	14.597	852.75	0.35
13.458	1039.66	0.39	14.131	1003.47	0.38	14.681	913.78	0.36	14.613	852.87	0.35
13.477	1039.75	0.39	14.149	1003.56	0.38	14.697	913.90	0.36	14.629	853.02	0.35

13.496	1039.83	0.39	14.167	1003.66	0.38	14.713	914.02	0.36	14.645	853.20	0.35
13.514	1039.88	0.39	14.185	1003.75	0.38	14.729	914.13	0.36	14.661	853.37	0.35
13.533	1039.93	0.39	14.203	1003.83	0.38	14.745	914.25	0.36	14.677	853.54	0.35
13.551	1040.00	0.39	14.221	1003.87	0.38	14.761	914.36	0.36	14.693	853.69	0.35
13.570	1040.11	0.39	14.239	1003.95	0.38	14.777	914.48	0.36	14.709	853.81	0.35
13.589	1040.16	0.39	14.257	1004.04	0.38	14.792	914.59	0.36	14.725	853.98	0.35
13.607	1040.24	0.39	14.275	1004.14	0.38	14.808	914.70	0.36	14.741	854.15	0.35
13.626	1040.31	0.39	14.293	1004.22	0.38	14.824	914.82	0.36	14.757	854.33	0.35
13.645	1040.35	0.39	14.311	1004.26	0.38	14.840	914.93	0.36	14.773	854.50	0.35
13.663	1040.40	0.39	14.329	1004.32	0.38	14.856	915.04	0.36	14.789	854.63	0.35
13.682	1040.52	0.39	14.347	1004.41	0.38	14.872	915.16	0.36	14.805	854.77	0.35
13.701	1040.57	0.39	14.365	1004.49	0.38	14.888	915.27	0.36	14.821	854.94	0.35
13.719	1040.65	0.39	14.383	1004.58	0.38	14.904	915.38	0.36	14.838	855.06	0.35
13.738	1040.72	0.39	14.401	1004.67	0.38	14.919	915.49	0.36	14.854	855.20	0.35
13.756	1040.75	0.39	14.419	1004.76	0.38	14.935	915.60	0.36	14.870	855.37	0.35
13.775	1040.87	0.39	14.437	1004.81	0.38	14.951	915.71	0.36	14.886	855.54	0.35
13.794	1040.90	0.39	14.455	1004.86	0.38	14.967	915.82	0.36	14.902	855.68	0.35
13.812	1041.01	0.39	14.473	1004.94	0.38	14.983	915.93	0.36	14.918	855.81	0.35
13.831	1041.06	0.39	14.491	1005.02	0.38	14.999	916.04	0.36	14.934	855.98	0.35
13.850	1041.14	0.39	14.509	1005.10	0.38	15.015	916.15	0.36	14.950	856.14	0.35
13.868	1041.16	0.39	14.527	1005.18	0.38	15.031	916.25	0.36	14.966	856.31	0.35
13.887	1041.26	0.39	14.545	1005.26	0.38	15.046	916.36	0.36	14.982	856.48	0.35
13.906	1041.30	0.39	14.563	1005.34	0.38	15.062	916.46	0.36	14.998	856.60	0.35
13.924	1041.39	0.39	14.581	1005.42	0.38	15.078	916.57	0.36	15.014	856.73	0.35
13.943	1041.47	0.39	14.599	1005.50	0.38	15.094	916.67	0.36	15.030	856.89	0.35
13.961	1041.51	0.39	14.617	1005.58	0.38	15.110	916.78	0.36	15.046	857.05	0.35
13.980	1041.62	0.39	14.635	1005.66	0.38	15.126	916.89	0.36	15.062	857.19	0.35
13.999	1041.64	0.39	14.653	1005.73	0.38	15.142	917.01	0.36	15.078	857.31	0.35
14.017	1041.75	0.39	14.671	1005.81	0.38	15.158	917.15	0.36	15.094	857.48	0.35
14.036	1041.80	0.39	14.689	1005.89	0.38	15.173	917.28	0.36	15.110	857.67	0.35
14.055	1041.87	0.39	14.707	1005.97	0.38	15.189	917.39	0.36	15.126	857.82	0.35
14.073	1041.98	0.39	14.725	1006.04	0.38	15.205	917.49	0.36	15.142	857.95	0.35
14.092	1042.04	0.39	14.743	1006.12	0.38	15.221	917.59	0.36	15.158	858.15	0.35
14.111	1042.11	0.39	14.761	1006.18	0.38	15.237	917.69	0.36	15.174	858.28	0.35
14.129	1042.14	0.39	14.779	1006.22	0.38	15.253	917.80	0.36	15.190	858.44	0.35
14.148	1042.25	0.39	14.797	1006.26	0.38	15.269	917.90	0.36	15.206	858.62	0.35
14.167	1042.29	0.39	14.815	1006.33	0.38	15.285	918.00	0.36	15.222	858.72	0.35
14.185	1042.37	0.39	14.833	1006.40	0.38	15.300	918.12	0.36	15.238	858.90	0.35
14.204	1042.40	0.39	14.851	1006.48	0.38	15.316	918.25	0.36	15.254	859.07	0.35
14.222	1042.51	0.39	14.869	1006.55	0.38	15.332	918.37	0.36	15.270	859.24	0.35
14.241	1042.53	0.39	14.887	1006.62	0.38	15.348	918.47	0.36	15.286	859.38	0.35
14.260	1042.63	0.39	14.905	1006.69	0.38	15.364	918.57	0.36	15.302	859.50	0.35
14.278	1042.73	0.39	14.923	1006.78	0.38	15.380	918.67	0.36	15.319	859.67	0.35
14.297	1042.78	0.39	14.941	1006.88	0.38	15.396	918.76	0.36	15.335	859.80	0.35
14.316	1042.85	0.39	14.959	1006.98	0.38	15.412	918.86	0.36	15.351	859.94	0.35

14.334	1042.94	0.39	14.977	1007.05	0.38	15.427	918.96	0.36	15.367	860.11	0.35
14.353	1042.96	0.39	14.995	1007.12	0.38	15.443	919.06	0.36	15.383	860.28	0.35
14.372	1043.06	0.39	15.013	1007.19	0.38	15.459	919.17	0.36	15.399	860.44	0.35
14.390	1043.11	0.39	15.031	1007.26	0.38	15.475	919.30	0.36	15.415	860.61	0.35
14.409	1043.16	0.39	15.049	1007.32	0.38	15.491	919.43	0.36	15.431	860.77	0.35
14.427	1043.25	0.39	15.067	1007.36	0.38	15.507	919.52	0.36	15.447	860.87	0.35
14.446	1043.34	0.39	15.085	1007.44	0.38	15.523	919.62	0.36	15.463	861.01	0.35
14.465	1043.35	0.39	15.103	1007.53	0.38	15.539	919.71	0.36	15.479	861.18	0.35
14.483	1043.43	0.39	15.121	1007.60	0.38	15.554	919.80	0.36	15.495	861.34	0.35
14.502	1043.53	0.39	15.139	1007.69	0.38	15.570	919.89	0.36	15.511	861.51	0.35
14.521	1043.60	0.39	15.157	1007.76	0.38	15.586	920.02	0.36	15.527	861.67	0.35
14.539	1043.63	0.39	15.175	1007.84	0.38	15.602	920.14	0.36	15.543	861.77	0.35
14.558	1043.72	0.39	15.193	1007.92	0.38	15.618	920.26	0.36	15.559	861.92	0.35
14.577	1043.81	0.39	15.211	1008.00	0.38	15.634	920.35	0.36	15.575	862.09	0.35
14.595	1043.84	0.39	15.229	1008.08	0.38	15.650	920.44	0.36	15.591	862.25	0.35
14.614	1043.91	0.39	15.247	1008.12	0.38	15.666	920.55	0.36	15.607	862.42	0.35
14.632	1044.00	0.39	15.265	1008.23	0.38	15.682	920.67	0.36	15.623	862.58	0.35
14.651	1044.09	0.39	15.283	1008.31	0.38	15.697	920.79	0.36	15.639	862.67	0.35
14.670	1044.09	0.39	15.301	1008.38	0.38	15.713	920.89	0.36	15.655	862.80	0.35
14.688	1044.19	0.39	15.319	1008.45	0.38	15.729	920.98	0.36	15.671	862.95	0.35
14.707	1044.27	0.39	15.337	1008.53	0.38	15.745	921.07	0.36	15.687	863.10	0.35
14.726	1044.33	0.39	15.355	1008.61	0.38	15.761	921.16	0.36	15.703	863.25	0.35
14.744	1044.37	0.39	15.373	1008.69	0.38	15.777	921.25	0.36	15.719	863.40	0.35
14.763	1044.46	0.39	15.391	1008.77	0.38	15.793	921.35	0.36	15.735	863.55	0.35
14.782	1044.50	0.39	15.409	1008.83	0.38	15.809	921.47	0.36	15.751	863.69	0.35
14.800	1044.55	0.39	15.427	1008.94	0.38	15.824	921.59	0.36	15.767	863.85	0.35
14.819	1044.64	0.39	15.445	1008.97	0.38	15.840	921.70	0.36	15.783	863.99	0.35
14.837	1044.72	0.39	15.463	1009.03	0.38	15.856	921.82	0.36	15.799	864.14	0.35
14.856	1044.80	0.39	15.481	1009.10	0.38	15.872	921.93	0.36	15.816	864.29	0.35
14.875	1044.89	0.39	15.499	1009.18	0.38	15.888	922.02	0.36	15.832	864.43	0.35
14.893	1044.90	0.39	15.517	1009.26	0.38	15.904	922.10	0.36	15.848	864.58	0.35
14.912	1044.97	0.39	15.535	1009.38	0.38	15.920	922.19	0.36	15.864	864.73	0.35
14.931	1045.05	0.39	15.553	1009.45	0.38	15.936	922.31	0.36	15.880	864.88	0.35
14.949	1045.14	0.39	15.571	1009.51	0.38	15.951	922.42	0.36	15.896	865.03	0.35
14.968	1045.22	0.39	15.589	1009.60	0.38	15.967	922.53	0.36	15.912	865.18	0.35
14.987	1045.23	0.39	15.607	1009.67	0.38	15.983	922.62	0.36	15.928	865.31	0.35
15.005	1045.30	0.39	15.625	1009.75	0.38	15.999	922.70	0.36	15.944	865.40	0.35
15.024	1045.38	0.39	15.643	1009.83	0.38	16.015	922.80	0.36	15.960	865.54	0.35
15.042	1045.46	0.39	15.661	1009.91	0.38	16.031	922.91	0.36	15.976	865.68	0.35
15.061	1045.55	0.39	15.679	1009.98	0.38	16.047	923.02	0.36	15.992	865.88	0.35
15.080	1045.56	0.39	15.697	1010.05	0.38	16.063	923.12	0.36	16.008	866.00	0.35
15.098	1045.65	0.39	15.715	1010.10	0.38	16.078	923.20	0.36	16.024	866.11	0.35
15.117	1045.74	0.39	15.733	1010.24	0.38	16.094	923.28	0.36	16.040	866.25	0.35
15.136	1045.80	0.39	15.751	1010.32	0.38	16.110	923.38	0.36	16.056	866.39	0.35
15.154	1045.83	0.39	15.769	1010.40	0.38	16.126	923.49	0.36	16.072	866.55	0.35

15.173	1045.91	0.39	15.787	1010.45	0.38	16.142	923.59	0.36	16.088	866.75	0.35
15.192	1045.99	0.39	15.805	1010.50	0.38	16.158	923.70	0.36	16.104	866.89	0.35
15.210	1046.08	0.39	15.823	1010.56	0.38	16.174	923.81	0.36	16.120	867.02	0.35
15.229	1046.13	0.39	15.841	1010.68	0.38	16.190	923.92	0.36	16.136	867.16	0.35
15.247	1046.15	0.39	15.859	1010.73	0.38	16.205	924.02	0.36	16.152	867.29	0.35
15.266	1046.23	0.39	15.877	1010.85	0.38	16.221	924.10	0.36	16.168	867.42	0.35
15.285	1046.31	0.39	15.895	1010.89	0.38	16.237	924.18	0.36	16.184	867.56	0.35
15.303	1046.39	0.39	15.913	1010.97	0.38	16.253	924.27	0.36	16.200	867.69	0.35
15.322	1046.46	0.39	15.931	1011.05	0.38	16.269	924.38	0.36	16.216	867.83	0.35
15.341	1046.54	0.39	15.949	1011.11	0.38	16.285	924.48	0.36	16.232	867.96	0.35
15.359	1046.62	0.39	15.967	1011.21	0.38	16.301	924.59	0.36	16.248	868.10	0.35
15.378	1046.62	0.39	15.985	1011.29	0.38	16.317	924.69	0.36	16.264	868.23	0.35
15.397	1046.69	0.39	16.003	1011.38	0.38	16.332	924.80	0.36	16.280	868.37	0.35
15.415	1046.77	0.39	16.021	1011.45	0.38	16.348	924.90	0.36	16.296	868.51	0.35
15.434	1046.85	0.39	16.039	1011.48	0.38	16.364	925.01	0.36	16.313	868.65	0.35
15.452	1046.92	0.39	16.057	1011.61	0.38	16.380	925.11	0.36	16.329	868.79	0.35
15.471	1047.00	0.39	16.075	1011.64	0.38	16.396	925.21	0.36	16.345	868.93	0.35
15.490	1047.03	0.39	16.093	1011.70	0.38	16.412	925.31	0.36	16.361	869.07	0.35
15.508	1047.09	0.39	16.111	1011.81	0.38	16.428	925.42	0.36	16.377	869.21	0.35
15.527	1047.19	0.39	16.129	1011.87	0.38	16.444	925.52	0.36	16.393	869.34	0.35
15.546	1047.21	0.39	16.147	1011.97	0.38	16.459	925.60	0.36	16.409	869.47	0.35
15.564	1047.29	0.39	16.165	1012.03	0.38	16.475	925.67	0.36	16.425	869.60	0.35
15.583	1047.36	0.39	16.183	1012.12	0.38	16.491	925.75	0.36	16.441	869.73	0.35
15.602	1047.43	0.39	16.201	1012.19	0.38	16.507	925.84	0.36	16.457	869.86	0.35
15.620	1047.51	0.39	16.219	1012.26	0.38	16.523	925.94	0.36	16.473	869.99	0.35
15.639	1047.58	0.39	16.237	1012.35	0.38	16.539	926.04	0.36	16.489	870.18	0.35
15.657	1047.65	0.39	16.255	1012.39	0.38	16.555	926.14	0.36	16.505	870.34	0.35
15.676	1047.68	0.39	16.273	1012.50	0.38	16.571	926.24	0.36	16.521	870.46	0.35
15.695	1047.73	0.39	16.291	1012.52	0.38	16.586	926.34	0.36	16.537	870.59	0.35
15.713	1047.86	0.39	16.309	1012.63	0.38	16.602	926.43	0.36	16.553	870.72	0.35
15.732	1047.92	0.39	16.327	1012.68	0.38	16.618	926.53	0.36	16.569	870.85	0.35
15.751	1047.99	0.39	16.345	1012.75	0.38	16.634	926.63	0.36	16.585	870.98	0.35
15.769	1048.05	0.39	16.363	1012.86	0.38	16.650	926.73	0.36	16.601	871.12	0.35
15.788	1048.09	0.39	16.381	1012.97	0.38	16.666	926.83	0.36	16.617	871.26	0.35
15.807	1048.11	0.39	16.399	1013.01	0.38	16.682	926.92	0.36	16.633	871.38	0.35
15.825	1048.19	0.39	16.417	1013.10	0.38	16.698	927.02	0.36	16.649	871.51	0.35
15.844	1048.26	0.39	16.435	1013.17	0.38	16.713	927.11	0.36	16.665	871.63	0.35
15.863	1048.33	0.39	16.453	1013.23	0.38	16.729	927.21	0.36	16.681	871.76	0.35
15.881	1048.40	0.39	16.471	1013.33	0.38	16.745	927.30	0.36	16.697	871.88	0.35
15.900	1048.47	0.39	16.489	1013.36	0.38	16.761	927.40	0.36	16.713	872.05	0.35
15.918	1048.54	0.39	16.507	1013.47	0.38	16.777	927.49	0.36	16.729	872.20	0.35
15.937	1048.61	0.39	16.525	1013.51	0.38	16.793	927.59	0.36	16.745	872.32	0.35
15.956	1048.68	0.39	16.543	1013.62	0.38	16.809	927.68	0.36	16.761	872.45	0.35
15.974	1048.74	0.39	16.561	1013.66	0.39	16.825	927.78	0.36	16.777	872.56	0.35
15.993	1048.82	0.39	16.579	1013.75	0.39	16.841	927.87	0.36	16.793	872.68	0.35



16.012	1048.89	0.39	16.597	1013.82	0.39	16.856	927.96	0.36	16.810	872.80	0.35
16.030	1048.91	0.39	16.615	1013.87	0.39	16.872	928.05	0.36	16.826	872.95	0.35
16.049	1048.95	0.39	16.633	1013.98	0.39	16.888	928.15	0.36	16.842	873.06	0.35
16.068	1049.02	0.39	16.651	1014.06	0.39	16.904	928.24	0.36	16.858	873.27	0.35
16.086	1049.09	0.39	16.669	1014.10	0.39	16.920	928.33	0.36	16.874	873.36	0.35
16.105	1049.15	0.39	16.687	1014.20	0.39	16.936	928.42	0.36	16.890	873.52	0.35
16.123	1049.23	0.39	16.705	1014.30	0.39	16.952	928.51	0.36	16.906	873.65	0.35
16.142	1049.29	0.39	16.723	1014.31	0.39	16.968	928.60	0.36	16.922	873.80	0.35
16.161	1049.36	0.39	16.741	1014.41	0.39	16.983	928.69	0.36	16.938	873.94	0.35
16.179	1049.43	0.39	16.759	1014.51	0.39	16.999	928.78	0.36	16.954	874.08	0.35
16.198	1049.50	0.39	16.777	1014.55	0.39	17.015	928.87	0.36	16.970	874.22	0.35
16.217	1049.57	0.39	16.795	1014.63	0.39	17.031	928.96	0.36	16.986	874.36	0.35
16.235	1049.64	0.39	16.813	1014.73	0.39	17.047	929.04	0.36	17.002	874.49	0.35
16.254	1049.71	0.39	16.831	1014.80	0.39	17.063	929.13	0.36	17.018	874.57	0.35
16.273	1049.78	0.39	16.849	1014.84	0.39	17.079	929.22	0.36	17.034	874.79	0.35
16.291	1049.84	0.39	16.867	1014.94	0.39	17.095	929.31	0.36	17.050	874.87	0.35
16.310	1049.89	0.39	16.885	1014.96	0.39	17.110	929.40	0.36	17.066	875.02	0.35
16.328	1049.92	0.39	16.903	1015.05	0.39	17.126	929.48	0.36	17.082	875.16	0.35
16.347	1050.05	0.39	16.921	1015.14	0.39	17.142	929.57	0.36	17.098	875.30	0.35
16.366	1050.06	0.39	16.939	1015.23	0.39	17.158	929.66	0.36	17.114	875.43	0.35
16.384	1050.11	0.39	16.957	1015.32	0.39	17.174	929.74	0.36	17.130	875.58	0.35
16.403	1050.17	0.39	16.975	1015.41	0.39	17.190	929.82	0.36	17.146	875.75	0.35
16.422	1050.24	0.39	16.993	1015.45	0.39	17.206	929.91	0.36	17.162	875.83	0.35
16.440	1050.30	0.39	17.011	1015.51	0.39	17.222	929.99	0.36	17.178	875.95	0.35
16.459	1050.37	0.39	17.029	1015.60	0.39	17.237	930.10	0.36	17.194	876.16	0.35
16.478	1050.43	0.39	17.047	1015.69	0.39	17.253	930.21	0.36	17.210	876.29	0.35
16.496	1050.50	0.39	17.065	1015.70	0.39	17.269	930.29	0.36	17.226	876.42	0.35
16.515	1050.56	0.39	17.083	1015.80	0.39	17.285	930.36	0.36	17.242	876.56	0.35
16.533	1050.62	0.39	17.101	1015.89	0.39	17.301	930.46	0.36	17.258	876.69	0.35
16.552	1050.69	0.39	17.119	1015.98	0.39	17.317	930.57	0.36	17.274	876.83	0.35
16.571	1050.76	0.39	17.137	1016.06	0.39	17.333	930.69	0.36	17.291	876.96	0.35
16.589	1050.82	0.39	17.155	1016.10	0.39	17.349	930.74	0.36	17.307	877.11	0.35
16.608	1050.88	0.39	17.173	1016.14	0.39	17.364	930.84	0.36	17.323	877.17	0.35
16.627	1050.95	0.39	17.191	1016.23	0.39	17.380	930.96	0.36	17.339	877.34	0.35
16.645	1051.01	0.39	17.209	1016.31	0.39	17.396	931.08	0.36	17.355	877.48	0.35
16.664	1051.07	0.39	17.227	1016.39	0.39	17.412	931.15	0.36	17.371	877.61	0.35
16.683	1051.13	0.39	17.245	1016.48	0.39	17.428	931.23	0.36	17.387	877.75	0.35
16.701	1051.19	0.39	17.263	1016.56	0.39	17.444	931.35	0.36	17.403	877.86	0.35
16.720	1051.25	0.39	17.281	1016.59	0.39	17.460	931.46	0.36	17.419	877.99	0.35
16.738	1051.32	0.39	17.299	1016.65	0.39	17.476	931.58	0.36	17.435	878.13	0.35
16.757	1051.38	0.39	17.317	1016.74	0.39	17.491	931.63	0.36	17.451	878.27	0.35
16.776	1051.44	0.39	17.335	1016.82	0.39	17.507	931.72	0.37	17.467	878.39	0.35
16.794	1051.51	0.39	17.353	1016.90	0.39	17.523	931.82	0.37	17.483	878.54	0.35
16.813	1051.57	0.39	17.371	1016.98	0.39	17.539	931.93	0.37	17.499	878.68	0.35
16.832	1051.63	0.39	17.389	1017.05	0.39	17.555	932.04	0.37	17.515	878.80	0.35

16.850	1051.69	0.39	17.407	1017.13	0.39	17.571	932.15	0.37	17.531	878.93	0.35
16.869	1051.76	0.39	17.425	1017.21	0.39	17.587	932.26	0.37	17.547	879.06	0.35
16.888	1051.82	0.39	17.443	1017.29	0.39	17.603	932.29	0.37	17.563	879.19	0.35
16.906	1051.91	0.39	17.461	1017.37	0.39	17.618	932.40	0.37	17.579	879.31	0.35
16.925	1052.03	0.39	17.479	1017.44	0.39	17.634	932.52	0.37	17.595	879.44	0.35
16.943	1052.09	0.39	17.497	1017.48	0.39	17.650	932.64	0.37	17.611	879.57	0.35
16.962	1052.15	0.39	17.515	1017.51	0.39	17.666	932.69	0.37	17.627	879.69	0.35
16.981	1052.21	0.39	17.533	1017.59	0.39	17.682	932.78	0.37	17.643	879.84	0.35
16.999	1052.26	0.39	17.551	1017.66	0.39	17.698	932.90	0.37	17.659	879.97	0.35
17.018	1052.32	0.39	17.569	1017.74	0.39	17.714	933.02	0.37	17.675	880.09	0.35
17.037	1052.38	0.39	17.587	1017.82	0.39	17.730	933.10	0.37	17.691	880.24	0.35
17.055	1052.44	0.39	17.605	1017.90	0.39	17.745	933.16	0.37	17.707	880.41	0.35
17.074	1052.50	0.39	17.623	1017.99	0.39	17.761	933.27	0.37	17.723	880.54	0.35
17.093	1052.56	0.39	17.641	1018.06	0.39	17.777	933.37	0.37	17.739	880.65	0.35
17.111	1052.62	0.39	17.659	1018.15	0.39	17.793	933.48	0.37	17.755	880.78	0.35
17.130	1052.68	0.39	17.677	1018.21	0.39	17.809	933.58	0.37	17.771	880.90	0.35
17.148	1052.74	0.39	17.695	1018.22	0.39	17.825	933.69	0.37	17.788	881.02	0.35
17.167	1052.80	0.39	17.713	1018.30	0.39	17.841	933.75	0.37	17.804	881.15	0.35
17.186	1052.86	0.39	17.731	1018.38	0.39	17.857	933.89	0.37	17.820	881.29	0.35
17.204	1052.92	0.39	17.749	1018.46	0.39	17.873	933.93	0.37	17.836	881.40	0.35
17.223	1052.98	0.39	17.767	1018.53	0.39	17.888	934.04	0.37	17.852	881.51	0.35
17.242	1053.03	0.39	17.785	1018.60	0.39	17.904	934.15	0.37	17.868	881.64	0.35
17.260	1053.09	0.39	17.803	1018.68	0.39	17.920	934.27	0.37	17.884	881.76	0.35
17.279	1053.14	0.39	17.821	1018.75	0.39	17.936	934.38	0.37	17.900	881.87	0.35
17.298	1053.22	0.39	17.839	1018.83	0.39	17.952	934.40	0.37	17.916	882.00	0.35
17.316	1053.33	0.39	17.857	1018.90	0.39	17.968	934.51	0.37	17.932	882.12	0.35
17.335	1053.38	0.39	17.875	1018.98	0.39	17.984	934.61	0.37	17.948	882.24	0.35
17.353	1053.44	0.39	17.893	1019.05	0.39	18.000	934.73	0.37	17.964	882.35	0.35
17.372	1053.49	0.39	17.911	1019.13	0.39	18.015	934.82	0.37	17.980	882.55	0.35
17.391	1053.55	0.39	17.929	1019.20	0.39	18.031	934.93	0.37	17.996	882.67	0.35
17.409	1053.60	0.39	17.947	1019.28	0.39	18.047	935.03	0.37	18.012	882.79	0.35
17.428	1053.66	0.39	17.966	1019.34	0.39	18.063	935.14	0.37	18.028	882.91	0.35
17.447	1053.71	0.39	17.984	1019.42	0.39	18.079	935.22	0.37	18.044	883.04	0.35
17.465	1053.77	0.39	18.002	1019.49	0.39	18.095	935.26	0.37	18.060	883.16	0.35
17.484	1053.83	0.39	18.020	1019.56	0.39	18.111	935.36	0.37	18.076	883.26	0.35
17.503	1053.94	0.39	18.038	1019.62	0.39	18.127	935.47	0.37	18.092	883.39	0.35
17.521	1054.02	0.39	18.056	1019.70	0.39	18.142	935.57	0.37	18.108	883.50	0.35
17.540	1054.07	0.39	18.074	1019.77	0.39	18.158	935.68	0.37	18.124	883.61	0.35
17.559	1054.13	0.39	18.092	1019.84	0.39	18.174	935.79	0.37	18.140	883.72	0.35
17.577	1054.18	0.39	18.110	1019.91	0.39	18.190	935.87	0.37	18.156	883.83	0.35
17.596	1054.24	0.39	18.128	1019.98	0.39	18.206	935.91	0.37	18.172	884.04	0.35
17.614	1054.29	0.39	18.146	1020.05	0.39	18.222	936.02	0.37	18.188	884.16	0.35
17.633	1054.34	0.39	18.164	1020.13	0.39	18.238	936.12	0.37	18.204	884.27	0.35
17.652	1054.39	0.39	18.182	1020.20	0.39	18.254	936.23	0.37	18.220	884.38	0.35
17.670	1054.44	0.39	18.200	1020.26	0.39	18.269	936.33	0.37	18.236	884.49	0.35

17.689	1054.53	0.39	18.218	1020.33	0.39	18.285	936.43	0.37	18.252	884.60	0.35
17.708	1054.63	0.39	18.236	1020.39	0.39	18.301	936.53	0.37	18.268	884.72	0.35
17.726	1054.69	0.39	18.254	1020.46	0.39	18.317	936.62	0.37	18.285	884.83	0.35
17.745	1054.74	0.39	18.272	1020.53	0.39	18.333	936.69	0.37	18.301	885.02	0.35
17.764	1054.79	0.39	18.290	1020.60	0.39	18.349	936.74	0.37	18.317	885.13	0.35
17.782	1054.84	0.39	18.308	1020.66	0.39	18.365	936.85	0.37	18.333	885.24	0.35
17.801	1054.91	0.39	18.326	1020.73	0.39	18.381	936.94	0.37	18.349	885.34	0.35
17.819	1055.01	0.39	18.344	1020.80	0.39	18.396	937.04	0.37	18.365	885.45	0.35
17.838	1055.04	0.39	18.362	1020.86	0.39	18.412	937.14	0.37	18.381	885.57	0.35
17.857	1055.05	0.39	18.380	1020.92	0.39	18.428	937.24	0.37	18.397	885.69	0.35
17.875	1055.15	0.39	18.398	1020.99	0.39	18.444	937.33	0.37	18.413	885.88	0.35
17.894	1055.23	0.39	18.416	1021.05	0.39	18.460	937.44	0.37	18.429	885.98	0.35
17.913	1055.28	0.39	18.434	1021.16	0.39	18.476	937.53	0.37	18.445	886.10	0.35
17.931	1055.33	0.39	18.452	1021.25	0.39	18.492	937.63	0.37	18.461	886.21	0.35
17.950	1055.37	0.39	18.470	1021.32	0.39	18.508	937.73	0.37	18.477	886.31	0.35
17.969	1055.42	0.39	18.488	1021.39	0.39	18.523	937.83	0.37	18.493	886.41	0.35
17.987	1055.49	0.39	18.506	1021.45	0.39	18.539	937.92	0.37	18.509	886.59	0.35
18.006	1055.59	0.39	18.524	1021.51	0.39	18.555	937.99	0.37	18.525	886.71	0.35
18.024	1055.65	0.39	18.542	1021.58	0.39	18.571	938.09	0.37	18.541	886.81	0.35
18.043	1055.70	0.39	18.560	1021.64	0.39	18.587	938.15	0.37	18.557	886.91	0.35
18.062	1055.75	0.39	18.578	1021.71	0.39	18.603	938.24	0.37	18.573	887.02	0.35
18.080	1055.81	0.39	18.596	1021.77	0.39	18.619	938.33	0.37	18.589	887.15	0.35
18.099	1055.90	0.39	18.614	1021.83	0.39	18.635	938.43	0.37	18.605	887.30	0.35
18.118	1055.97	0.39	18.632	1021.91	0.39	18.650	938.53	0.37	18.621	887.40	0.35
18.136	1056.02	0.39	18.650	1022.03	0.39	18.666	938.62	0.37	18.637	887.50	0.35
18.155	1056.06	0.39	18.668	1022.09	0.39	18.682	938.72	0.37	18.653	887.68	0.35
18.174	1056.11	0.39	18.686	1022.15	0.39	18.698	938.82	0.37	18.669	887.77	0.35
18.192	1056.16	0.39	18.704	1022.21	0.39	18.714	938.91	0.37	18.685	887.87	0.35
18.211	1056.24	0.39	18.722	1022.27	0.39	18.730	939.00	0.37	18.701	887.97	0.35
18.229	1056.34	0.39	18.740	1022.32	0.39	18.746	939.09	0.37	18.717	888.07	0.35
18.248	1056.39	0.40	18.758	1022.38	0.39	18.762	939.19	0.37	18.733	888.27	0.35
18.267	1056.44	0.40	18.776	1022.44	0.39	18.777	939.28	0.37	18.749	888.37	0.35
18.285	1056.49	0.40	18.794	1022.56	0.39	18.793	939.37	0.37	18.765	888.47	0.35
18.304	1056.54	0.40	18.812	1022.64	0.39	18.809	939.46	0.37	18.782	888.58	0.36
18.323	1056.59	0.40	18.830	1022.69	0.39	18.825	939.55	0.37	18.798	888.68	0.36
18.341	1056.64	0.40	18.848	1022.75	0.39	18.841	939.64	0.37	18.814	888.82	0.36
18.360	1056.71	0.40	18.866	1022.80	0.39	18.857	939.74	0.37	18.830	888.95	0.36
18.379	1056.81	0.40	18.884	1022.86	0.39	18.873	939.83	0.37	18.846	889.04	0.36
18.397	1056.87	0.40	18.902	1022.91	0.39	18.889	939.92	0.37	18.862	889.14	0.36
18.416	1056.92	0.40	18.920	1023.01	0.39	18.904	940.01	0.37	18.878	889.27	0.36
18.434	1056.97	0.40	18.938	1023.10	0.39	18.920	940.10	0.37	18.894	889.43	0.36
18.453	1057.02	0.40	18.956	1023.16	0.39	18.936	940.19	0.37	18.910	889.53	0.36
18.472	1057.07	0.40	18.974	1023.21	0.39	18.952	940.28	0.37	18.926	889.63	0.36
18.490	1057.16	0.40	18.992	1023.27	0.39	18.968	940.37	0.37	18.942	889.76	0.36
18.509	1057.25	0.40	19.010	1023.32	0.39	18.984	940.47	0.37	18.958	889.90	0.36

18.528	1057.30	0.40	19.028	1023.42	0.39	19.000	940.56	0.37	18.974	889.99	0.36
18.546	1057.35	0.40	19.046	1023.52	0.39	19.016	940.59	0.37	18.990	890.08	0.36
18.565	1057.39	0.40	19.064	1023.57	0.39	19.032	940.74	0.37	19.006	890.23	0.36
18.584	1057.47	0.40	19.082	1023.62	0.39	19.047	940.84	0.37	19.022	890.35	0.36
18.602	1057.56	0.40	19.100	1023.67	0.39	19.063	940.85	0.37	19.038	890.44	0.36
18.621	1057.61	0.40	19.118	1023.73	0.39	19.079	940.96	0.37	19.054	890.60	0.36
18.639	1057.66	0.40	19.136	1023.83	0.39	19.095	941.08	0.37	19.070	890.69	0.36
18.658	1057.70	0.40	19.154	1023.92	0.39	19.111	941.12	0.37	19.086	890.78	0.36
18.677	1057.76	0.40	19.172	1023.98	0.39	19.127	941.25	0.37	19.102	890.90	0.36
18.695	1057.84	0.40	19.190	1024.04	0.39	19.143	941.38	0.37	19.118	891.05	0.36
18.714	1057.91	0.40	19.208	1024.10	0.39	19.159	941.46	0.37	19.134	891.14	0.36
18.733	1057.96	0.40	19.226	1024.15	0.39	19.174	941.55	0.37	19.150	891.25	0.36
18.751	1058.00	0.40	19.244	1024.21	0.39	19.190	941.64	0.37	19.166	891.34	0.36
18.770	1058.04	0.40	19.262	1024.29	0.39	19.206	941.73	0.37	19.182	891.47	0.36
18.789	1058.11	0.40	19.280	1024.39	0.39	19.222	941.82	0.37	19.198	891.61	0.36
18.807	1058.20	0.40	19.298	1024.45	0.39	19.238	941.90	0.37	19.214	891.70	0.36
18.826	1058.25	0.40	19.316	1024.51	0.39	19.254	941.99	0.37	19.230	891.83	0.36
18.844	1058.30	0.40	19.334	1024.56	0.39	19.270	942.07	0.37	19.246	891.96	0.36
18.863	1058.37	0.40	19.352	1024.62	0.39	19.286	942.16	0.37	19.263	892.04	0.36
18.882	1058.46	0.40	19.370	1024.71	0.39	19.301	942.25	0.37	19.279	892.12	0.36
18.900	1058.51	0.40	19.388	1024.81	0.39	19.317	942.33	0.37	19.295	892.29	0.36
18.919	1058.55	0.40	19.406	1024.86	0.39	19.333	942.42	0.37	19.311	892.38	0.36
18.938	1058.59	0.40	19.424	1024.91	0.39	19.349	942.51	0.37	19.327	892.48	0.36
18.956	1058.63	0.40	19.442	1024.97	0.39	19.365	942.59	0.37	19.343	892.65	0.36
18.975	1058.72	0.40	19.460	1025.02	0.39	19.381	942.68	0.37	19.359	892.74	0.36
18.994	1058.80	0.40	19.478	1025.11	0.39	19.397	942.76	0.37	19.375	892.85	0.36
19.012	1058.84	0.40	19.496	1025.21	0.39	19.413	942.85	0.37	19.391	892.99	0.36
19.031	1058.88	0.40	19.514	1025.26	0.39	19.428	942.93	0.37	19.407	893.08	0.36
19.049	1058.93	0.40	19.532	1025.32	0.39	19.444	943.02	0.37	19.423	893.22	0.36
19.068	1058.98	0.40	19.550	1025.37	0.39	19.460	943.11	0.37	19.439	893.34	0.36
19.087	1059.07	0.40	19.568	1025.47	0.39	19.476	943.19	0.37	19.455	893.42	0.36
19.105	1059.14	0.40	19.586	1025.55	0.39	19.492	943.27	0.37	19.471	893.51	0.36
19.124	1059.18	0.40	19.604	1025.60	0.39	19.508	943.35	0.37	19.487	893.67	0.36
19.143	1059.24	0.40	19.622	1025.65	0.39	19.524	943.43	0.37	19.503	893.76	0.36
19.161	1059.32	0.40	19.640	1025.70	0.39	19.540	943.52	0.37	19.519	893.86	0.36
19.180	1059.39	0.40	19.658	1025.75	0.39	19.555	943.68	0.37	19.535	894.02	0.36
19.199	1059.43	0.40	19.676	1025.84	0.39	19.571	943.78	0.37	19.551	894.12	0.36
19.217	1059.49	0.40	19.694	1025.94	0.39	19.587	943.85	0.37	19.567	894.21	0.36
19.236	1059.57	0.40	19.712	1025.99	0.39	19.603	943.89	0.37	19.583	894.36	0.36
19.255	1059.63	0.40	19.730	1026.03	0.39	19.619	944.04	0.37	19.599	894.48	0.36
19.273	1059.68	0.40	19.748	1026.08	0.39	19.635	944.13	0.37	19.615	894.57	0.36
19.292	1059.74	0.40	19.766	1026.17	0.39	19.651	944.21	0.37	19.631	894.67	0.36
19.310	1059.82	0.40	19.784	1026.26	0.39	19.667	944.29	0.37	19.647	894.79	0.36
19.329	1059.88	0.40	19.802	1026.31	0.39	19.682	944.37	0.37	19.663	894.93	0.36
19.348	1059.92	0.40	19.820	1026.38	0.39	19.698	944.45	0.37	19.679	895.02	0.36

19.366	1059.96	0.40	19.838	1026.47	0.39	19.714	944.54	0.37	19.695	895.14	0.36
19.385	1060.00	0.40	19.856	1026.54	0.39	19.730	944.62	0.37	19.711	895.27	0.36
19.404	1060.07	0.40	19.874	1026.58	0.39	19.746	944.70	0.37	19.727	895.36	0.36
19.422	1060.15	0.40	19.892	1026.63	0.39	19.762	944.77	0.37	19.743	895.45	0.36
19.441	1060.21	0.40	19.910	1026.69	0.39	19.778	944.85	0.37	19.760	895.62	0.36
19.460	1060.25	0.40	19.928	1026.79	0.39	19.794	944.93	0.37	19.776	895.71	0.36
19.478	1060.32	0.40	19.946	1026.86	0.39	19.809	945.02	0.37	19.792	895.80	0.36
19.497	1060.40	0.40	19.964	1026.90	0.39	19.825	945.16	0.37	19.808	895.91	0.36
19.515	1060.46	0.40	19.982	1026.95	0.39	19.841	945.24	0.37	19.824	896.07	0.36
19.534	1060.50	0.40	20.000	1027.01	0.39	19.857	945.32	0.37	19.840	896.16	0.36
19.553	1060.56	0.40				19.873	945.41	0.37	19.856	896.24	0.36
19.571	1060.64	0.40				19.889	945.49	0.37	19.872	896.38	0.36
19.590	1060.70	0.40				19.905	945.58	0.37	19.888	896.49	0.36
19.609	1060.74	0.40				19.921	945.66	0.37	19.904	896.58	0.36
19.627	1060.78	0.40				19.936	945.74	0.37	19.920	896.73	0.36
19.646	1060.82	0.40				19.952	945.82	0.37	19.936	896.83	0.36
19.665	1060.88	0.40				19.968	945.90	0.37	19.952	896.92	0.36
19.683	1060.96	0.40				19.984	945.98	0.37	19.968	897.07	0.36
19.702	1061.02	0.40				20.000	946.06	0.37	19.984	897.17	0.36
19.720	1061.06	0.40							20.000	897.25	0.36
19.739	1061.11	0.40									
19.758	1061.19	0.40									
19.776	1061.25	0.40									
19.795	1061.29	0.40									
19.814	1061.33	0.40									
19.832	1061.41	0.40									
19.851	1061.49	0.40									
19.870	1061.56	0.40									
19.888	1061.64	0.40									
19.907	1061.68	0.40									
19.925	1061.72	0.40									
19.944	1061.78	0.40									
19.963	1061.85	0.40									
19.981	1061.91	0.40									
20.000	1061.95	0.40									

Combined standard uncertainties:

$$u(T) = 0.006 \text{ K}; u(p) = 0.0020 \text{ MPa for } p < 6 \text{ MPa}; u(p) = 0.024 \text{ MPa for } 6 \text{ MPa} \leq p \leq 70 \text{ MPa}$$

$$u(x_{\text{CO}_2}) = 0.0003; u(x_{\text{SO}_2}) = 0.0002; u(x_{\text{CH}_4}) = 0.0002$$

**Table S1 (continued).**  $p\rho T$  experimental data for the CO<sub>2</sub>+SO<sub>2</sub>+CH<sub>4</sub> mixtures ( $u(\rho)$ ): Combined standard uncertainty).

$x_{\text{CO}_2} = 0.9343; x_{\text{SO}_2} = 0.0472; x_{\text{CH}_4} = 0.0185$											
$T = 313.16 \pm 0.02 \text{ K}$			$T = 333.16 \pm 0.02 \text{ K}$			$T = 353.15 \pm 0.01 \text{ K}$			$T = 373.14 \pm 0.04 \text{ K}$		
$p$ (MPa)	$\rho$ (kg.m <sup>-3</sup> )	$u(\rho)$ (kg.m <sup>-3</sup> )	$p$ (MPa)	$\rho$ (kg.m <sup>-3</sup> )	$u(\rho)$ (kg.m <sup>-3</sup> )	$p$ (MPa)	$\rho$ (kg.m <sup>-3</sup> )	$u(\rho)$ (kg.m <sup>-3</sup> )	$p$ (MPa)	$\rho$ (kg.m <sup>-3</sup> )	$u(\rho)$ (kg.m <sup>-3</sup> )
0.102	1.88	0.23	0.101	1.80	0.24	0.100	1.56	0.23	0.100	1.47	0.22
0.122	2.21	0.23	0.121	2.05	0.23	0.120	1.79	0.22	0.120	1.70	0.22
0.142	2.55	0.23	0.141	2.34	0.23	0.140	2.10	0.22	0.140	2.03	0.22
0.162	2.86	0.23	0.161	2.67	0.23	0.160	2.37	0.22	0.160	2.31	0.22
0.182	3.22	0.23	0.181	2.97	0.23	0.180	2.70	0.22	0.180	2.56	0.22
0.202	3.56	0.23	0.201	3.31	0.23	0.200	3.00	0.22	0.200	2.86	0.22
0.222	3.91	0.23	0.221	3.65	0.23	0.220	3.29	0.22	0.220	3.13	0.22
0.242	4.29	0.23	0.241	3.94	0.22	0.240	3.56	0.22	0.240	3.40	0.22
0.262	4.64	0.23	0.261	4.25	0.22	0.260	3.90	0.22	0.260	3.71	0.22
0.282	4.99	0.23	0.281	4.62	0.23	0.280	4.19	0.22	0.280	4.03	0.22
0.302	5.33	0.23	0.301	4.93	0.22	0.299	4.51	0.22	0.299	4.31	0.22
0.321	5.69	0.23	0.321	5.28	0.22	0.319	4.79	0.22	0.319	4.58	0.22
0.341	6.04	0.23	0.341	5.59	0.22	0.339	5.08	0.22	0.339	4.87	0.22
0.361	6.35	0.23	0.361	5.91	0.22	0.359	5.42	0.22	0.359	5.17	0.22
0.381	6.70	0.23	0.381	6.24	0.22	0.379	5.73	0.22	0.379	5.44	0.22
0.401	7.04	0.23	0.401	6.53	0.22	0.399	6.06	0.22	0.399	5.71	0.22
0.421	7.43	0.23	0.420	6.87	0.22	0.419	6.36	0.22	0.419	6.02	0.22
0.441	7.76	0.23	0.440	7.23	0.22	0.439	6.65	0.22	0.439	6.30	0.22
0.461	8.13	0.23	0.460	7.58	0.22	0.459	6.99	0.22	0.459	6.60	0.22
0.481	8.50	0.23	0.480	7.90	0.22	0.479	7.30	0.22	0.479	6.90	0.22
0.501	8.87	0.23	0.500	8.23	0.22	0.499	7.60	0.22	0.499	7.18	0.22
0.521	9.21	0.23	0.520	8.57	0.22	0.519	7.93	0.22	0.519	7.48	0.22
0.541	9.54	0.23	0.540	8.92	0.22	0.539	8.20	0.22	0.539	7.75	0.22
0.561	9.86	0.22	0.560	9.26	0.22	0.559	8.52	0.22	0.559	8.02	0.22
0.581	10.24	0.22	0.580	9.56	0.22	0.579	8.83	0.22	0.579	8.35	0.22
0.601	10.63	0.23	0.600	9.91	0.22	0.599	9.15	0.22	0.599	8.65	0.22
0.621	11.01	0.23	0.620	10.23	0.22	0.619	9.47	0.22	0.619	8.91	0.22
0.641	11.32	0.22	0.640	10.58	0.22	0.639	9.76	0.22	0.639	9.26	0.22
0.661	11.66	0.22	0.660	10.86	0.22	0.659	10.07	0.22	0.659	9.54	0.22
0.680	12.03	0.22	0.680	11.20	0.22	0.678	10.37	0.22	0.678	9.81	0.22
0.700	12.40	0.22	0.700	11.58	0.22	0.698	10.69	0.22	0.698	10.10	0.22
0.720	12.80	0.23	0.720	11.88	0.22	0.718	11.02	0.22	0.718	10.41	0.22
0.740	13.13	0.22	0.740	12.23	0.22	0.738	11.34	0.22	0.738	10.72	0.22
0.760	13.51	0.23	0.760	12.58	0.22	0.758	11.64	0.22	0.758	11.01	0.22
0.780	13.89	0.23	0.780	12.92	0.22	0.778	11.98	0.22	0.778	11.30	0.22

0.800	14.24	0.22	0.799	13.24	0.22	0.798	12.31	0.22	0.798	11.60	0.22
0.820	14.65	0.23	0.819	13.55	0.22	0.818	12.66	0.22	0.818	11.90	0.22
0.840	14.97	0.22	0.839	13.91	0.22	0.838	12.97	0.22	0.838	12.21	0.22
0.860	15.36	0.23	0.859	14.27	0.22	0.858	13.27	0.22	0.858	12.51	0.22
0.880	15.72	0.22	0.879	14.60	0.22	0.878	13.58	0.22	0.878	12.82	0.22
0.900	16.07	0.22	0.899	14.97	0.22	0.898	13.93	0.22	0.898	13.12	0.22
0.920	16.46	0.22	0.919	15.34	0.22	0.918	14.22	0.22	0.918	13.41	0.22
0.940	16.85	0.23	0.939	15.69	0.22	0.938	14.57	0.22	0.938	13.70	0.22
0.960	17.22	0.23	0.959	16.02	0.22	0.958	14.89	0.22	0.958	14.01	0.22
0.980	17.60	0.23	0.979	16.33	0.22	0.978	15.23	0.22	0.978	14.32	0.22
1.000	17.98	0.23	0.999	16.69	0.22	0.998	15.51	0.22	0.998	14.62	0.22
1.020	18.34	0.23	1.019	17.02	0.22	1.018	15.86	0.22	1.018	14.91	0.22
1.039	18.71	0.23	1.039	17.37	0.22	1.037	16.17	0.22	1.037	15.20	0.22
1.059	19.09	0.23	1.059	17.73	0.22	1.057	16.50	0.22	1.057	15.51	0.22
1.079	19.45	0.22	1.079	18.05	0.22	1.077	16.81	0.22	1.077	15.85	0.22
1.099	19.81	0.22	1.099	18.45	0.22	1.097	17.15	0.22	1.097	16.13	0.22
1.119	20.20	0.22	1.119	18.77	0.22	1.117	17.47	0.22	1.117	16.44	0.22
1.139	20.57	0.22	1.139	19.15	0.22	1.137	17.80	0.22	1.137	16.71	0.22
1.159	20.94	0.22	1.158	19.53	0.22	1.157	18.11	0.22	1.157	17.02	0.22
1.179	21.34	0.22	1.178	19.82	0.22	1.177	18.46	0.22	1.177	17.32	0.22
1.199	21.72	0.22	1.198	20.20	0.22	1.197	18.79	0.22	1.197	17.62	0.22
1.219	22.09	0.22	1.218	20.55	0.22	1.217	19.12	0.22	1.217	17.92	0.22
1.239	22.45	0.22	1.238	20.91	0.22	1.237	19.44	0.22	1.237	18.26	0.22
1.259	22.83	0.22	1.258	21.26	0.22	1.257	19.74	0.22	1.257	18.53	0.22
1.279	23.23	0.22	1.278	21.57	0.22	1.277	20.04	0.22	1.277	18.84	0.22
1.299	23.63	0.22	1.298	21.97	0.22	1.297	20.41	0.22	1.297	19.16	0.22
1.319	24.02	0.22	1.318	22.32	0.22	1.317	20.71	0.22	1.317	19.47	0.22
1.339	24.43	0.23	1.338	22.68	0.22	1.337	21.04	0.22	1.337	19.78	0.22
1.359	24.81	0.23	1.358	23.00	0.22	1.357	21.38	0.22	1.357	20.07	0.22
1.379	25.17	0.22	1.378	23.40	0.22	1.377	21.71	0.22	1.377	20.40	0.22
1.398	25.56	0.22	1.398	23.78	0.22	1.397	22.04	0.22	1.397	20.70	0.22
1.418	25.98	0.23	1.418	24.09	0.22	1.416	22.36	0.22	1.416	20.96	0.22
1.438	26.39	0.23	1.438	24.42	0.22	1.436	22.67	0.22	1.436	21.29	0.22
1.458	26.79	0.23	1.458	24.77	0.22	1.456	23.03	0.22	1.456	21.60	0.22
1.478	27.19	0.23	1.478	25.19	0.22	1.476	23.37	0.22	1.476	21.90	0.22
1.498	27.57	0.23	1.498	25.53	0.22	1.496	23.67	0.22	1.496	22.24	0.22
1.518	27.95	0.23	1.517	25.87	0.22	1.516	24.00	0.22	1.516	22.57	0.22
1.538	28.38	0.23	1.537	26.26	0.22	1.536	24.33	0.22	1.536	22.87	0.22
1.558	28.78	0.23	1.557	26.64	0.22	1.556	24.64	0.22	1.556	23.19	0.22
1.578	29.14	0.23	1.577	26.94	0.22	1.576	24.94	0.22	1.576	23.46	0.22
1.598	29.57	0.23	1.597	27.32	0.22	1.596	25.31	0.22	1.596	23.78	0.22
1.618	29.94	0.23	1.617	27.67	0.22	1.616	25.61	0.22	1.616	24.08	0.22
1.638	30.36	0.23	1.637	28.03	0.22	1.636	25.96	0.22	1.636	24.40	0.22
1.658	30.76	0.23	1.657	28.44	0.22	1.656	26.28	0.22	1.656	24.70	0.22
1.678	31.17	0.23	1.677	28.77	0.22	1.676	26.63	0.22	1.676	24.99	0.22

1.698	31.57	0.23	1.697	29.17	0.22	1.696	27.00	0.22	1.696	25.34	0.22
1.718	31.95	0.23	1.717	29.50	0.22	1.716	27.33	0.22	1.716	25.63	0.22
1.738	32.35	0.23	1.737	29.86	0.22	1.736	27.59	0.22	1.736	25.96	0.22
1.758	32.80	0.23	1.757	30.25	0.22	1.756	28.00	0.22	1.756	26.25	0.22
1.777	33.22	0.23	1.777	30.63	0.22	1.776	28.32	0.22	1.776	26.55	0.22
1.797	33.58	0.23	1.797	31.01	0.22	1.795	28.64	0.22	1.795	26.87	0.22
1.817	33.98	0.23	1.817	31.34	0.22	1.815	28.96	0.22	1.815	27.19	0.22
1.837	34.44	0.23	1.837	31.73	0.22	1.835	29.34	0.22	1.835	27.50	0.22
1.857	34.87	0.23	1.857	32.11	0.22	1.855	29.65	0.22	1.855	27.81	0.22
1.877	35.28	0.23	1.877	32.47	0.22	1.875	30.01	0.22	1.875	28.14	0.22
1.897	35.67	0.23	1.896	32.83	0.22	1.895	30.30	0.22	1.895	28.48	0.22
1.917	36.10	0.23	1.916	33.23	0.22	1.915	30.64	0.22	1.915	28.77	0.22
1.937	36.51	0.23	1.936	33.58	0.22	1.935	30.99	0.22	1.935	29.10	0.22
1.957	36.92	0.23	1.956	33.98	0.22	1.955	31.33	0.22	1.955	29.41	0.22
1.977	37.35	0.23	1.976	34.34	0.22	1.975	31.66	0.22	1.975	29.68	0.22
1.997	37.78	0.23	1.996	34.73	0.22	1.995	32.01	0.22	1.995	29.99	0.22
2.017	38.15	0.23	2.016	35.12	0.22	2.015	32.39	0.22	2.015	30.31	0.22
2.037	38.62	0.23	2.036	35.50	0.22	2.035	32.71	0.22	2.035	30.62	0.22
2.057	39.08	0.23	2.056	35.87	0.22	2.055	33.08	0.22	2.055	30.99	0.22
2.077	39.52	0.23	2.076	36.21	0.22	2.075	33.40	0.22	2.075	31.31	0.22
2.097	39.95	0.23	2.096	36.62	0.22	2.095	33.72	0.22	2.095	31.60	0.22
2.117	40.34	0.23	2.116	36.97	0.22	2.115	34.08	0.22	2.115	31.94	0.22
2.136	40.76	0.23	2.136	37.35	0.22	2.135	34.44	0.22	2.135	32.27	0.22
2.156	41.19	0.23	2.156	37.71	0.22	2.155	34.78	0.22	2.155	32.60	0.22
2.176	41.63	0.23	2.176	38.11	0.22	2.174	35.12	0.22	2.174	32.91	0.22
2.196	42.06	0.23	2.196	38.47	0.22	2.194	35.45	0.22	2.194	33.23	0.22
2.216	42.53	0.23	2.216	38.87	0.22	2.214	35.82	0.22	2.214	33.54	0.22
2.236	42.99	0.23	2.236	39.21	0.22	2.234	36.18	0.22	2.234	33.86	0.22
2.256	43.39	0.23	2.255	39.61	0.22	2.254	36.51	0.22	2.254	34.20	0.22
2.276	43.86	0.23	2.275	40.01	0.22	2.274	36.87	0.22	2.274	34.52	0.22
2.296	44.27	0.23	2.295	40.39	0.22	2.294	37.23	0.22	2.294	34.82	0.22
2.316	44.74	0.23	2.315	40.78	0.22	2.314	37.59	0.22	2.314	35.13	0.22
2.336	45.19	0.23	2.335	41.16	0.22	2.334	37.94	0.22	2.334	35.45	0.22
2.356	45.62	0.23	2.355	41.54	0.22	2.354	38.28	0.22	2.354	35.77	0.22
2.376	46.03	0.23	2.375	41.91	0.22	2.374	38.61	0.22	2.374	36.08	0.22
2.396	46.53	0.23	2.395	42.34	0.22	2.394	38.99	0.22	2.394	36.44	0.22
2.416	46.94	0.23	2.415	42.70	0.22	2.414	39.37	0.22	2.414	36.79	0.22
2.436	47.41	0.23	2.435	43.08	0.22	2.434	39.74	0.22	2.434	37.09	0.22
2.456	47.81	0.23	2.455	43.48	0.22	2.454	40.10	0.22	2.454	37.44	0.22
2.476	48.28	0.23	2.475	43.87	0.22	2.474	40.46	0.22	2.474	37.74	0.22
2.495	48.73	0.23	2.495	44.29	0.22	2.494	40.81	0.22	2.494	38.05	0.22
2.515	49.19	0.23	2.515	44.66	0.22	2.514	41.17	0.22	2.514	38.40	0.22
2.535	49.65	0.23	2.535	45.04	0.22	2.533	41.54	0.22	2.533	38.73	0.22
2.555	50.11	0.23	2.555	45.45	0.22	2.553	41.92	0.22	2.553	39.03	0.22
2.575	50.60	0.23	2.575	45.86	0.22	2.573	42.28	0.22	2.573	39.31	0.22



2.595	51.04	0.23	2.595	46.26	0.22	2.593	42.60	0.22	2.593	39.64	0.22
2.615	51.52	0.23	2.615	46.65	0.22	2.613	42.99	0.22	2.613	40.00	0.22
2.635	51.95	0.23	2.634	47.02	0.22	2.633	43.34	0.22	2.633	40.35	0.22
2.655	52.44	0.23	2.654	47.41	0.22	2.653	43.65	0.22	2.653	40.66	0.22
2.675	52.85	0.23	2.674	47.85	0.22	2.673	44.07	0.22	2.673	40.97	0.22
2.695	53.36	0.23	2.694	48.24	0.22	2.693	44.38	0.22	2.693	41.29	0.22
2.715	53.85	0.23	2.714	48.65	0.23	2.713	44.77	0.22	2.713	41.64	0.22
2.735	54.26	0.23	2.734	49.04	0.23	2.733	45.16	0.22	2.733	41.98	0.22
2.755	54.75	0.23	2.754	49.43	0.22	2.753	45.47	0.22	2.753	42.31	0.22
2.775	55.23	0.23	2.774	49.85	0.23	2.773	45.85	0.22	2.773	42.65	0.22
2.795	55.68	0.23	2.794	50.28	0.23	2.793	46.23	0.22	2.793	42.98	0.22
2.815	56.20	0.23	2.814	50.70	0.23	2.813	46.60	0.22	2.813	43.32	0.22
2.835	56.65	0.23	2.834	51.11	0.23	2.833	46.96	0.22	2.833	43.64	0.22
2.855	57.17	0.23	2.854	51.52	0.23	2.853	47.31	0.22	2.853	43.96	0.22
2.874	57.60	0.23	2.874	51.91	0.23	2.873	47.67	0.22	2.873	44.27	0.22
2.894	58.11	0.23	2.894	52.34	0.23	2.893	48.03	0.22	2.893	44.61	0.22
2.914	58.60	0.23	2.914	52.75	0.23	2.912	48.38	0.22	2.912	44.96	0.22
2.934	59.09	0.23	2.934	53.14	0.23	2.932	48.71	0.22	2.932	45.31	0.22
2.954	59.59	0.23	2.954	53.54	0.23	2.952	49.14	0.22	2.952	45.66	0.22
2.974	60.09	0.23	2.974	53.93	0.23	2.972	49.48	0.22	2.972	45.96	0.22
2.994	60.58	0.23	2.993	54.38	0.23	2.992	49.81	0.22	2.992	46.26	0.22
3.014	61.06	0.23	3.013	54.76	0.23	3.012	50.21	0.22	3.012	46.63	0.22
3.034	61.54	0.23	3.033	55.16	0.23	3.032	50.61	0.22	3.032	47.00	0.22
3.054	62.09	0.23	3.053	55.58	0.23	3.052	50.94	0.22	3.052	47.32	0.22
3.074	62.55	0.23	3.073	56.00	0.23	3.072	51.31	0.22	3.072	47.64	0.22
3.094	63.04	0.23	3.093	56.39	0.23	3.092	51.73	0.22	3.092	47.96	0.22
3.114	63.55	0.23	3.113	56.83	0.23	3.112	52.06	0.22	3.112	48.29	0.22
3.134	64.09	0.23	3.133	57.26	0.23	3.132	52.42	0.22	3.132	48.64	0.22
3.154	64.59	0.23	3.153	57.63	0.23	3.152	52.80	0.22	3.152	48.99	0.22
3.174	65.06	0.23	3.173	58.06	0.23	3.172	53.18	0.22	3.172	49.34	0.22
3.194	65.58	0.23	3.193	58.50	0.23	3.192	53.52	0.22	3.192	49.70	0.22
3.214	66.07	0.23	3.213	58.95	0.23	3.212	53.92	0.22	3.212	50.05	0.22
3.233	66.61	0.23	3.233	59.36	0.23	3.232	54.29	0.22	3.232	50.35	0.22
3.253	67.10	0.23	3.253	59.79	0.23	3.252	54.69	0.22	3.252	50.71	0.22
3.273	67.59	0.23	3.273	60.19	0.23	3.272	55.06	0.22	3.272	51.02	0.22
3.293	68.10	0.23	3.293	60.60	0.23	3.291	55.44	0.22	3.291	51.34	0.22
3.313	68.64	0.23	3.313	61.01	0.23	3.311	55.81	0.22	3.311	51.70	0.22
3.333	69.14	0.23	3.333	61.42	0.23	3.331	56.18	0.22	3.331	52.04	0.22
3.353	69.66	0.23	3.353	61.90	0.23	3.351	56.55	0.22	3.351	52.38	0.22
3.373	70.25	0.23	3.372	62.30	0.23	3.371	56.91	0.22	3.371	52.72	0.22
3.393	70.76	0.23	3.392	62.76	0.23	3.391	57.30	0.22	3.391	53.06	0.22
3.413	71.26	0.23	3.412	63.16	0.23	3.411	57.70	0.22	3.411	53.39	0.22
3.433	71.79	0.23	3.432	63.61	0.23	3.431	58.06	0.22	3.431	53.74	0.22
3.453	72.33	0.23	3.452	64.01	0.23	3.451	58.40	0.22	3.451	54.11	0.22
3.473	72.88	0.23	3.472	64.44	0.23	3.471	58.82	0.22	3.471	54.43	0.22

3.493	73.39	0.23	3.492	64.90	0.23	3.491	59.16	0.22	3.491	54.75	0.22
3.513	73.95	0.23	3.512	65.35	0.23	3.511	59.58	0.22	3.511	55.08	0.22
3.533	74.45	0.23	3.532	65.80	0.23	3.531	59.99	0.22	3.531	55.44	0.22
3.553	75.03	0.23	3.552	66.23	0.23	3.551	60.34	0.22	3.551	55.81	0.22
3.573	75.54	0.23	3.572	66.67	0.23	3.571	60.73	0.22	3.571	56.16	0.22
3.592	76.09	0.23	3.592	67.10	0.23	3.591	61.08	0.22	3.591	56.46	0.22
3.612	76.65	0.23	3.612	67.53	0.23	3.611	61.49	0.22	3.611	56.79	0.22
3.632	77.19	0.23	3.632	67.95	0.23	3.631	61.88	0.22	3.631	57.14	0.22
3.652	77.69	0.23	3.652	68.39	0.23	3.651	62.28	0.22	3.651	57.49	0.22
3.672	78.24	0.23	3.672	68.82	0.23	3.670	62.67	0.22	3.670	57.83	0.22
3.692	78.78	0.23	3.692	69.29	0.23	3.690	63.06	0.22	3.690	58.17	0.22
3.712	79.33	0.23	3.712	69.71	0.23	3.710	63.45	0.22	3.710	58.55	0.22
3.732	79.86	0.23	3.731	70.17	0.23	3.730	63.83	0.22	3.730	58.92	0.22
3.752	80.40	0.23	3.751	70.60	0.23	3.750	64.21	0.22	3.750	59.25	0.22
3.772	80.99	0.23	3.771	71.04	0.23	3.770	64.59	0.22	3.770	59.60	0.22
3.792	81.52	0.23	3.791	71.51	0.23	3.790	64.98	0.22	3.790	59.98	0.22
3.812	82.05	0.23	3.811	71.97	0.23	3.810	65.41	0.23	3.810	60.31	0.22
3.832	82.57	0.23	3.831	72.43	0.23	3.830	65.77	0.22	3.830	60.64	0.22
3.852	83.17	0.23	3.851	72.88	0.23	3.850	66.15	0.22	3.850	61.00	0.22
3.872	83.70	0.23	3.871	73.32	0.23	3.870	66.58	0.23	3.870	61.36	0.22
3.892	84.23	0.23	3.891	73.79	0.23	3.890	67.02	0.23	3.890	61.73	0.22
3.912	84.80	0.23	3.911	74.23	0.23	3.910	67.37	0.23	3.910	62.08	0.22
3.932	85.32	0.23	3.931	74.69	0.23	3.930	67.77	0.23	3.930	62.43	0.22
3.951	85.91	0.23	3.951	75.16	0.23	3.950	68.19	0.23	3.950	62.78	0.22
3.971	86.43	0.23	3.971	75.62	0.23	3.970	68.60	0.23	3.970	63.12	0.22
3.991	87.02	0.23	3.991	76.09	0.23	3.990	69.01	0.23	3.990	63.47	0.22
4.011	87.58	0.23	4.011	76.55	0.23	4.010	69.41	0.23	4.010	63.82	0.22
4.031	88.11	0.23	4.031	77.01	0.23	4.029	69.82	0.23	4.029	64.20	0.22
4.051	88.68	0.23	4.051	77.47	0.23	4.049	70.21	0.23	4.049	64.55	0.22
4.071	89.23	0.23	4.071	77.92	0.23	4.069	70.58	0.23	4.069	64.88	0.22
4.091	89.78	0.23	4.090	78.36	0.23	4.089	70.98	0.23	4.089	65.24	0.22
4.111	90.37	0.23	4.110	78.84	0.23	4.109	71.38	0.23	4.109	65.62	0.22
4.131	90.93	0.23	4.130	79.34	0.23	4.129	71.77	0.23	4.129	65.98	0.22
4.151	91.51	0.23	4.150	79.77	0.23	4.149	72.23	0.23	4.149	66.35	0.22
4.171	92.05	0.23	4.170	80.26	0.23	4.169	72.62	0.23	4.169	66.71	0.22
4.191	92.61	0.23	4.190	80.71	0.23	4.189	73.00	0.23	4.189	67.06	0.22
4.211	93.19	0.23	4.210	81.23	0.23	4.209	73.39	0.23	4.209	67.42	0.22
4.231	93.75	0.23	4.230	81.63	0.23	4.229	73.85	0.23	4.229	67.78	0.22
4.251	94.31	0.23	4.250	82.15	0.23	4.249	74.22	0.23	4.249	68.13	0.22
4.271	94.94	0.23	4.270	82.66	0.23	4.269	74.60	0.23	4.269	68.47	0.22
4.291	95.50	0.23	4.290	83.10	0.23	4.289	75.04	0.23	4.289	68.85	0.22
4.311	96.05	0.23	4.310	83.54	0.23	4.309	75.43	0.23	4.309	69.23	0.22
4.330	96.61	0.23	4.330	84.06	0.23	4.329	75.84	0.23	4.329	69.57	0.22
4.350	97.16	0.23	4.350	84.51	0.23	4.349	76.24	0.23	4.349	69.91	0.22
4.370	97.76	0.23	4.370	84.99	0.23	4.369	76.66	0.23	4.369	70.28	0.22

4.390	98.32	0.23	4.390	85.50	0.23	4.389	77.08	0.23	4.389	70.65	0.22
4.410	98.94	0.23	4.410	85.98	0.23	4.408	77.44	0.23	4.408	71.04	0.22
4.430	99.54	0.23	4.430	86.47	0.23	4.428	77.90	0.23	4.428	71.44	0.22
4.450	100.10	0.23	4.450	86.90	0.23	4.448	78.29	0.23	4.448	71.81	0.22
4.470	100.70	0.23	4.469	87.42	0.23	4.468	78.71	0.23	4.468	72.17	0.22
4.490	101.27	0.23	4.489	87.88	0.23	4.488	79.12	0.23	4.488	72.52	0.22
4.510	101.87	0.23	4.509	88.37	0.23	4.508	79.56	0.23	4.508	72.88	0.22
4.530	102.49	0.23	4.529	88.88	0.23	4.528	79.96	0.23	4.528	73.24	0.22
4.550	103.10	0.23	4.549	89.39	0.23	4.548	80.33	0.23	4.548	73.62	0.22
4.570	103.71	0.23	4.569	89.88	0.23	4.568	80.77	0.23	4.568	74.00	0.22
4.590	104.34	0.23	4.589	90.39	0.23	4.588	81.13	0.23	4.588	74.38	0.22
4.610	104.93	0.23	4.609	90.88	0.23	4.608	81.58	0.23	4.608	74.76	0.22
4.630	105.52	0.23	4.629	91.38	0.23	4.628	82.02	0.23	4.628	75.12	0.22
4.650	106.12	0.23	4.649	91.86	0.23	4.648	82.46	0.23	4.648	75.49	0.22
4.670	106.72	0.23	4.669	92.35	0.23	4.668	82.88	0.23	4.668	75.86	0.22
4.689	107.33	0.23	4.689	92.83	0.23	4.688	83.25	0.23	4.688	76.24	0.22
4.709	107.93	0.23	4.709	93.31	0.23	4.708	83.67	0.23	4.708	76.62	0.22
4.729	108.55	0.23	4.729	93.85	0.23	4.728	84.09	0.23	4.728	76.93	0.22
4.749	109.22	0.23	4.749	94.34	0.23	4.748	84.52	0.23	4.748	77.29	0.22
4.769	109.82	0.23	4.769	94.83	0.23	4.768	84.93	0.23	4.768	77.70	0.22
4.789	110.43	0.23	4.789	95.36	0.23	4.787	85.35	0.23	4.787	78.10	0.22
4.809	111.07	0.23	4.809	95.83	0.23	4.807	85.84	0.23	4.807	78.40	0.22
4.829	111.70	0.23	4.828	96.34	0.23	4.827	86.21	0.23	4.827	78.83	0.22
4.849	112.36	0.23	4.848	96.83	0.23	4.847	86.66	0.23	4.847	79.22	0.22
4.869	112.96	0.23	4.868	97.38	0.23	4.867	87.07	0.23	4.867	79.58	0.22
4.889	113.62	0.23	4.888	97.90	0.23	4.887	87.47	0.23	4.887	79.94	0.22
4.909	114.29	0.23	4.908	98.39	0.23	4.907	87.92	0.23	4.907	80.29	0.22
4.929	114.89	0.23	4.928	98.89	0.23	4.927	88.35	0.23	4.927	80.70	0.22
4.949	115.52	0.23	4.948	99.40	0.23	4.947	88.82	0.23	4.947	81.08	0.22
4.969	116.19	0.23	4.968	99.93	0.23	4.967	89.22	0.23	4.967	81.44	0.22
4.989	116.85	0.23	4.988	100.48	0.23	4.987	89.65	0.23	4.987	81.84	0.22
5.009	117.48	0.23	5.008	101.01	0.23	5.007	90.07	0.23	5.007	82.19	0.22
5.029	118.12	0.23	5.028	101.52	0.23	5.027	90.53	0.23	5.027	82.56	0.22
5.048	118.80	0.23	5.048	101.98	0.23	5.047	90.93	0.23	5.047	82.95	0.22
5.068	119.47	0.23	5.068	102.51	0.23	5.067	91.35	0.23	5.067	83.34	0.22
5.088	120.15	0.23	5.088	103.04	0.23	5.087	91.83	0.23	5.087	83.74	0.22
5.108	120.82	0.23	5.108	103.56	0.23	5.107	92.22	0.23	5.107	84.13	0.22
5.128	121.50	0.23	5.128	104.13	0.23	5.127	92.68	0.23	5.127	84.53	0.22
5.148	122.14	0.23	5.148	104.67	0.23	5.147	93.12	0.23	5.147	84.91	0.22
5.168	122.81	0.23	5.168	105.18	0.23	5.166	93.52	0.23	5.166	85.30	0.22
5.188	123.51	0.23	5.188	105.69	0.23	5.186	94.00	0.23	5.186	85.68	0.22
5.208	124.26	0.23	5.207	106.28	0.23	5.206	94.46	0.23	5.206	86.08	0.23
5.228	124.95	0.23	5.227	106.79	0.23	5.226	94.91	0.23	5.226	86.40	0.22
5.248	125.62	0.23	5.247	107.31	0.23	5.246	95.29	0.23	5.246	86.78	0.22
5.268	126.30	0.23	5.267	107.87	0.23	5.266	95.74	0.23	5.266	87.19	0.23

5.288	126.98	0.23	5.287	108.39	0.23	5.286	96.19	0.23	5.286	87.57	0.23
5.308	127.71	0.23	5.307	108.94	0.23	5.306	96.65	0.23	5.306	87.97	0.23
5.328	128.43	0.23	5.327	109.47	0.23	5.326	97.09	0.23	5.326	88.35	0.23
5.348	129.14	0.23	5.347	110.05	0.23	5.346	97.53	0.23	5.346	88.74	0.23
5.368	129.82	0.23	5.367	110.57	0.23	5.366	97.97	0.23	5.366	89.12	0.23
5.388	130.58	0.23	5.387	111.11	0.23	5.386	98.40	0.23	5.386	89.50	0.23
5.407	131.31	0.23	5.407	111.68	0.23	5.406	98.86	0.23	5.406	89.89	0.23
5.427	132.06	0.23	5.427	112.25	0.23	5.426	99.31	0.23	5.426	90.27	0.23
5.447	132.78	0.23	5.447	112.76	0.23	5.446	99.79	0.23	5.446	90.64	0.23
5.467	133.48	0.23	5.467	113.28	0.23	5.466	100.22	0.23	5.466	91.02	0.23
5.487	134.24	0.23	5.487	113.85	0.23	5.486	100.65	0.23	5.486	91.39	0.23
5.507	134.98	0.23	5.507	114.43	0.23	5.506	101.13	0.23	5.506	91.85	0.23
5.527	135.75	0.23	5.527	114.99	0.23	5.525	101.58	0.23	5.525	92.21	0.23
5.547	136.50	0.23	5.547	115.53	0.23	5.545	102.06	0.23	5.545	92.57	0.23
5.567	137.26	0.23	5.566	116.08	0.23	5.565	102.49	0.23	5.565	92.97	0.23
5.587	138.02	0.23	5.586	116.67	0.23	5.585	102.98	0.23	5.585	93.38	0.23
5.607	138.78	0.23	5.606	117.25	0.23	5.605	103.39	0.23	5.605	93.74	0.23
5.627	139.55	0.23	5.626	117.79	0.23	5.625	103.82	0.23	5.625	94.18	0.23
5.647	140.33	0.23	5.646	118.40	0.23	5.645	104.32	0.23	5.645	94.54	0.23
5.667	141.09	0.23	5.666	118.96	0.23	5.665	104.78	0.23	5.665	94.92	0.23
5.687	141.91	0.23	5.686	119.49	0.23	5.685	105.20	0.23	5.685	95.32	0.23
5.707	142.71	0.23	5.706	120.08	0.23	5.705	105.69	0.23	5.705	95.72	0.23
5.727	143.47	0.23	5.726	120.64	0.23	5.725	106.16	0.23	5.725	96.10	0.23
5.747	144.28	0.23	5.746	121.22	0.23	5.745	106.59	0.23	5.745	96.51	0.23
5.767	145.07	0.23	5.766	121.84	0.23	5.765	107.07	0.23	5.765	96.86	0.23
5.786	145.91	0.23	5.786	122.41	0.23	5.785	107.54	0.23	5.785	97.30	0.23
5.806	146.69	0.23	5.806	122.97	0.23	5.805	108.02	0.23	5.805	97.71	0.23
5.826	147.54	0.23	5.826	123.58	0.23	5.825	108.49	0.23	5.825	98.08	0.23
5.846	148.39	0.23	5.846	124.18	0.23	5.845	108.95	0.23	5.845	98.50	0.23
5.866	149.22	0.23	5.866	124.77	0.23	5.865	109.42	0.23	5.865	98.89	0.23
5.886	150.03	0.23	5.886	125.37	0.23	5.885	109.87	0.23	5.885	99.27	0.23
5.906	150.89	0.23	5.906	125.95	0.23	5.904	110.30	0.23	5.904	99.69	0.23
5.926	151.77	0.23	5.926	126.49	0.23	5.924	110.81	0.23	5.924	100.10	0.23
5.946	152.66	0.23	5.945	127.07	0.23	5.944	111.27	0.23	5.944	100.51	0.23
5.966	153.54	0.23	5.965	127.73	0.23	5.964	111.73	0.23	5.964	100.87	0.23
5.986	154.48	0.23	5.985	128.33	0.23	5.984	112.22	0.23	5.984	101.27	0.23
6.006	155.36	0.23	6.005	128.92	0.23	6.004	112.73	0.23	6.004	101.68	0.23
6.026	156.26	0.23	6.025	129.50	0.23	6.024	113.18	0.23	6.024	102.09	0.23
6.046	157.17	0.23	6.045	130.10	0.23	6.044	113.62	0.23	6.044	102.49	0.23
6.066	158.11	0.23	6.065	130.73	0.23	6.064	114.07	0.23	6.064	102.89	0.23
6.086	159.05	0.23	6.085	131.32	0.23	6.084	114.60	0.23	6.084	103.29	0.23
6.106	160.07	0.23	6.105	131.94	0.23	6.104	115.04	0.23	6.104	103.69	0.23
6.126	161.00	0.23	6.125	132.56	0.23	6.124	115.53	0.23	6.124	104.10	0.23
6.145	161.98	0.23	6.145	133.15	0.23	6.144	116.00	0.23	6.144	104.49	0.23
6.165	163.00	0.23	6.165	133.76	0.23	6.164	116.50	0.23	6.164	104.88	0.23

6.185	163.97	0.23	6.185	134.41	0.23	6.184	117.02	0.23	6.184	105.29	0.23
6.205	165.02	0.24	6.205	135.05	0.23	6.204	117.47	0.23	6.204	105.75	0.23
6.225	166.09	0.24	6.225	135.63	0.23	6.224	117.94	0.23	6.224	106.13	0.23
6.245	167.08	0.24	6.245	136.26	0.23	6.244	118.45	0.23	6.244	106.51	0.23
6.265	168.17	0.24	6.265	136.91	0.23	6.264	118.92	0.23	6.264	106.98	0.23
6.285	169.26	0.24	6.285	137.54	0.23	6.283	119.37	0.23	6.283	107.37	0.23
6.305	170.34	0.24	6.304	138.19	0.23	6.303	119.88	0.23	6.303	107.76	0.23
6.325	171.38	0.24	6.324	138.83	0.23	6.323	120.37	0.23	6.323	108.22	0.23
6.345	172.54	0.24	6.344	139.46	0.23	6.343	120.86	0.23	6.343	108.59	0.23
6.365	173.67	0.24	6.364	140.10	0.23	6.363	121.36	0.23	6.363	108.97	0.23
6.385	174.78	0.24	6.384	140.74	0.23	6.383	121.85	0.23	6.383	109.41	0.23
6.405	175.91	0.24	6.404	141.37	0.23	6.403	122.33	0.23	6.403	109.79	0.23
6.425	177.05	0.24	6.424	142.01	0.23	6.423	122.82	0.23	6.423	110.24	0.23
6.445	178.20	0.24	6.444	142.65	0.23	6.443	123.31	0.23	6.443	110.63	0.23
6.465	179.39	0.24	6.464	143.35	0.23	6.463	123.79	0.23	6.463	111.06	0.23
6.485	180.64	0.24	6.484	143.99	0.23	6.483	124.28	0.23	6.483	111.49	0.23
6.504	181.87	0.24	6.504	144.61	0.23	6.503	124.82	0.23	6.503	111.88	0.23
6.524	183.11	0.24	6.524	145.28	0.23	6.523	125.29	0.23	6.523	112.30	0.23
6.544	184.32	0.24	6.544	145.95	0.23	6.543	125.77	0.23	6.543	112.74	0.23
6.564	185.66	0.24	6.564	146.60	0.23	6.563	126.29	0.23	6.563	113.14	0.23
6.584	186.98	0.24	6.584	147.31	0.23	6.583	126.79	0.23	6.583	113.53	0.23
6.604	188.26	0.24	6.604	147.95	0.23	6.603	127.29	0.23	6.603	113.97	0.23
6.624	189.59	0.24	6.624	148.63	0.23	6.623	127.81	0.23	6.623	114.40	0.23
6.644	190.94	0.24	6.644	149.25	0.23	6.642	128.29	0.23	6.642	114.82	0.23
6.664	192.33	0.24	6.663	149.95	0.23	6.662	128.82	0.23	6.662	115.26	0.23
6.684	193.74	0.24	6.683	150.60	0.23	6.682	129.34	0.23	6.682	115.68	0.23
6.704	195.12	0.24	6.703	151.26	0.23	6.702	129.82	0.23	6.702	116.10	0.23
6.724	196.57	0.24	6.723	151.96	0.23	6.722	130.33	0.23	6.722	116.53	0.23
6.744	198.06	0.24	6.743	152.65	0.23	6.742	130.85	0.23	6.742	116.95	0.23
6.764	199.59	0.24	6.763	153.34	0.23	6.762	131.37	0.23	6.762	117.37	0.23
6.784	201.10	0.24	6.783	154.05	0.23	6.782	131.90	0.23	6.782	117.78	0.23
6.804	202.63	0.24	6.803	154.74	0.23	6.802	132.35	0.23	6.802	118.20	0.23
6.824	204.16	0.24	6.823	155.42	0.23	6.822	132.90	0.23	6.822	118.62	0.23
6.844	205.72	0.24	6.843	156.11	0.23	6.842	133.45	0.23	6.842	119.03	0.23
6.863	207.34	0.24	6.863	156.80	0.23	6.862	133.95	0.23	6.862	119.44	0.23
6.883	208.97	0.24	6.883	157.51	0.23	6.882	134.40	0.23	6.882	119.85	0.23
6.903	210.59	0.24	6.903	158.24	0.23	6.902	134.92	0.23	6.902	120.32	0.23
6.923	212.21	0.24	6.923	158.94	0.23	6.922	135.49	0.23	6.922	120.74	0.23
6.943	213.94	0.25	6.943	159.69	0.23	6.942	136.03	0.23	6.942	121.15	0.23
6.963	215.64	0.25	6.963	160.37	0.23	6.962	136.54	0.23	6.962	121.58	0.23
6.983	217.38	0.25	6.983	161.11	0.23	6.982	137.04	0.23	6.982	122.03	0.23
7.003	219.10	0.25	7.003	161.81	0.23	7.002	137.62	0.23	7.002	122.43	0.23
7.023	220.86	0.25	7.023	162.50	0.23	7.021	138.12	0.23	7.021	122.90	0.23
7.043	222.74	0.25	7.042	163.22	0.23	7.041	138.66	0.23	7.041	123.30	0.23
7.063	224.63	0.25	7.062	163.97	0.23	7.061	139.20	0.23	7.061	123.74	0.23

7.083	226.57	0.25	7.082	164.65	0.23	7.081	139.70	0.23	7.081	124.18	0.23
7.103	228.47	0.25	7.102	165.41	0.23	7.101	140.27	0.23	7.101	124.60	0.23
7.123	230.48	0.25	7.122	166.18	0.23	7.121	140.75	0.23	7.121	125.06	0.23
7.143	232.46	0.25	7.142	166.94	0.23	7.141	141.31	0.23	7.141	125.45	0.23
7.163	234.53	0.25	7.162	167.65	0.23	7.161	141.81	0.23	7.161	125.91	0.23
7.183	236.58	0.25	7.182	168.36	0.23	7.181	142.33	0.23	7.181	126.35	0.23
7.203	238.62	0.25	7.202	169.11	0.23	7.201	142.88	0.23	7.201	126.80	0.23
7.223	240.80	0.25	7.222	169.85	0.23	7.221	143.43	0.23	7.221	127.25	0.23
7.242	243.18	0.25	7.242	170.61	0.23	7.241	143.97	0.23	7.241	127.68	0.23
7.262	245.41	0.25	7.262	171.35	0.23	7.261	144.52	0.23	7.261	128.08	0.23
7.282	247.65	0.25	7.282	172.17	0.23	7.281	145.06	0.23	7.281	128.52	0.23
7.302	249.93	0.26	7.302	172.94	0.23	7.301	145.61	0.23	7.301	128.96	0.23
7.322	252.28	0.26	7.322	173.68	0.23	7.321	146.16	0.23	7.321	129.41	0.23
7.342	254.66	0.26	7.342	174.44	0.23	7.341	146.68	0.23	7.341	129.85	0.23
7.362	257.10	0.26	7.362	175.20	0.23	7.361	147.21	0.23	7.361	130.29	0.23
7.382	259.54	0.26	7.382	176.01	0.23	7.381	147.76	0.23	7.381	130.72	0.23
7.402	261.90	0.26	7.401	176.78	0.24	7.400	148.29	0.23	7.400	131.16	0.23
7.422	264.43	0.26	7.421	177.52	0.24	7.420	148.86	0.23	7.420	131.60	0.23
7.442	266.90	0.26	7.441	178.35	0.24	7.440	149.43	0.23	7.440	132.04	0.23
7.462	269.67	0.26	7.461	179.13	0.24	7.460	149.97	0.23	7.460	132.47	0.23
7.482	272.20	0.26	7.481	179.90	0.24	7.480	150.50	0.23	7.480	132.90	0.23
7.502	274.59	0.26	7.501	180.72	0.24	7.500	151.01	0.23	7.500	133.37	0.23
7.522	277.73	0.26	7.521	181.54	0.24	7.520	151.64	0.23	7.520	133.84	0.23
7.542	281.15	0.26	7.541	182.30	0.24	7.540	152.17	0.23	7.540	134.27	0.23
7.562	284.56	0.27	7.561	183.07	0.24	7.560	152.69	0.23	7.560	134.71	0.23
7.582	287.68	0.27	7.581	183.94	0.24	7.580	153.29	0.23	7.580	135.13	0.23
7.601	291.01	0.27	7.601	184.78	0.24	7.600	153.82	0.23	7.600	135.58	0.23
7.621	294.66	0.27	7.621	185.57	0.24	7.620	154.42	0.23	7.620	136.06	0.23
7.641	298.26	0.27	7.641	186.38	0.24	7.640	154.96	0.23	7.640	136.48	0.23
7.661	301.90	0.27	7.661	187.20	0.24	7.660	155.53	0.23	7.660	136.96	0.23
7.681	305.75	0.27	7.681	188.02	0.24	7.680	156.04	0.23	7.680	137.40	0.23
7.701	309.71	0.27	7.701	188.85	0.24	7.700	156.62	0.23	7.700	137.84	0.23
7.721	313.87	0.28	7.721	189.71	0.24	7.720	157.19	0.23	7.720	138.31	0.23
7.741	317.99	0.28	7.741	190.55	0.24	7.740	157.81	0.23	7.740	138.73	0.23
7.761	322.25	0.28	7.761	191.36	0.24	7.760	158.34	0.23	7.760	139.19	0.23
7.781	326.61	0.28	7.780	192.21	0.24	7.779	158.92	0.23	7.779	139.66	0.23
7.801	331.13	0.28	7.800	193.07	0.24	7.799	159.48	0.23	7.799	140.13	0.23
7.821	336.91	0.28	7.820	193.92	0.24	7.819	160.10	0.23	7.819	140.55	0.23
7.841	341.72	0.29	7.840	194.81	0.24	7.839	160.63	0.23	7.839	141.01	0.23
7.861	346.35	0.29	7.860	195.64	0.24	7.859	161.24	0.23	7.859	141.48	0.23
7.881	350.95	0.29	7.880	196.48	0.24	7.879	161.76	0.23	7.879	141.95	0.23
7.901	357.17	0.29	7.900	197.37	0.24	7.899	162.36	0.23	7.899	142.42	0.23
7.921	363.56	0.30	7.920	198.28	0.24	7.919	162.93	0.23	7.919	142.88	0.23
7.941	369.61	0.30	7.940	199.16	0.24	7.939	163.49	0.23	7.939	143.32	0.23
7.960	376.20	0.30	7.960	200.05	0.24	7.959	164.10	0.23	7.959	143.73	0.23

7.980	382.24	0.30	7.980	200.94	0.24	7.979	164.69	0.23	7.979	144.20	0.23
8.000	388.00	0.30	8.000	201.79	0.24	7.999	165.31	0.23	7.999	144.70	0.23
8.020	393.84	0.31	8.020	202.68	0.24	8.019	165.90	0.23	8.019	145.18	0.23
8.040	399.44	0.31	8.040	203.63	0.24	8.039	166.40	0.23	8.039	145.60	0.23
8.060	405.53	0.31	8.060	204.51	0.24	8.059	167.00	0.23	8.059	146.11	0.23
8.080	413.70	0.31	8.080	205.42	0.24	8.079	167.60	0.23	8.079	146.57	0.23
8.100	422.26	0.32	8.100	206.34	0.24	8.099	168.20	0.23	8.099	147.02	0.23
8.120	429.94	0.32	8.120	207.28	0.24	8.119	168.80	0.23	8.119	147.48	0.23
8.140	439.64	0.33	8.139	208.20	0.24	8.138	169.40	0.23	8.138	147.93	0.23
8.160	448.34	0.33	8.159	209.10	0.24	8.158	169.98	0.23	8.158	148.39	0.23
8.180	456.58	0.33	8.179	210.03	0.24	8.178	170.56	0.23	8.178	148.86	0.23
8.200	464.93	0.34	8.199	211.00	0.24	8.198	171.16	0.23	8.198	149.36	0.23
8.220	472.96	0.34	8.219	211.94	0.24	8.218	171.78	0.23	8.218	149.83	0.23
8.240	480.01	0.34	8.239	212.89	0.24	8.238	172.42	0.23	8.238	150.27	0.23
8.260	487.00	0.34	8.259	213.84	0.24	8.258	173.02	0.23	8.258	150.72	0.23
8.280	493.42	0.34	8.279	214.76	0.24	8.278	173.59	0.23	8.278	151.23	0.23
8.300	499.41	0.35	8.299	215.73	0.24	8.298	174.18	0.23	8.298	151.70	0.23
8.320	504.97	0.35	8.319	216.70	0.24	8.318	174.81	0.23	8.318	152.15	0.23
8.339	510.69	0.35	8.339	217.69	0.24	8.338	175.42	0.23	8.338	152.66	0.23
8.359	516.22	0.35	8.359	218.72	0.24	8.358	176.01	0.23	8.358	153.11	0.23
8.379	521.45	0.35	8.379	219.68	0.24	8.378	176.67	0.23	8.378	153.57	0.23
8.399	526.19	0.35	8.399	220.66	0.24	8.398	177.24	0.23	8.398	154.06	0.23
8.419	530.52	0.35	8.419	221.67	0.24	8.418	177.87	0.23	8.418	154.51	0.23
8.439	534.44	0.35	8.439	222.67	0.24	8.438	178.46	0.23	8.438	154.98	0.23
8.459	538.23	0.35	8.459	223.65	0.24	8.458	179.06	0.23	8.458	155.47	0.23
8.479	541.43	0.35	8.479	224.65	0.24	8.478	179.70	0.23	8.478	155.96	0.23
8.499	545.90	0.35	8.499	225.68	0.24	8.498	180.33	0.23	8.498	156.42	0.23
8.519	550.79	0.35	8.518	226.68	0.24	8.517	180.93	0.23	8.517	156.88	0.23
8.539	554.69	0.35	8.538	227.74	0.24	8.537	181.59	0.23	8.537	157.37	0.23
8.559	559.05	0.35	8.558	228.76	0.24	8.557	182.17	0.23	8.557	157.86	0.23
8.579	562.55	0.35	8.578	229.78	0.24	8.577	182.81	0.23	8.577	158.35	0.23
8.599	566.11	0.35	8.598	230.83	0.24	8.597	183.44	0.23	8.597	158.84	0.23
8.619	569.16	0.35	8.618	231.88	0.24	8.617	184.05	0.23	8.617	159.33	0.23
8.639	572.04	0.34	8.638	232.94	0.24	8.637	184.71	0.23	8.637	159.81	0.23
8.659	574.54	0.34	8.658	233.99	0.24	8.657	185.31	0.23	8.657	160.29	0.23
8.679	577.52	0.34	8.678	235.12	0.24	8.677	185.97	0.23	8.677	160.78	0.23
8.698	580.11	0.34	8.698	236.18	0.24	8.697	186.58	0.23	8.697	161.26	0.23
8.718	584.25	0.34	8.718	237.24	0.24	8.717	187.21	0.23	8.717	161.74	0.23
8.738	587.29	0.34	8.738	238.36	0.24	8.737	187.87	0.23	8.737	162.23	0.23
8.758	590.30	0.34	8.758	239.42	0.24	8.757	188.48	0.23	8.757	162.71	0.23
8.778	593.27	0.34	8.778	240.53	0.24	8.777	189.15	0.23	8.777	163.19	0.23
8.798	596.82	0.34	8.798	241.61	0.24	8.797	189.79	0.23	8.797	163.67	0.23
8.818	599.64	0.33	8.818	242.70	0.24	8.817	190.46	0.23	8.817	164.16	0.23
8.838	602.72	0.33	8.838	243.83	0.24	8.837	191.03	0.23	8.837	164.65	0.23
8.858	605.66	0.33	8.858	244.99	0.24	8.857	191.70	0.23	8.857	165.18	0.23

8.878	608.11	0.33	8.877	246.07	0.24	8.877	192.34	0.23	8.877	165.67	0.23
8.898	610.16	0.33	8.897	247.24	0.24	8.896	193.00	0.24	8.896	166.15	0.23
8.918	612.59	0.33	8.917	248.40	0.24	8.916	193.65	0.24	8.916	166.62	0.23
8.938	614.96	0.33	8.937	249.54	0.25	8.936	194.32	0.24	8.936	167.15	0.23
8.958	617.15	0.33	8.957	250.74	0.25	8.956	194.97	0.24	8.956	167.66	0.23
8.978	619.17	0.33	8.977	251.96	0.25	8.976	195.64	0.24	8.976	168.14	0.23
8.998	621.27	0.33	8.997	253.11	0.25	8.996	196.24	0.24	8.996	168.66	0.23
9.018	623.20	0.32	9.017	254.31	0.25	9.016	196.88	0.24	9.016	169.16	0.23
9.038	625.05	0.32	9.037	255.46	0.25	9.036	197.54	0.24	9.036	169.62	0.23
9.057	626.94	0.32	9.057	256.65	0.25	9.056	198.20	0.24	9.056	170.13	0.23
9.077	628.59	0.32	9.077	257.88	0.25	9.076	198.92	0.24	9.076	170.60	0.23
9.097	630.28	0.32	9.097	259.06	0.25	9.096	199.61	0.24	9.096	171.11	0.23
9.117	631.75	0.32	9.117	260.26	0.25	9.116	200.25	0.24	9.116	171.58	0.23
9.137	633.35	0.32	9.137	261.52	0.25	9.136	200.93	0.24	9.136	172.12	0.23
9.157	634.88	0.32	9.157	262.76	0.25	9.156	201.60	0.24	9.156	172.62	0.23
9.177	636.49	0.32	9.177	264.03	0.25	9.176	202.25	0.24	9.176	173.11	0.23
9.197	638.13	0.32	9.197	265.27	0.25	9.196	202.90	0.24	9.196	173.65	0.23
9.217	639.83	0.32	9.217	266.57	0.25	9.216	203.65	0.24	9.216	174.11	0.23
9.237	641.48	0.32	9.236	267.80	0.25	9.236	204.30	0.24	9.236	174.63	0.23
9.257	642.96	0.32	9.256	269.10	0.25	9.256	204.98	0.24	9.256	175.14	0.23
9.277	644.52	0.32	9.276	270.36	0.25	9.275	205.64	0.24	9.275	175.62	0.23
9.297	646.16	0.32	9.296	271.68	0.25	9.295	206.35	0.24	9.295	176.15	0.23
9.317	647.66	0.32	9.316	272.96	0.25	9.315	207.03	0.24	9.315	176.63	0.23
9.337	649.13	0.32	9.336	274.22	0.25	9.335	207.69	0.24	9.335	177.11	0.23
9.357	650.58	0.32	9.356	275.58	0.25	9.355	208.42	0.24	9.355	177.64	0.23
9.377	652.03	0.32	9.376	276.93	0.25	9.375	209.08	0.24	9.375	178.16	0.23
9.397	653.40	0.32	9.396	278.21	0.25	9.395	209.77	0.24	9.395	178.70	0.23
9.416	654.69	0.32	9.416	279.62	0.25	9.415	210.45	0.24	9.415	179.15	0.23
9.436	656.37	0.32	9.436	280.95	0.25	9.435	211.18	0.24	9.435	179.69	0.23
9.456	657.63	0.32	9.456	282.30	0.25	9.455	211.84	0.24	9.455	180.21	0.23
9.476	658.93	0.32	9.476	283.63	0.25	9.475	212.56	0.24	9.475	180.72	0.23
9.496	660.19	0.32	9.496	284.96	0.25	9.495	213.25	0.24	9.495	181.24	0.23
9.516	661.40	0.32	9.516	286.31	0.25	9.515	213.93	0.24	9.515	181.76	0.23
9.536	662.65	0.32	9.536	287.68	0.25	9.535	214.64	0.24	9.535	182.29	0.23
9.556	663.99	0.32	9.556	289.01	0.25	9.555	215.33	0.24	9.555	182.82	0.23
9.576	665.13	0.32	9.576	290.42	0.25	9.575	216.07	0.24	9.575	183.26	0.23
9.596	666.30	0.32	9.596	291.80	0.25	9.595	216.80	0.24	9.595	183.78	0.23
9.616	667.54	0.32	9.615	293.15	0.25	9.615	217.49	0.24	9.615	184.30	0.23
9.636	668.60	0.32	9.635	294.55	0.25	9.634	218.24	0.24	9.634	184.82	0.23
9.656	669.83	0.32	9.655	295.98	0.25	9.654	218.89	0.24	9.654	185.34	0.23
9.676	670.93	0.32	9.675	297.38	0.25	9.674	219.62	0.24	9.674	185.87	0.23
9.696	672.03	0.32	9.695	298.75	0.25	9.694	220.31	0.24	9.694	186.46	0.23
9.716	673.18	0.32	9.715	300.24	0.25	9.714	221.06	0.24	9.714	186.92	0.23
9.736	674.22	0.32	9.735	301.70	0.25	9.734	221.80	0.24	9.734	187.42	0.23
9.756	675.28	0.32	9.755	303.09	0.25	9.754	222.47	0.24	9.754	188.01	0.23



9.776	676.31	0.32	9.775	304.55	0.25	9.774	223.18	0.24	9.774	188.52	0.23
9.795	677.36	0.32	9.795	305.95	0.25	9.794	223.96	0.24	9.794	189.05	0.23
9.815	678.39	0.32	9.815	307.40	0.25	9.814	224.69	0.24	9.814	189.56	0.23
9.835	679.37	0.32	9.835	308.77	0.26	9.834	225.40	0.24	9.834	190.07	0.23
9.855	680.32	0.32	9.855	310.30	0.26	9.854	226.12	0.24	9.854	190.59	0.23
9.875	681.32	0.32	9.875	311.72	0.26	9.874	226.85	0.24	9.874	191.11	0.23
9.895	682.23	0.32	9.895	313.14	0.26	9.894	227.60	0.24	9.894	191.63	0.23
9.915	683.26	0.32	9.915	314.53	0.26	9.914	228.34	0.24	9.914	192.22	0.23
9.935	684.20	0.32	9.935	315.93	0.26	9.934	229.08	0.24	9.934	192.73	0.23
9.955	685.16	0.32	9.955	317.39	0.26	9.954	229.80	0.24	9.954	193.23	0.23
9.975	686.01	0.32	9.974	318.91	0.26	9.974	230.56	0.24	9.974	193.75	0.23
9.995	686.92	0.32	9.994	320.38	0.26	9.994	231.29	0.24	9.994	194.29	0.23
10.015	687.83	0.32	10.014	321.78	0.26	10.013	232.05	0.24	10.013	194.86	0.23
10.035	688.77	0.32	10.034	323.11	0.26	10.033	232.79	0.24	10.033	195.36	0.23
10.055	689.59	0.32	10.054	324.71	0.26	10.053	233.54	0.24	10.053	195.90	0.23
10.075	690.58	0.32	10.074	326.23	0.26	10.073	234.30	0.24	10.073	196.46	0.23
10.095	691.45	0.32	10.094	327.90	0.26	10.093	235.06	0.24	10.093	196.97	0.23
10.115	692.28	0.32	10.114	329.45	0.26	10.113	235.81	0.24	10.113	197.48	0.23
10.135	693.22	0.32	10.134	331.08	0.26	10.133	236.59	0.24	10.133	198.03	0.23
10.154	694.04	0.32	10.154	332.69	0.26	10.153	237.33	0.24	10.153	198.57	0.23
10.174	694.81	0.32	10.174	334.29	0.26	10.173	238.13	0.24	10.173	199.09	0.23
10.194	695.66	0.32	10.194	335.98	0.26	10.193	238.88	0.24	10.193	199.67	0.23
10.214	696.55	0.32	10.214	337.76	0.26	10.213	239.62	0.24	10.213	200.16	0.23
10.234	697.34	0.32	10.234	339.41	0.26	10.233	240.37	0.24	10.233	200.76	0.23
10.254	698.12	0.32	10.254	341.11	0.26	10.253	241.18	0.24	10.253	201.30	0.23
10.274	698.92	0.32	10.274	342.79	0.26	10.273	241.91	0.24	10.273	201.86	0.23
10.294	699.74	0.32	10.294	344.47	0.26	10.293	242.71	0.24	10.293	202.36	0.23
10.314	700.51	0.32	10.314	346.19	0.26	10.313	243.49	0.24	10.313	202.91	0.23
10.334	701.30	0.32	10.334	347.89	0.26	10.333	244.23	0.24	10.333	203.46	0.23
10.354	702.09	0.32	10.353	349.55	0.26	10.353	245.05	0.24	10.353	204.01	0.23
10.374	702.85	0.32	10.373	351.25	0.26	10.373	245.80	0.24	10.373	204.55	0.23
10.394	703.62	0.32	10.393	353.00	0.26	10.392	246.58	0.24	10.392	205.13	0.23
10.414	704.36	0.32	10.413	354.72	0.26	10.412	247.35	0.24	10.412	205.66	0.23
10.434	705.13	0.32	10.433	356.47	0.26	10.432	248.16	0.24	10.432	206.24	0.23
10.454	705.85	0.32	10.453	358.15	0.26	10.452	248.93	0.24	10.452	206.74	0.23
10.474	706.56	0.32	10.473	359.93	0.26	10.472	249.73	0.24	10.472	207.34	0.23
10.494	707.31	0.32	10.493	361.72	0.26	10.492	250.53	0.24	10.492	207.85	0.23
10.513	708.03	0.32	10.513	363.53	0.26	10.512	251.32	0.24	10.512	208.43	0.23
10.533	708.76	0.32	10.533	365.42	0.26	10.532	252.13	0.24	10.532	208.96	0.24
10.553	709.43	0.32	10.553	367.16	0.27	10.552	252.95	0.24	10.552	209.52	0.24
10.573	710.22	0.32	10.573	368.99	0.27	10.572	253.71	0.24	10.572	210.04	0.24
10.593	710.84	0.32	10.593	370.89	0.27	10.592	254.51	0.24	10.592	210.59	0.24
10.613	711.57	0.32	10.613	372.71	0.27	10.612	255.29	0.24	10.612	211.16	0.24
10.633	712.21	0.32	10.633	374.65	0.27	10.632	256.13	0.24	10.632	211.69	0.24
10.653	712.94	0.32	10.653	376.45	0.27	10.652	256.88	0.24	10.652	212.26	0.24

10.673	713.63	0.32	10.673	378.15	0.27	10.672	257.71	0.24	10.672	212.84	0.24
10.693	714.23	0.32	10.693	380.11	0.27	10.692	258.55	0.24	10.692	213.37	0.24
10.713	714.85	0.32	10.712	381.87	0.27	10.712	259.38	0.24	10.712	213.94	0.24
10.733	715.59	0.32	10.732	383.73	0.27	10.732	260.15	0.24	10.732	214.52	0.24
10.753	716.26	0.32	10.752	385.56	0.27	10.752	260.95	0.24	10.752	215.04	0.24
10.773	716.90	0.32	10.772	387.43	0.27	10.771	261.78	0.24	10.771	215.62	0.24
10.793	717.51	0.32	10.792	389.29	0.27	10.791	262.60	0.24	10.791	216.22	0.24
10.813	718.15	0.32	10.812	391.17	0.27	10.811	263.43	0.24	10.811	216.77	0.24
10.833	718.84	0.32	10.832	392.97	0.27	10.831	264.26	0.24	10.831	217.31	0.24
10.853	719.46	0.32	10.852	394.88	0.27	10.851	265.10	0.24	10.851	217.90	0.24
10.872	720.11	0.32	10.872	396.70	0.27	10.871	265.90	0.24	10.871	218.48	0.24
10.892	720.69	0.32	10.892	398.60	0.27	10.891	266.72	0.24	10.891	219.02	0.24
10.912	721.35	0.32	10.912	400.34	0.27	10.911	267.54	0.24	10.911	219.56	0.24
10.932	721.97	0.32	10.932	402.33	0.27	10.931	268.45	0.24	10.931	220.15	0.24
10.952	722.56	0.32	10.952	404.15	0.27	10.951	269.26	0.24	10.951	220.74	0.24
10.972	723.17	0.32	10.972	406.07	0.27	10.971	270.09	0.24	10.971	221.26	0.24
10.992	723.76	0.32	10.992	407.97	0.27	10.991	270.92	0.24	10.991	221.83	0.24
11.012	724.39	0.32	11.012	409.84	0.27	11.011	271.73	0.24	11.011	222.43	0.24
11.032	725.00	0.32	11.032	411.75	0.27	11.031	272.58	0.24	11.031	223.01	0.24
11.052	725.55	0.32	11.052	413.52	0.27	11.051	273.47	0.24	11.051	223.60	0.24
11.072	726.12	0.32	11.072	415.52	0.27	11.071	274.28	0.25	11.071	224.17	0.24
11.092	726.72	0.32	11.091	417.34	0.27	11.091	275.09	0.25	11.091	224.68	0.24
11.112	727.29	0.32	11.111	419.31	0.27	11.111	275.97	0.25	11.111	225.27	0.24
11.132	727.87	0.32	11.131	421.22	0.28	11.130	276.83	0.25	11.130	225.84	0.24
11.152	728.46	0.32	11.151	423.12	0.28	11.150	277.67	0.25	11.150	226.43	0.24
11.172	729.03	0.32	11.171	424.90	0.28	11.170	278.53	0.25	11.170	227.02	0.24
11.192	729.61	0.32	11.191	426.70	0.28	11.190	279.36	0.25	11.190	227.60	0.24
11.212	730.17	0.32	11.211	428.43	0.28	11.210	280.26	0.25	11.210	228.19	0.24
11.232	730.69	0.32	11.231	430.23	0.28	11.230	281.10	0.25	11.230	228.79	0.24
11.251	731.26	0.32	11.251	432.12	0.28	11.250	281.96	0.25	11.250	229.36	0.24
11.271	731.83	0.32	11.271	433.98	0.28	11.270	282.85	0.25	11.270	229.95	0.24
11.291	732.38	0.32	11.291	435.89	0.28	11.290	283.70	0.25	11.290	230.52	0.24
11.311	732.93	0.32	11.311	437.70	0.28	11.310	284.59	0.25	11.310	231.10	0.24
11.331	733.46	0.32	11.331	439.52	0.28	11.330	285.45	0.25	11.330	231.68	0.24
11.351	734.04	0.32	11.351	441.43	0.28	11.350	286.29	0.25	11.350	232.28	0.24
11.371	734.59	0.32	11.371	443.27	0.28	11.370	287.18	0.25	11.370	232.84	0.24
11.391	735.11	0.32	11.391	445.13	0.28	11.390	288.06	0.25	11.390	233.44	0.24
11.411	735.66	0.32	11.411	447.00	0.28	11.410	288.95	0.25	11.410	234.01	0.24
11.431	736.19	0.32	11.431	448.75	0.28	11.430	289.87	0.25	11.430	234.59	0.24
11.451	736.73	0.32	11.450	450.55	0.28	11.450	290.75	0.25	11.450	235.18	0.24
11.471	737.25	0.32	11.470	452.31	0.28	11.470	291.55	0.25	11.470	235.77	0.24
11.491	737.81	0.32	11.490	454.04	0.28	11.490	292.51	0.25	11.490	236.35	0.24
11.511	738.32	0.32	11.510	455.77	0.28	11.509	293.42	0.25	11.509	236.93	0.24
11.531	738.80	0.32	11.530	457.45	0.28	11.529	294.27	0.25	11.529	237.52	0.24
11.551	739.32	0.32	11.550	459.12	0.28	11.549	295.17	0.25	11.549	238.08	0.24

11.571	739.89	0.32	11.570	460.81	0.28	11.569	296.07	0.25	11.569	238.68	0.24
11.591	740.36	0.32	11.590	462.48	0.28	11.589	296.94	0.25	11.589	239.30	0.24
11.610	740.92	0.32	11.610	464.24	0.28	11.609	297.80	0.25	11.609	239.91	0.24
11.630	741.43	0.32	11.630	465.72	0.28	11.629	298.75	0.25	11.629	240.49	0.24
11.650	741.90	0.32	11.650	467.39	0.28	11.649	299.62	0.25	11.649	241.08	0.24
11.670	742.39	0.32	11.670	469.08	0.28	11.669	300.54	0.25	11.669	241.65	0.24
11.690	742.94	0.32	11.690	470.68	0.28	11.689	301.43	0.25	11.689	242.25	0.24
11.710	743.44	0.33	11.710	472.20	0.28	11.709	302.33	0.25	11.709	242.83	0.24
11.730	743.86	0.33	11.730	473.79	0.28	11.729	303.23	0.25	11.729	243.49	0.24
11.750	744.35	0.33	11.750	475.39	0.28	11.749	304.18	0.25	11.749	243.99	0.24
11.770	744.93	0.33	11.770	476.94	0.28	11.769	305.10	0.25	11.769	244.65	0.24
11.790	745.38	0.33	11.790	478.52	0.28	11.789	305.99	0.25	11.789	245.24	0.24
11.810	745.90	0.33	11.809	480.03	0.28	11.809	306.91	0.25	11.809	245.81	0.24
11.830	746.35	0.33	11.829	481.55	0.28	11.829	307.82	0.25	11.829	246.42	0.24
11.850	746.81	0.33	11.849	483.05	0.28	11.849	308.75	0.25	11.849	247.05	0.24
11.870	747.29	0.33	11.869	484.51	0.28	11.869	309.68	0.25	11.869	247.64	0.24
11.890	747.80	0.33	11.889	485.99	0.28	11.888	310.57	0.25	11.888	248.22	0.24
11.910	748.26	0.33	11.909	487.46	0.28	11.908	311.51	0.25	11.908	248.84	0.24
11.930	748.71	0.33	11.929	488.96	0.28	11.928	312.40	0.25	11.928	249.45	0.24
11.950	749.19	0.33	11.949	490.47	0.29	11.948	313.37	0.25	11.948	250.05	0.24
11.969	749.66	0.33	11.969	491.84	0.29	11.968	314.30	0.25	11.968	250.64	0.24
11.989	750.11	0.33	11.989	493.19	0.29	11.988	315.18	0.25	11.988	251.27	0.24
12.009	750.59	0.33	12.009	494.62	0.29	12.008	316.09	0.25	12.008	251.85	0.24
12.029	751.03	0.33	12.029	496.03	0.29	12.028	317.10	0.25	12.028	252.51	0.24
12.049	751.52	0.33	12.049	497.35	0.29	12.048	317.99	0.25	12.048	253.07	0.24
12.069	751.92	0.33	12.069	498.63	0.29	12.068	318.97	0.25	12.068	253.68	0.24
12.089	752.40	0.33	12.089	499.83	0.29	12.088	319.91	0.25	12.088	254.33	0.24
12.109	752.86	0.33	12.109	501.44	0.29	12.108	320.82	0.25	12.108	254.93	0.24
12.129	753.31	0.33	12.129	503.04	0.29	12.128	321.78	0.25	12.128	255.55	0.24
12.149	753.71	0.33	12.149	504.57	0.29	12.148	322.73	0.25	12.148	256.12	0.24
12.169	754.18	0.33	12.169	505.92	0.29	12.168	323.62	0.25	12.168	256.72	0.24
12.189	754.60	0.33	12.188	507.55	0.29	12.188	324.57	0.25	12.188	257.36	0.24
12.209	755.06	0.33	12.208	509.11	0.29	12.208	325.53	0.25	12.208	257.98	0.24
12.229	755.51	0.33	12.228	510.64	0.29	12.228	326.50	0.25	12.228	258.56	0.24
12.249	755.97	0.33	12.248	512.15	0.29	12.248	327.45	0.25	12.248	259.21	0.24
12.269	756.40	0.33	12.268	513.63	0.29	12.267	328.40	0.25	12.267	259.82	0.24
12.289	756.78	0.33	12.288	515.09	0.29	12.287	329.35	0.25	12.287	260.43	0.24
12.309	757.27	0.33	12.308	516.48	0.29	12.307	330.29	0.25	12.307	261.03	0.24
12.329	757.64	0.33	12.328	517.83	0.29	12.327	331.26	0.25	12.327	261.69	0.24
12.348	758.09	0.33	12.348	519.09	0.29	12.347	332.21	0.25	12.347	262.29	0.24
12.368	758.52	0.33	12.368	520.53	0.29	12.367	333.17	0.25	12.367	262.88	0.24
12.388	758.91	0.33	12.388	522.02	0.29	12.387	334.15	0.25	12.387	263.53	0.24
12.408	759.36	0.33	12.408	523.45	0.29	12.407	335.04	0.25	12.407	264.17	0.24
12.428	759.80	0.33	12.428	524.91	0.29	12.427	336.05	0.25	12.427	264.78	0.24
12.448	760.20	0.33	12.448	526.25	0.29	12.447	337.01	0.25	12.447	265.40	0.24

12.468	760.61	0.33	12.468	527.61	0.29	12.467	337.99	0.25	12.467	266.04	0.24
12.488	761.01	0.33	12.488	528.94	0.29	12.487	338.95	0.25	12.487	266.63	0.24
12.508	761.41	0.33	12.508	530.26	0.29	12.507	339.90	0.25	12.507	267.25	0.24
12.528	761.83	0.33	12.528	531.55	0.29	12.527	340.84	0.25	12.527	267.89	0.24
12.548	762.24	0.33	12.547	532.80	0.29	12.547	341.77	0.25	12.547	268.53	0.24
12.568	762.65	0.33	12.567	533.98	0.29	12.567	342.75	0.26	12.567	269.17	0.24
12.588	763.08	0.33	12.587	535.20	0.29	12.587	343.75	0.26	12.587	269.76	0.24
12.608	763.45	0.33	12.607	536.49	0.29	12.607	344.68	0.26	12.607	270.38	0.24
12.628	763.87	0.33	12.627	537.73	0.29	12.626	345.67	0.26	12.626	271.02	0.24
12.648	764.28	0.33	12.647	538.97	0.29	12.646	346.59	0.26	12.646	271.64	0.24
12.668	764.67	0.33	12.667	540.16	0.29	12.666	347.57	0.26	12.666	272.29	0.24
12.688	765.03	0.33	12.687	541.42	0.29	12.686	348.56	0.26	12.686	272.94	0.24
12.707	765.44	0.33	12.707	542.58	0.29	12.706	349.53	0.26	12.706	273.57	0.24
12.727	765.84	0.33	12.727	543.67	0.29	12.726	350.50	0.26	12.726	274.23	0.24
12.747	766.20	0.33	12.747	544.83	0.29	12.746	351.47	0.26	12.746	274.85	0.24
12.767	766.56	0.33	12.767	545.98	0.29	12.766	352.43	0.26	12.766	275.43	0.24
12.787	766.95	0.33	12.787	547.11	0.29	12.786	353.37	0.26	12.786	276.05	0.24
12.807	767.41	0.33	12.807	548.31	0.29	12.806	354.36	0.26	12.806	276.67	0.24
12.827	767.77	0.33	12.827	549.43	0.29	12.826	355.32	0.26	12.826	277.31	0.24
12.847	768.14	0.33	12.847	550.46	0.29	12.846	356.29	0.26	12.846	277.96	0.24
12.867	768.54	0.33	12.867	551.58	0.29	12.866	357.25	0.26	12.866	278.60	0.24
12.887	768.90	0.33	12.887	552.65	0.29	12.886	358.21	0.26	12.886	279.25	0.24
12.907	769.28	0.33	12.907	553.68	0.29	12.906	359.17	0.26	12.906	279.90	0.24
12.927	769.64	0.33	12.926	554.80	0.29	12.926	360.13	0.26	12.926	280.53	0.24
12.947	770.00	0.33	12.946	555.89	0.29	12.946	361.12	0.26	12.946	281.18	0.24
12.967	770.37	0.33	12.966	556.86	0.29	12.966	362.10	0.26	12.966	281.78	0.24
12.987	770.77	0.33	12.986	557.87	0.29	12.986	363.03	0.26	12.986	282.43	0.24
13.007	771.12	0.33	13.006	558.90	0.29	13.005	364.03	0.26	13.005	283.09	0.24
13.027	771.52	0.33	13.026	559.92	0.29	13.025	365.02	0.26	13.025	283.74	0.24
13.047	771.89	0.33	13.046	560.91	0.29	13.045	365.96	0.26	13.045	284.38	0.24
13.066	772.26	0.33	13.066	561.86	0.29	13.065	366.87	0.26	13.065	285.02	0.24
13.086	772.60	0.33	13.086	562.83	0.29	13.085	367.80	0.26	13.085	285.66	0.24
13.106	772.95	0.33	13.106	563.76	0.29	13.105	368.82	0.26	13.105	286.31	0.24
13.126	773.33	0.33	13.126	564.67	0.29	13.125	369.79	0.26	13.125	286.95	0.24
13.146	773.71	0.33	13.146	565.58	0.29	13.145	370.71	0.26	13.145	287.60	0.24
13.166	774.05	0.33	13.166	566.48	0.29	13.165	371.61	0.26	13.165	288.25	0.24
13.186	774.36	0.33	13.186	567.39	0.29	13.185	372.58	0.26	13.185	288.89	0.24
13.206	774.75	0.33	13.206	568.26	0.29	13.205	373.55	0.26	13.205	289.53	0.24
13.226	775.12	0.33	13.226	569.06	0.29	13.225	374.51	0.26	13.225	290.17	0.24
13.246	775.41	0.33	13.246	570.14	0.29	13.245	375.45	0.26	13.245	290.79	0.24
13.266	775.79	0.33	13.266	571.20	0.29	13.265	376.36	0.26	13.265	291.45	0.24
13.286	776.17	0.33	13.285	572.23	0.29	13.285	377.27	0.26	13.285	292.14	0.24
13.306	776.47	0.33	13.305	573.24	0.29	13.305	378.22	0.26	13.305	292.77	0.25
13.326	776.83	0.33	13.325	574.21	0.29	13.325	379.17	0.26	13.325	293.39	0.25
13.346	777.18	0.33	13.345	575.27	0.30	13.345	380.13	0.26	13.345	294.04	0.25

13.366	777.53	0.33	13.365	576.33	0.30	13.365	381.05	0.26	13.365	294.71	0.25
13.386	777.88	0.33	13.385	577.33	0.30	13.384	381.97	0.26	13.384	295.35	0.25
13.406	778.21	0.33	13.405	578.39	0.30	13.404	382.88	0.26	13.404	296.01	0.25
13.425	778.54	0.33	13.425	579.43	0.30	13.424	383.83	0.26	13.424	296.65	0.25
13.445	778.88	0.33	13.445	580.40	0.30	13.444	384.75	0.26	13.444	297.32	0.25
13.465	779.22	0.33	13.465	581.42	0.30	13.464	385.62	0.26	13.464	297.95	0.25
13.485	779.56	0.33	13.485	582.48	0.30	13.484	386.52	0.26	13.484	298.62	0.25
13.505	779.88	0.33	13.505	583.50	0.30	13.504	387.42	0.26	13.504	299.23	0.25
13.525	780.16	0.33	13.525	584.51	0.30	13.524	388.36	0.26	13.524	299.91	0.25
13.545	780.50	0.33	13.545	585.51	0.30	13.544	389.27	0.26	13.544	300.62	0.25
13.565	780.84	0.33	13.565	586.47	0.30	13.564	390.15	0.26	13.564	301.22	0.25
13.585	781.17	0.33	13.585	587.44	0.30	13.584	391.05	0.26	13.584	301.91	0.25
13.605	781.49	0.33	13.605	588.39	0.30	13.604	391.98	0.26	13.604	302.52	0.25
13.625	781.80	0.33	13.625	589.31	0.30	13.624	392.77	0.26	13.624	303.21	0.25
13.645	782.12	0.33	13.645	590.22	0.30	13.644	393.52	0.26	13.644	303.89	0.25
13.665	782.42	0.33	13.664	591.21	0.30	13.664	394.41	0.26	13.664	304.56	0.25
13.685	782.73	0.33	13.684	592.20	0.30	13.684	395.45	0.26	13.684	305.17	0.25
13.705	783.04	0.33	13.704	593.10	0.30	13.704	396.36	0.26	13.704	305.82	0.25
13.725	783.34	0.33	13.724	594.08	0.30	13.724	397.39	0.26	13.724	306.49	0.25
13.745	783.69	0.33	13.744	595.00	0.30	13.744	398.37	0.26	13.744	307.17	0.25
13.765	784.03	0.33	13.764	595.95	0.30	13.763	399.35	0.26	13.763	307.84	0.25
13.785	784.33	0.33	13.784	596.81	0.30	13.783	400.31	0.26	13.783	308.48	0.25
13.804	784.58	0.33	13.804	597.71	0.30	13.803	401.28	0.26	13.803	309.14	0.25
13.824	784.93	0.33	13.824	598.66	0.30	13.823	402.24	0.26	13.823	309.80	0.25
13.844	785.26	0.33	13.844	599.62	0.30	13.843	403.22	0.26	13.843	310.45	0.25
13.864	785.56	0.33	13.864	600.51	0.30	13.863	404.22	0.26	13.863	311.12	0.25
13.884	785.86	0.33	13.884	601.39	0.30	13.883	405.21	0.26	13.883	311.78	0.25
13.904	786.14	0.33	13.904	602.38	0.30	13.903	406.15	0.26	13.903	312.43	0.25
13.924	786.43	0.33	13.924	603.31	0.30	13.923	407.14	0.26	13.923	313.15	0.25
13.944	786.71	0.33	13.944	604.12	0.30	13.943	408.08	0.26	13.943	313.81	0.25
13.964	786.99	0.33	13.964	605.00	0.30	13.963	409.05	0.26	13.963	314.46	0.25
13.984	787.29	0.33	13.984	605.84	0.30	13.983	410.02	0.26	13.983	315.13	0.25
14.004	787.62	0.33	14.004	606.66	0.30	14.003	411.01	0.26	14.003	315.77	0.25
14.024	787.90	0.33	14.023	607.42	0.30	14.023	411.95	0.26	14.023	316.43	0.25
14.044	788.17	0.33	14.043	608.20	0.30	14.043	412.92	0.27	14.043	317.11	0.25
14.064	788.45	0.33	14.063	609.08	0.30	14.063	413.92	0.27	14.063	317.78	0.25
14.084	788.77	0.33	14.083	609.87	0.30	14.083	414.84	0.27	14.083	318.44	0.25
14.104	789.06	0.33	14.103	610.67	0.30	14.103	415.78	0.27	14.103	319.13	0.25
14.124	789.33	0.33	14.123	611.45	0.30	14.122	416.82	0.27	14.122	319.81	0.25
14.144	789.59	0.33	14.143	612.26	0.30	14.142	417.74	0.27	14.142	320.43	0.25
14.163	789.87	0.33	14.163	613.09	0.30	14.162	418.73	0.27	14.162	321.11	0.25
14.183	790.17	0.33	14.183	613.92	0.30	14.182	419.63	0.27	14.182	321.80	0.25
14.203	790.43	0.33	14.203	614.70	0.30	14.202	420.59	0.27	14.202	322.48	0.25
14.223	790.68	0.33	14.223	615.51	0.30	14.222	421.56	0.27	14.222	323.17	0.25
14.243	790.97	0.33	14.243	616.39	0.30	14.242	422.56	0.27	14.242	323.85	0.25

14.263	791.24	0.33	14.263	617.05	0.30	14.262	423.48	0.27	14.262	324.50	0.25
14.283	791.51	0.33	14.283	617.87	0.30	14.282	424.40	0.27	14.282	325.17	0.25
14.303	791.78	0.33	14.303	618.67	0.30	14.302	425.36	0.27	14.302	325.82	0.25
14.323	792.06	0.33	14.323	619.47	0.30	14.322	426.33	0.27	14.322	326.52	0.25
14.343	792.31	0.33	14.343	620.20	0.30	14.342	427.30	0.27	14.342	327.21	0.25
14.363	792.56	0.33	14.363	620.94	0.30	14.362	428.23	0.27	14.362	327.87	0.25
14.383	792.81	0.33	14.382	621.67	0.30	14.382	429.23	0.27	14.382	328.53	0.25
14.403	793.05	0.33	14.402	622.44	0.30	14.402	430.13	0.27	14.402	329.20	0.25
14.423	793.31	0.33	14.422	623.21	0.30	14.422	431.08	0.27	14.422	329.86	0.25
14.443	793.60	0.33	14.442	623.93	0.30	14.442	432.05	0.27	14.442	330.51	0.25
14.463	793.89	0.33	14.462	624.59	0.30	14.462	433.04	0.27	14.462	331.17	0.25
14.483	794.26	0.33	14.482	625.25	0.30	14.482	433.97	0.27	14.482	331.85	0.25
14.503	794.51	0.33	14.502	625.99	0.30	14.501	434.87	0.27	14.501	332.55	0.25
14.522	794.76	0.33	14.522	626.74	0.30	14.521	435.87	0.27	14.521	333.19	0.25
14.542	795.11	0.33	14.542	627.47	0.30	14.541	436.78	0.27	14.541	333.88	0.25
14.562	795.38	0.33	14.562	628.17	0.30	14.561	437.77	0.27	14.561	334.56	0.25
14.582	795.67	0.33	14.582	628.84	0.30	14.581	438.67	0.27	14.581	335.22	0.25
14.602	795.93	0.33	14.602	629.53	0.30	14.601	439.58	0.27	14.601	335.89	0.25
14.622	796.28	0.33	14.622	630.24	0.30	14.621	440.54	0.27	14.621	336.57	0.25
14.642	796.56	0.33	14.642	630.90	0.30	14.641	441.47	0.27	14.641	337.26	0.25
14.662	796.85	0.33	14.662	631.55	0.30	14.661	442.39	0.27	14.661	337.93	0.25
14.682	797.13	0.34	14.682	632.19	0.30	14.681	443.31	0.27	14.681	338.61	0.25
14.702	797.41	0.34	14.702	632.83	0.30	14.701	444.20	0.27	14.701	339.27	0.25
14.722	797.73	0.34	14.722	633.47	0.30	14.721	445.16	0.27	14.721	339.93	0.25
14.742	797.98	0.34	14.742	634.07	0.30	14.741	446.07	0.27	14.741	340.64	0.25
14.762	798.26	0.34	14.761	634.70	0.30	14.761	446.97	0.27	14.761	341.34	0.25
14.782	798.55	0.34	14.781	635.35	0.30	14.781	447.89	0.27	14.781	341.98	0.25
14.802	798.81	0.34	14.801	636.00	0.30	14.801	448.76	0.27	14.801	342.63	0.25
14.822	799.10	0.34	14.821	636.62	0.30	14.821	449.74	0.27	14.821	343.33	0.25
14.842	799.42	0.34	14.841	637.34	0.30	14.841	450.64	0.27	14.841	344.01	0.25
14.862	799.65	0.34	14.861	637.97	0.30	14.861	451.56	0.27	14.861	344.63	0.25
14.881	799.95	0.34	14.881	638.57	0.30	14.880	452.48	0.27	14.880	345.31	0.25
14.901	800.21	0.34	14.901	639.19	0.30	14.900	453.41	0.27	14.900	345.99	0.25
14.921	800.48	0.34	14.921	639.84	0.30	14.920	454.32	0.27	14.920	346.67	0.25
14.941	800.80	0.34	14.941	640.41	0.30	14.940	455.17	0.27	14.940	347.33	0.25
14.961	801.11	0.34	14.961	641.03	0.30	14.960	456.08	0.27	14.960	348.01	0.25
14.981	801.35	0.34	14.981	641.67	0.30	14.980	456.97	0.27	14.980	348.67	0.25
15.001	801.62	0.34	15.001	642.33	0.30	15.000	457.90	0.27	15.000	349.30	0.25
15.021	801.92	0.34	15.021	642.89	0.31	15.020	458.80	0.27	15.020	349.98	0.25
15.041	802.15	0.34	15.041	643.46	0.31	15.040	459.66	0.27	15.040	350.67	0.25
15.061	802.44	0.34	15.061	644.03	0.31	15.060	460.62	0.27	15.060	351.37	0.25
15.081	802.69	0.34	15.081	644.60	0.31	15.080	461.50	0.27	15.080	352.05	0.25
15.101	802.97	0.34	15.101	645.20	0.31	15.100	462.41	0.27	15.100	352.73	0.25
15.121	803.22	0.34	15.120	645.81	0.31	15.120	463.27	0.27	15.120	353.40	0.25
15.141	803.52	0.34	15.140	646.37	0.31	15.140	464.16	0.27	15.140	354.06	0.25

15.161	803.79	0.34	15.160	646.94	0.31	15.160	465.02	0.27	15.160	354.72	0.25
15.181	804.03	0.34	15.180	647.51	0.31	15.180	465.87	0.27	15.180	355.36	0.25
15.201	804.33	0.34	15.200	648.07	0.31	15.200	466.77	0.27	15.200	356.03	0.25
15.221	804.60	0.34	15.220	648.62	0.31	15.220	467.61	0.27	15.220	356.71	0.25
15.241	804.87	0.34	15.240	649.16	0.31	15.239	468.53	0.27	15.239	357.40	0.25
15.260	805.11	0.34	15.260	649.67	0.31	15.259	469.38	0.27	15.259	358.07	0.25
15.280	805.40	0.34	15.280	650.22	0.31	15.279	470.29	0.27	15.279	358.73	0.25
15.300	805.66	0.34	15.300	650.81	0.31	15.299	471.18	0.27	15.299	359.38	0.25
15.320	805.89	0.34	15.320	651.37	0.31	15.319	471.97	0.27	15.319	360.03	0.25
15.340	806.18	0.34	15.340	651.91	0.31	15.339	472.82	0.27	15.339	360.67	0.25
15.360	806.42	0.34	15.360	652.39	0.31	15.359	473.69	0.27	15.359	361.34	0.25
15.380	806.72	0.34	15.380	652.89	0.31	15.379	474.52	0.27	15.379	362.04	0.25
15.400	806.95	0.34	15.400	653.45	0.31	15.399	475.42	0.27	15.399	362.68	0.25
15.420	807.22	0.34	15.420	653.99	0.31	15.419	476.25	0.27	15.419	363.29	0.25
15.440	807.45	0.34	15.440	654.50	0.31	15.439	477.16	0.28	15.439	363.97	0.25
15.460	807.75	0.34	15.460	654.99	0.31	15.459	478.00	0.28	15.459	364.65	0.25
15.480	808.04	0.34	15.480	655.51	0.31	15.479	478.83	0.28	15.479	365.29	0.26
15.500	808.26	0.34	15.499	656.06	0.31	15.499	479.67	0.28	15.499	365.93	0.26
15.520	808.53	0.34	15.519	656.50	0.31	15.519	480.49	0.28	15.519	366.57	0.26
15.540	808.80	0.34	15.539	656.93	0.31	15.539	481.32	0.28	15.539	367.21	0.26
15.560	809.01	0.34	15.559	657.39	0.31	15.559	482.15	0.28	15.559	367.89	0.26
15.580	809.27	0.34	15.579	657.98	0.31	15.579	482.95	0.28	15.579	368.56	0.26
15.600	809.55	0.34	15.599	658.51	0.31	15.599	483.77	0.28	15.599	369.21	0.26
15.619	809.82	0.34	15.619	659.11	0.31	15.618	484.60	0.28	15.618	369.85	0.26
15.639	810.03	0.34	15.639	659.63	0.31	15.638	485.41	0.28	15.638	370.48	0.26
15.659	810.29	0.34	15.659	660.24	0.31	15.658	486.22	0.28	15.658	371.10	0.26
15.679	810.57	0.34	15.679	660.76	0.31	15.678	487.04	0.28	15.678	371.76	0.26
15.699	810.83	0.34	15.699	661.33	0.31	15.698	487.88	0.28	15.698	372.41	0.26
15.719	811.10	0.34	15.719	661.85	0.31	15.718	488.69	0.28	15.718	373.05	0.26
15.739	811.34	0.34	15.739	662.45	0.31	15.738	489.43	0.28	15.738	373.68	0.26
15.759	811.56	0.34	15.759	662.97	0.31	15.758	490.20	0.28	15.758	374.29	0.26
15.779	811.84	0.34	15.779	663.51	0.31	15.778	490.99	0.28	15.778	374.84	0.26
15.799	812.10	0.34	15.799	664.03	0.31	15.798	491.77	0.28	15.798	375.51	0.26
15.819	812.36	0.34	15.819	664.56	0.31	15.818	492.56	0.28	15.818	376.15	0.26
15.839	812.61	0.34	15.839	665.09	0.31	15.838	493.33	0.28	15.838	376.84	0.26
15.859	812.86	0.34	15.858	665.68	0.31	15.858	494.08	0.28	15.858	377.47	0.26
15.879	813.09	0.34	15.878	666.18	0.31	15.878	494.84	0.28	15.878	378.13	0.26
15.899	813.34	0.34	15.898	666.66	0.31	15.898	495.63	0.28	15.898	378.78	0.26
15.919	813.53	0.34	15.918	667.16	0.31	15.918	496.40	0.28	15.918	379.48	0.26
15.939	813.77	0.34	15.938	667.75	0.31	15.938	497.16	0.28	15.938	380.17	0.26
15.959	814.03	0.34	15.958	668.29	0.31	15.958	497.88	0.28	15.958	380.81	0.26
15.978	814.28	0.34	15.978	668.80	0.31	15.978	498.66	0.28	15.978	381.52	0.26
15.998	814.54	0.34	15.998	669.28	0.31	15.997	499.42	0.28	15.997	382.18	0.26
16.018	814.78	0.34	16.018	669.83	0.31	16.017	500.13	0.28	16.017	382.79	0.26
16.038	815.03	0.34	16.038	670.37	0.31	16.037	500.81	0.28	16.037	383.49	0.26

16.058	815.28	0.34	16.058	670.86	0.31	16.057	501.54	0.28	16.057	384.11	0.26
16.078	815.51	0.34	16.078	671.39	0.31	16.077	502.32	0.28	16.077	384.82	0.26
16.098	815.75	0.34	16.098	671.95	0.31	16.097	503.04	0.28	16.097	385.50	0.26
16.118	815.98	0.34	16.118	672.46	0.31	16.117	503.75	0.28	16.117	386.13	0.26
16.138	816.21	0.34	16.138	672.96	0.31	16.137	504.46	0.28	16.137	386.86	0.26
16.158	816.44	0.34	16.158	673.49	0.31	16.157	505.17	0.28	16.157	387.50	0.26
16.178	816.68	0.34	16.178	673.98	0.31	16.177	505.86	0.28	16.177	388.19	0.26
16.198	816.92	0.34	16.198	674.45	0.31	16.197	506.55	0.28	16.197	388.81	0.26
16.218	817.16	0.34	16.218	674.92	0.31	16.217	507.23	0.28	16.217	389.48	0.26
16.238	817.39	0.34	16.237	675.47	0.31	16.237	507.92	0.28	16.237	390.15	0.26
16.258	817.63	0.34	16.257	675.94	0.31	16.257	508.62	0.28	16.257	390.82	0.26
16.278	817.86	0.34	16.277	676.46	0.31	16.277	509.31	0.28	16.277	391.46	0.26
16.298	818.08	0.34	16.297	676.92	0.31	16.297	509.99	0.28	16.297	392.14	0.26
16.318	818.30	0.34	16.317	677.38	0.31	16.317	510.63	0.28	16.317	392.81	0.26
16.337	818.55	0.34	16.337	677.89	0.31	16.337	511.26	0.28	16.337	393.44	0.26
16.357	818.82	0.34	16.357	678.37	0.31	16.357	511.84	0.28	16.357	394.12	0.26
16.377	819.04	0.34	16.377	678.81	0.31	16.376	512.42	0.28	16.376	394.79	0.26
16.397	819.25	0.34	16.397	679.38	0.31	16.396	513.10	0.28	16.396	395.47	0.26
16.417	819.46	0.34	16.417	679.82	0.31	16.416	513.85	0.28	16.416	396.12	0.26
16.437	819.69	0.34	16.437	680.26	0.31	16.436	514.61	0.28	16.436	396.73	0.26
16.457	819.94	0.34	16.457	680.74	0.31	16.456	515.37	0.28	16.456	397.43	0.26
16.477	820.18	0.34	16.477	681.23	0.31	16.476	516.06	0.28	16.476	398.07	0.26
16.497	820.42	0.34	16.497	681.66	0.31	16.496	516.83	0.28	16.496	398.69	0.26
16.517	820.64	0.34	16.517	682.15	0.31	16.516	517.59	0.28	16.516	399.33	0.26
16.537	820.84	0.34	16.537	682.61	0.31	16.536	518.27	0.28	16.536	400.02	0.26
16.557	821.07	0.34	16.557	683.11	0.31	16.556	519.09	0.28	16.556	400.67	0.26
16.577	821.33	0.34	16.577	683.55	0.31	16.576	519.81	0.28	16.576	401.28	0.26
16.597	821.53	0.34	16.596	683.99	0.31	16.596	520.54	0.28	16.596	401.91	0.26
16.617	821.79	0.34	16.616	684.45	0.31	16.616	521.25	0.28	16.616	402.59	0.26
16.637	822.01	0.34	16.636	684.92	0.31	16.636	521.96	0.28	16.636	403.29	0.26
16.657	822.21	0.34	16.656	685.35	0.31	16.656	522.71	0.28	16.656	403.87	0.26
16.677	822.41	0.34	16.676	685.81	0.31	16.676	523.38	0.28	16.676	404.50	0.26
16.697	822.63	0.34	16.696	686.30	0.31	16.696	524.16	0.28	16.696	405.14	0.26
16.716	822.91	0.34	16.716	686.74	0.31	16.716	524.82	0.28	16.716	405.80	0.26
16.736	823.13	0.34	16.736	687.18	0.31	16.735	525.55	0.28	16.735	406.47	0.26
16.756	823.34	0.34	16.756	687.58	0.31	16.755	526.27	0.28	16.755	407.10	0.26
16.776	823.55	0.34	16.776	688.02	0.31	16.775	526.98	0.28	16.775	407.74	0.26
16.796	823.75	0.34	16.796	688.48	0.31	16.795	527.70	0.28	16.795	408.37	0.26
16.816	823.97	0.34	16.816	688.93	0.31	16.815	528.39	0.28	16.815	409.00	0.26
16.836	824.21	0.34	16.836	689.35	0.31	16.835	529.11	0.28	16.835	409.67	0.26
16.856	824.45	0.34	16.856	689.77	0.31	16.855	529.83	0.28	16.855	410.25	0.26
16.876	824.65	0.34	16.876	690.24	0.31	16.875	530.58	0.28	16.875	410.87	0.26
16.896	824.83	0.34	16.896	690.68	0.31	16.895	531.23	0.28	16.895	411.52	0.26
16.916	825.08	0.34	16.916	691.11	0.31	16.915	531.94	0.28	16.915	412.18	0.26
16.936	825.27	0.34	16.936	691.54	0.31	16.935	532.67	0.28	16.935	412.80	0.26



16.956	825.49	0.34	16.955	691.94	0.31	16.955	533.32	0.28	16.955	413.40	0.26
16.976	825.73	0.34	16.975	692.38	0.31	16.975	534.02	0.28	16.975	414.00	0.26
16.996	825.94	0.34	16.995	692.83	0.31	16.995	534.73	0.28	16.995	414.65	0.26
17.016	826.16	0.34	17.015	693.23	0.31	17.015	535.44	0.28	17.015	415.28	0.26
17.036	826.35	0.34	17.035	693.65	0.31	17.035	536.11	0.28	17.035	415.91	0.26
17.056	826.59	0.34	17.055	694.09	0.31	17.055	536.78	0.28	17.055	416.52	0.26
17.075	826.81	0.34	17.075	694.53	0.31	17.075	537.51	0.28	17.075	417.13	0.26
17.095	826.99	0.34	17.095	694.95	0.31	17.095	538.20	0.28	17.095	417.73	0.26
17.115	827.21	0.34	17.115	695.35	0.31	17.114	538.87	0.28	17.114	418.31	0.26
17.135	827.40	0.34	17.135	695.81	0.31	17.134	539.56	0.28	17.134	418.92	0.26
17.155	827.58	0.34	17.155	696.21	0.31	17.154	540.20	0.28	17.154	419.58	0.26
17.175	827.81	0.34	17.175	696.62	0.31	17.174	540.87	0.28	17.174	420.20	0.26
17.195	828.03	0.34	17.195	697.02	0.31	17.194	541.54	0.28	17.194	420.78	0.26
17.215	828.25	0.34	17.215	697.42	0.31	17.214	542.24	0.28	17.214	421.37	0.26
17.235	828.42	0.34	17.235	697.82	0.31	17.234	542.91	0.29	17.234	421.95	0.26
17.255	828.64	0.34	17.255	698.25	0.31	17.254	543.52	0.29	17.254	422.58	0.26
17.275	828.85	0.34	17.275	698.64	0.31	17.274	544.25	0.29	17.274	423.20	0.26
17.295	829.03	0.34	17.295	699.04	0.31	17.294	544.85	0.29	17.294	423.76	0.26
17.315	829.26	0.34	17.315	699.46	0.31	17.314	545.54	0.29	17.314	424.33	0.26
17.335	829.45	0.34	17.334	699.90	0.31	17.334	546.20	0.29	17.334	424.90	0.26
17.355	829.63	0.34	17.354	700.30	0.31	17.354	546.80	0.29	17.354	425.46	0.26
17.375	829.85	0.34	17.374	700.68	0.31	17.374	547.44	0.29	17.374	426.00	0.26
17.395	830.07	0.34	17.394	701.06	0.31	17.394	548.09	0.29	17.394	426.50	0.26
17.415	830.28	0.34	17.414	701.47	0.31	17.414	548.77	0.29	17.414	427.10	0.26
17.434	830.44	0.34	17.434	701.91	0.31	17.434	549.43	0.29	17.434	427.72	0.26
17.454	830.64	0.34	17.454	702.27	0.31	17.454	550.10	0.29	17.454	428.35	0.26
17.474	830.84	0.34	17.474	702.65	0.32	17.474	550.72	0.29	17.474	428.98	0.26
17.494	831.05	0.34	17.494	703.06	0.32	17.493	551.34	0.29	17.493	429.54	0.26
17.514	831.25	0.34	17.514	703.48	0.32	17.513	552.04	0.29	17.513	430.21	0.26
17.534	831.46	0.34	17.534	703.84	0.32	17.533	552.71	0.29	17.533	430.89	0.26
17.554	831.66	0.34	17.554	704.22	0.32	17.553	553.31	0.29	17.553	431.47	0.26
17.574	831.84	0.34	17.574	704.59	0.32	17.573	553.93	0.29	17.573	432.11	0.26
17.594	832.00	0.34	17.594	704.97	0.32	17.593	554.58	0.29	17.593	432.77	0.26
17.614	832.20	0.34	17.614	705.36	0.32	17.613	555.20	0.29	17.613	433.38	0.26
17.634	832.41	0.34	17.634	705.74	0.32	17.633	555.85	0.29	17.633	434.02	0.26
17.654	832.62	0.34	17.654	706.12	0.32	17.653	556.52	0.29	17.653	434.60	0.26
17.674	832.83	0.34	17.674	706.48	0.32	17.673	557.12	0.29	17.673	435.20	0.27
17.694	833.02	0.34	17.693	706.88	0.32	17.693	557.75	0.29	17.693	435.86	0.27
17.714	833.17	0.34	17.713	707.30	0.32	17.713	558.38	0.29	17.713	436.48	0.27
17.734	833.34	0.34	17.733	707.69	0.32	17.733	559.04	0.29	17.733	437.10	0.27
17.754	833.53	0.34	17.753	708.04	0.32	17.753	559.64	0.29	17.753	437.71	0.27
17.774	833.72	0.34	17.773	708.40	0.32	17.773	560.28	0.29	17.773	438.36	0.27
17.794	833.91	0.34	17.793	708.77	0.32	17.793	560.89	0.29	17.793	438.93	0.27
17.813	834.10	0.34	17.813	709.14	0.32	17.813	561.54	0.29	17.813	439.56	0.27
17.833	834.29	0.34	17.833	709.52	0.32	17.833	562.14	0.29	17.833	440.22	0.27

17.853	834.48	0.34	17.853	709.87	0.32	17.853	562.71	0.29	17.853	440.81	0.27
17.873	834.67	0.34	17.873	710.23	0.32	17.872	563.33	0.29	17.872	441.46	0.27
17.893	834.85	0.34	17.893	710.57	0.32	17.892	563.93	0.29	17.892	442.04	0.27
17.913	835.01	0.34	17.913	710.96	0.32	17.912	564.60	0.29	17.912	442.64	0.27
17.933	835.22	0.34	17.933	711.34	0.32	17.932	565.19	0.29	17.932	443.30	0.27
17.953	835.39	0.34	17.953	711.68	0.32	17.952	565.73	0.29	17.952	443.90	0.27
17.973	835.62	0.34	17.973	712.03	0.32	17.972	566.40	0.29	17.972	444.52	0.27
17.993	835.81	0.34	17.993	712.40	0.32	17.992	566.98	0.29	17.992	445.13	0.27
18.013	835.97	0.34	18.013	712.76	0.32	18.012	567.54	0.29	18.012	445.73	0.27
18.033	836.22	0.34	18.033	713.11	0.32	18.032	568.15	0.29	18.032	446.37	0.27
18.053	836.39	0.34	18.053	713.44	0.32	18.052	568.72	0.29	18.052	446.94	0.27
18.073	836.58	0.34	18.072	713.80	0.32	18.072	569.33	0.29	18.072	447.60	0.27
18.093	836.80	0.34	18.092	714.16	0.32	18.092	569.93	0.29	18.092	448.20	0.27
18.113	836.98	0.34	18.112	714.53	0.32	18.112	570.51	0.29	18.112	448.83	0.27
18.133	837.14	0.34	18.132	714.86	0.32	18.132	571.16	0.29	18.132	449.44	0.27
18.153	837.35	0.34	18.152	715.16	0.32	18.152	571.72	0.29	18.152	450.03	0.27
18.172	837.60	0.34	18.172	715.50	0.32	18.172	572.29	0.29	18.172	450.67	0.27
18.192	837.74	0.34	18.192	715.85	0.32	18.192	572.87	0.29	18.192	451.29	0.27
18.212	837.93	0.34	18.212	716.21	0.32	18.212	573.45	0.29	18.212	451.92	0.27
18.232	838.15	0.34	18.232	716.57	0.32	18.231	574.01	0.29	18.231	452.47	0.27
18.252	838.36	0.34	18.252	716.94	0.32	18.251	574.60	0.29	18.251	453.13	0.27
18.272	838.52	0.34	18.272	717.26	0.32	18.271	575.22	0.29	18.271	453.70	0.27
18.292	838.76	0.34	18.292	717.57	0.32	18.291	575.82	0.29	18.291	454.31	0.27
18.312	838.89	0.34	18.312	717.91	0.32	18.311	576.38	0.29	18.311	454.94	0.27
18.332	839.10	0.34	18.332	718.25	0.32	18.331	576.91	0.29	18.331	455.52	0.27
18.352	839.33	0.34	18.352	718.55	0.32	18.351	577.51	0.29	18.351	456.13	0.27
18.372	839.51	0.34	18.372	718.85	0.32	18.371	578.06	0.29	18.371	456.74	0.27
18.392	839.68	0.34	18.392	719.18	0.32	18.391	578.60	0.29	18.391	457.34	0.27
18.412	839.88	0.34	18.412	719.51	0.32	18.411	579.18	0.29	18.411	457.95	0.27
18.432	840.03	0.34	18.431	719.83	0.32	18.431	579.73	0.29	18.431	458.56	0.27
18.452	840.26	0.34	18.451	720.16	0.32	18.451	580.28	0.29	18.451	459.14	0.27
18.472	840.48	0.34	18.471	720.48	0.32	18.471	580.85	0.29	18.471	459.78	0.27
18.492	840.63	0.34	18.491	720.80	0.32	18.491	581.43	0.29	18.491	460.34	0.27
18.512	840.80	0.34	18.511	721.11	0.32	18.511	581.97	0.29	18.511	460.98	0.27
18.531	841.01	0.34	18.531	721.43	0.32	18.531	582.53	0.29	18.531	461.53	0.27
18.551	841.22	0.34	18.551	721.74	0.32	18.551	583.09	0.29	18.551	462.14	0.27
18.571	841.38	0.34	18.571	722.04	0.32	18.571	583.64	0.29	18.571	462.68	0.27
18.591	841.59	0.34	18.591	722.37	0.32	18.591	584.20	0.29	18.591	463.30	0.27
18.611	841.81	0.34	18.611	722.71	0.32	18.610	584.74	0.29	18.610	463.92	0.27
18.631	842.01	0.34	18.631	723.01	0.32	18.630	585.25	0.29	18.630	464.50	0.27
18.651	842.21	0.34	18.651	723.31	0.32	18.650	585.78	0.29	18.650	465.11	0.27
18.671	842.34	0.34	18.671	723.60	0.32	18.670	586.33	0.29	18.670	465.67	0.27
18.691	842.56	0.34	18.691	723.89	0.32	18.690	586.83	0.29	18.690	466.18	0.27
18.711	842.78	0.34	18.711	724.19	0.32	18.710	587.37	0.29	18.710	466.83	0.27
18.731	842.94	0.34	18.731	724.49	0.32	18.730	587.86	0.29	18.730	467.34	0.27

18.751	843.12	0.34	18.751	724.80	0.32	18.750	588.40	0.29	18.750	467.98	0.27
18.771	843.31	0.34	18.771	725.13	0.32	18.770	588.93	0.29	18.770	468.50	0.27
18.791	843.52	0.34	18.791	725.48	0.32	18.790	589.45	0.29	18.790	469.09	0.27
18.811	843.69	0.34	18.810	725.80	0.32	18.810	589.97	0.29	18.810	469.66	0.27
18.831	843.85	0.34	18.830	726.09	0.32	18.830	590.49	0.29	18.830	470.26	0.27
18.851	844.08	0.34	18.850	726.47	0.32	18.850	590.98	0.29	18.850	470.81	0.27
18.871	844.27	0.34	18.870	726.78	0.32	18.870	591.51	0.29	18.870	471.36	0.27
18.890	844.48	0.34	18.890	727.13	0.32	18.890	592.02	0.29	18.890	471.91	0.27
18.910	844.67	0.34	18.910	727.42	0.32	18.910	592.49	0.29	18.910	472.48	0.27
18.930	844.83	0.34	18.930	727.75	0.32	18.930	593.02	0.29	18.930	473.08	0.27
18.950	845.05	0.35	18.950	728.09	0.32	18.950	593.51	0.29	18.950	473.65	0.27
18.970	845.19	0.35	18.970	728.41	0.32	18.970	593.97	0.29	18.970	474.18	0.27
18.990	845.40	0.35	18.990	728.78	0.32	18.989	594.45	0.29	18.989	474.71	0.27
19.010	845.60	0.35	19.010	729.08	0.32	19.009	594.96	0.29	19.009	475.29	0.27
19.030	845.80	0.35	19.030	729.38	0.32	19.029	595.47	0.29	19.029	475.80	0.27
19.050	845.93	0.35	19.050	729.73	0.32	19.049	595.97	0.29	19.049	476.35	0.27
19.070	846.15	0.35	19.070	730.04	0.32	19.069	596.42	0.29	19.069	476.96	0.27
19.090	846.31	0.35	19.090	730.40	0.32	19.089	596.89	0.29	19.089	477.48	0.27
19.110	846.51	0.35	19.110	730.70	0.32	19.109	597.38	0.29	19.109	478.00	0.27
19.130	846.71	0.35	19.130	731.05	0.32	19.129	597.84	0.29	19.129	478.58	0.27
19.150	846.90	0.35	19.150	731.34	0.32	19.149	598.30	0.29	19.149	479.13	0.27
19.170	847.09	0.35	19.169	731.66	0.32	19.169	598.75	0.29	19.169	479.67	0.27
19.190	847.29	0.35	19.189	731.97	0.32	19.189	599.20	0.29	19.189	480.24	0.27
19.210	847.48	0.35	19.209	732.28	0.32	19.209	599.67	0.29	19.209	480.74	0.27
19.230	847.65	0.35	19.229	732.59	0.32	19.229	600.18	0.29	19.229	481.29	0.27
19.250	847.79	0.35	19.249	732.95	0.32	19.249	600.65	0.29	19.249	481.83	0.27
19.269	847.98	0.35	19.269	733.23	0.32	19.269	601.09	0.29	19.269	482.39	0.27
19.289	848.17	0.35	19.289	733.54	0.32	19.289	601.53	0.29	19.289	482.91	0.27
19.309	848.36	0.35	19.309	733.85	0.32	19.309	601.96	0.29	19.309	483.47	0.27
19.329	848.54	0.35	19.329	734.22	0.32	19.329	602.41	0.29	19.329	484.01	0.27
19.349	848.71	0.35	19.349	734.52	0.32	19.349	602.86	0.30	19.349	484.58	0.27
19.369	848.88	0.35	19.369	734.85	0.32	19.368	603.24	0.30	19.368	485.14	0.27
19.389	849.05	0.35	19.389	735.14	0.32	19.388	603.63	0.30	19.388	485.70	0.27
19.409	849.23	0.35	19.409	735.43	0.32	19.408	604.05	0.30	19.408	486.19	0.27
19.429	849.42	0.35	19.429	735.77	0.32	19.428	604.57	0.30	19.428	486.73	0.27
19.449	849.61	0.35	19.449	736.08	0.32	19.448	604.99	0.30	19.448	487.29	0.27
19.469	849.74	0.35	19.469	736.44	0.32	19.468	605.50	0.30	19.468	487.82	0.27
19.489	849.95	0.35	19.489	736.72	0.32	19.488	606.00	0.30	19.488	488.39	0.27
19.509	850.15	0.35	19.509	737.00	0.32	19.508	606.52	0.30	19.508	488.88	0.27
19.529	850.34	0.35	19.528	737.32	0.32	19.528	606.98	0.30	19.528	489.45	0.27
19.549	850.51	0.35	19.548	737.62	0.32	19.548	607.44	0.30	19.548	489.93	0.27
19.569	850.68	0.35	19.568	737.95	0.32	19.568	607.90	0.30	19.568	490.53	0.27
19.589	850.85	0.35	19.588	738.25	0.32	19.588	608.40	0.30	19.588	491.04	0.27
19.609	851.02	0.35	19.608	738.56	0.32	19.608	608.92	0.30	19.608	491.62	0.27
19.628	851.21	0.35	19.628	738.85	0.32	19.628	609.37	0.30	19.628	492.10	0.27

19.648	851.40	0.35	19.648	739.10	0.32	19.648	609.89	0.30	19.648	492.66	0.27
19.668	851.59	0.35	19.668	739.43	0.32	19.668	610.34	0.30	19.668	493.21	0.27
19.688	851.74	0.35	19.688	739.75	0.32	19.688	610.83	0.30	19.688	493.68	0.27
19.708	851.93	0.35	19.708	740.04	0.32	19.708	611.30	0.30	19.708	494.22	0.27
19.728	852.14	0.35	19.728	740.37	0.32	19.727	611.75	0.30	19.727	494.75	0.27
19.748	852.31	0.35	19.748	740.67	0.32	19.747	612.20	0.30	19.747	495.36	0.27
19.768	852.48	0.35	19.768	740.95	0.32	19.767	612.65	0.30	19.767	495.86	0.27
19.788	852.64	0.35	19.788	741.24	0.32	19.787	613.16	0.30	19.787	496.38	0.27
19.808	852.81	0.35	19.808	741.52	0.32	19.807	613.59	0.30	19.807	496.92	0.27
19.828	852.98	0.35	19.828	741.85	0.32	19.827	614.05	0.30	19.827	497.47	0.27
19.848	853.15	0.35	19.848	742.17	0.32	19.847	614.53	0.30	19.847	497.95	0.28
19.868	853.32	0.35	19.868	742.45	0.32	19.867	615.02	0.30	19.867	498.50	0.28
19.888	853.49	0.35	19.888	742.71	0.32	19.887	615.46	0.30	19.887	499.03	0.28
19.908	853.67	0.35	19.907	743.02	0.32	19.907	615.96	0.30	19.907	499.54	0.28
19.928	853.83	0.35	19.927	743.32	0.32	19.927	616.40	0.30	19.927	500.05	0.28
19.948	854.01	0.35	19.947	743.64	0.32	19.947	616.87	0.30	19.947	500.60	0.28
19.968	854.23	0.35	19.967	743.92	0.32	19.967	617.31	0.30	19.967	501.10	0.28
19.987	854.39	0.35	19.987	744.21	0.32	19.987	617.76	0.30	19.987	501.64	0.28
20.007	854.54	0.35	20.007	744.53	0.32	20.007	618.24	0.30	20.007	502.17	0.28
20.027	854.70	0.35	20.027	744.75	0.32	20.027	618.65	0.30	20.027	502.70	0.28
			20.047	745.04	0.32	20.047	619.07	0.30	20.047	503.24	0.28
			20.067	745.34	0.32	20.067	619.51	0.30	20.067	503.76	0.28
			20.087	745.62	0.32	20.087	619.96	0.30	20.087	504.28	0.28
			20.107	745.91	0.32	20.106	620.46	0.30	20.106	504.82	0.28
			20.127	746.23	0.32	20.126	620.87	0.30	20.126	505.31	0.28
			20.147	746.50	0.32	20.146	621.34	0.30	20.146	505.82	0.28
			20.167	746.76	0.32	20.166	621.81	0.30	20.166	506.33	0.28
			20.187	747.09	0.32	20.186	622.24	0.30	20.186	506.81	0.28
			20.207	747.33	0.32	20.206	622.65	0.30	20.206	507.36	0.28
			20.227	747.64	0.32	20.226	623.10	0.30	20.226	507.87	0.28
			20.247	747.94	0.32	20.246	623.54	0.30	20.246	508.36	0.28
			20.266	748.19	0.32	20.266	624.00	0.30	20.266	508.94	0.28
			20.286	748.47	0.32	20.286	624.42	0.30	20.286	509.40	0.28
			20.306	748.77	0.32	20.306	624.83	0.30	20.306	509.91	0.28
			20.326	749.06	0.32	20.326	625.27	0.30	20.326	510.46	0.28
			20.346	749.36	0.32	20.346	625.71	0.30	20.346	510.91	0.28
			20.366	749.64	0.32	20.366	626.15	0.30	20.366	511.46	0.28
			20.386	749.90	0.32	20.386	626.58	0.30	20.386	511.96	0.28
			20.406	750.18	0.32	20.406	627.01	0.30	20.406	512.45	0.28
			20.426	750.48	0.32	20.426	627.46	0.30	20.426	512.95	0.28
			20.446	750.76	0.32	20.446	627.88	0.30	20.446	513.42	0.28
			20.466	751.04	0.32	20.466	628.33	0.30	20.466	513.95	0.28
			20.486	751.30	0.32	20.485	628.71	0.30	20.485	514.48	0.28
			20.506	751.55	0.32	20.505	629.09	0.30	20.505	514.91	0.28
			20.526	751.80	0.32	20.525	629.53	0.30	20.525	515.42	0.28

			20.546	752.08	0.32	20.545	629.93	0.30	20.545	515.91	0.28
			20.566	752.35	0.32	20.565	630.43	0.30	20.565	516.40	0.28
			20.586	752.62	0.32	20.585	630.81	0.30	20.585	516.91	0.28
			20.606	752.93	0.32	20.605	631.29	0.30	20.605	517.44	0.28
			20.626	753.21	0.32	20.625	631.71	0.30	20.625	517.93	0.28
			20.645	753.45	0.32	20.645	632.11	0.30	20.645	518.45	0.28
			20.665	753.71	0.32	20.665	632.50	0.30	20.665	518.91	0.28
			20.685	753.96	0.32	20.685	632.91	0.30	20.685	519.44	0.28
			20.705	754.24	0.32	20.705	633.31	0.30	20.705	519.91	0.28
			20.725	754.53	0.33	20.725	633.80	0.30	20.725	520.37	0.28
			20.745	754.79	0.33	20.745	634.19	0.30	20.745	520.84	0.28
			20.765	755.06	0.33	20.765	634.56	0.30	20.765	521.36	0.28
			20.785	755.32	0.33	20.785	634.99	0.30	20.785	521.84	0.28
			20.805	755.58	0.33	20.805	635.39	0.30	20.805	522.34	0.28
			20.825	755.86	0.33	20.825	635.82	0.30	20.825	522.79	0.28
			20.845	756.17	0.33	20.845	636.21	0.30	20.845	523.30	0.28
			20.865	756.42	0.33	20.864	636.63	0.30	20.864	523.78	0.28
			20.885	756.68	0.33	20.884	637.00	0.30	20.884	524.25	0.28
			20.905	756.94	0.33	20.904	637.40	0.30	20.904	524.76	0.28
			20.925	757.19	0.33	20.924	637.80	0.30	20.924	525.18	0.28
			20.945	757.43	0.33	20.944	638.17	0.30	20.944	525.68	0.28
			20.965	757.73	0.33	20.964	638.59	0.30	20.964	526.16	0.28
			20.985	758.00	0.33	20.984	639.02	0.30	20.984	526.63	0.28
			21.004	758.25	0.33	21.004	639.42	0.30	21.004	527.11	0.28
			21.024	758.49	0.33	21.024	639.77	0.30	21.024	527.60	0.28
			21.044	758.78	0.33	21.044	640.17	0.30	21.044	528.08	0.28
			21.064	759.04	0.33	21.064	640.58	0.30	21.064	528.53	0.28
			21.084	759.27	0.33	21.084	640.98	0.30	21.084	529.00	0.28
			21.104	759.51	0.33	21.104	641.31	0.30	21.104	529.48	0.28
			21.124	759.79	0.33	21.124	641.70	0.30	21.124	529.94	0.28
			21.144	760.05	0.33	21.144	642.10	0.30	21.144	530.43	0.28
			21.164	760.28	0.33	21.164	642.48	0.30	21.164	530.90	0.28
			21.184	760.56	0.33	21.184	642.85	0.30	21.184	531.30	0.28
			21.204	760.84	0.33	21.204	643.23	0.30	21.204	531.82	0.28
			21.224	761.10	0.33	21.223	643.60	0.30	21.223	532.26	0.28
			21.244	761.35	0.33	21.243	644.00	0.30	21.243	532.78	0.28
			21.264	761.58	0.33	21.263	644.38	0.30	21.263	533.23	0.28
			21.284	761.82	0.33	21.283	644.72	0.30	21.283	533.72	0.28
			21.304	762.11	0.33	21.303	645.11	0.30	21.303	534.16	0.28
			21.324	762.33	0.33	21.323	645.49	0.30	21.323	534.62	0.28
			21.344	762.57	0.33	21.343	645.83	0.30	21.343	535.06	0.28
			21.364	762.86	0.33	21.363	646.17	0.30	21.363	535.55	0.28
			21.383	763.09	0.33	21.383	646.54	0.30	21.383	536.02	0.28
			21.403	763.35	0.33	21.403	646.90	0.30	21.403	536.49	0.28
			21.423	763.63	0.33	21.423	647.23	0.30	21.423	536.92	0.28

			21.443	763.84	0.33	21.443	647.58	0.30	21.443	537.37	0.28
			21.463	764.09	0.33	21.463	647.99	0.30	21.463	537.82	0.28
			21.483	764.36	0.33	21.483	648.31	0.30	21.483	538.29	0.28
			21.503	764.61	0.33	21.503	648.63	0.30	21.503	538.75	0.28
			21.523	764.85	0.33	21.523	648.96	0.30	21.523	539.22	0.28
			21.543	765.06	0.33	21.543	649.27	0.30	21.543	539.68	0.28
			21.563	765.35	0.33	21.563	649.68	0.30	21.563	540.11	0.28
			21.583	765.61	0.33	21.583	650.02	0.30	21.583	540.62	0.28
			21.603	765.87	0.33	21.602	650.43	0.30	21.602	541.05	0.28
			21.623	766.07	0.33	21.622	650.79	0.30	21.622	541.46	0.28
			21.643	766.30	0.33	21.642	651.15	0.30	21.642	541.96	0.28
			21.663	766.54	0.33	21.662	651.53	0.30	21.662	542.40	0.28
			21.683	766.79	0.33	21.682	651.95	0.30	21.682	542.87	0.28
			21.703	767.03	0.33	21.702	652.29	0.30	21.702	543.32	0.28
			21.723	767.28	0.33	21.722	652.63	0.30	21.722	543.82	0.28
			21.742	767.52	0.33	21.742	653.04	0.30	21.742	544.23	0.28
			21.762	767.76	0.33	21.762	653.41	0.30	21.762	544.68	0.28
			21.782	768.00	0.33	21.782	653.77	0.30	21.782	545.11	0.28
			21.802	768.24	0.33	21.802	654.11	0.30	21.802	545.57	0.28
			21.822	768.47	0.33	21.822	654.50	0.30	21.822	546.04	0.28
			21.842	768.70	0.33	21.842	654.82	0.30	21.842	546.51	0.28
			21.862	768.93	0.33	21.862	655.21	0.30	21.862	546.94	0.28
			21.882	769.17	0.33	21.882	655.53	0.30	21.882	547.35	0.28
			21.902	769.41	0.33	21.902	655.91	0.30	21.902	547.82	0.28
			21.922	769.66	0.33	21.922	656.31	0.30	21.922	548.25	0.28
			21.942	769.90	0.33	21.942	656.66	0.30	21.942	548.68	0.28
			21.962	770.14	0.33	21.962	657.01	0.30	21.962	549.15	0.28
			21.982	770.38	0.33	21.981	657.35	0.30	21.981	549.58	0.28
			22.002	770.62	0.33	22.001	657.74	0.30	22.001	550.00	0.28
			22.022	770.82	0.33	22.021	658.11	0.30	22.021	550.44	0.28
			22.042	771.03	0.33	22.041	658.44	0.30	22.041	550.87	0.28
			22.062	771.27	0.33	22.061	658.81	0.31	22.061	551.31	0.28
			22.082	771.51	0.33	22.081	659.16	0.31	22.081	551.76	0.28
			22.101	771.74	0.33	22.101	659.49	0.31	22.101	552.23	0.28
			22.121	771.97	0.33	22.121	659.87	0.31	22.121	552.60	0.28
			22.141	772.20	0.33	22.141	660.20	0.31	22.141	553.05	0.28
			22.161	772.43	0.33	22.161	660.55	0.31	22.161	553.50	0.28
			22.181	772.67	0.33	22.181	660.91	0.31	22.181	553.93	0.28
			22.201	772.90	0.33	22.201	661.28	0.31	22.201	554.35	0.28
			22.221	773.13	0.33	22.221	661.59	0.31	22.221	554.79	0.28
			22.241	773.35	0.33	22.241	661.97	0.31	22.241	555.23	0.28
			22.261	773.58	0.33	22.261	662.34	0.31	22.261	555.67	0.28
			22.281	773.80	0.33	22.281	662.70	0.31	22.281	556.08	0.28
			22.301	774.01	0.33	22.301	662.99	0.31	22.301	556.53	0.28
			22.321	774.22	0.33	22.321	663.38	0.31	22.321	556.95	0.28

			22.341	774.45	0.33	22.340	663.68	0.31	22.340	557.37	0.29
			22.361	774.67	0.33	22.360	664.04	0.31	22.360	557.80	0.29
			22.381	774.90	0.33	22.380	664.37	0.31	22.380	558.25	0.29
			22.401	775.12	0.33	22.400	664.76	0.31	22.400	558.68	0.29
			22.421	775.35	0.33	22.420	665.05	0.31	22.420	559.07	0.29
			22.441	775.56	0.33	22.440	665.42	0.31	22.440	559.48	0.29
			22.461	775.77	0.33	22.460	665.80	0.31	22.460	559.90	0.29
			22.480	776.01	0.33	22.480	666.08	0.31	22.480	560.32	0.29
			22.500	776.26	0.33	22.500	666.43	0.31	22.500	560.75	0.29
			22.520	776.47	0.33	22.520	666.79	0.31	22.520	561.16	0.29
			22.540	776.67	0.33	22.540	667.13	0.31	22.540	561.60	0.29
			22.560	776.87	0.33	22.560	667.48	0.31	22.560	562.00	0.29
			22.580	777.08	0.33	22.580	667.80	0.31	22.580	562.40	0.29
			22.600	777.31	0.33	22.600	668.13	0.31	22.600	562.82	0.29
			22.620	777.55	0.33	22.620	668.46	0.31	22.620	563.27	0.29
			22.640	777.76	0.33	22.640	668.78	0.31	22.640	563.71	0.29
			22.660	777.97	0.33	22.660	669.09	0.31	22.660	564.10	0.29
			22.680	778.18	0.33	22.680	669.47	0.31	22.680	564.50	0.29
			22.700	778.39	0.33	22.700	669.75	0.31	22.700	564.91	0.29
			22.720	778.62	0.33	22.719	670.06	0.31	22.719	565.35	0.29
			22.740	778.85	0.33	22.739	670.42	0.31	22.739	565.76	0.29
			22.760	779.03	0.33	22.759	670.74	0.31	22.759	566.17	0.29
			22.780	779.21	0.33	22.779	671.07	0.31	22.779	566.59	0.29
			22.800	779.42	0.33	22.799	671.37	0.31	22.799	567.01	0.29
			22.820	779.66	0.33	22.819	671.72	0.31	22.819	567.43	0.29
			22.839	779.88	0.33	22.839	672.06	0.31	22.839	567.78	0.29
			22.859	780.07	0.33	22.859	672.36	0.31	22.859	568.18	0.29
			22.879	780.27	0.33	22.879	672.65	0.31	22.879	568.63	0.29
			22.899	780.47	0.33	22.899	672.97	0.31	22.899	569.05	0.29
			22.919	780.66	0.33	22.919	673.28	0.31	22.919	569.44	0.29
			22.939	780.87	0.33	22.939	673.60	0.31	22.939	569.85	0.29
			22.959	781.07	0.33	22.959	673.94	0.31	22.959	570.23	0.29
			22.979	781.28	0.33	22.979	674.21	0.31	22.979	570.65	0.29
			22.999	781.49	0.33	22.999	674.53	0.31	22.999	571.05	0.29
			23.019	781.70	0.33	23.019	674.88	0.31	23.019	571.46	0.29
			23.039	781.90	0.33	23.039	675.12	0.31	23.039	571.90	0.29
			23.059	782.10	0.33	23.059	675.42	0.31	23.059	572.26	0.29
			23.079	782.32	0.33	23.079	675.71	0.31	23.079	572.65	0.29
			23.099	782.55	0.33	23.098	676.06	0.31	23.098	573.05	0.29
			23.119	782.73	0.33	23.118	676.36	0.31	23.118	573.46	0.29
			23.139	782.91	0.33	23.138	676.66	0.31	23.138	573.86	0.29
			23.159	783.10	0.33	23.158	676.97	0.31	23.158	574.27	0.29
			23.179	783.31	0.33	23.178	677.31	0.31	23.178	574.63	0.29
			23.199	783.51	0.33	23.198	677.66	0.31	23.198	575.05	0.29
			23.218	783.70	0.33	23.218	677.94	0.31	23.218	575.48	0.29

			23.238	783.88	0.33	23.238	678.22	0.31	23.238	575.85	0.29
			23.258	784.08	0.33	23.258	678.55	0.31	23.258	576.20	0.29
			23.278	784.28	0.33	23.278	678.91	0.31	23.278	576.60	0.29
			23.298	784.51	0.33	23.298	679.19	0.31	23.298	577.01	0.29
			23.318	784.72	0.33	23.318	679.48	0.31	23.318	577.39	0.29
			23.338	784.94	0.33	23.338	679.87	0.31	23.338	577.81	0.29
			23.358	785.15	0.33	23.358	680.16	0.31	23.358	578.19	0.29
			23.378	785.36	0.33	23.378	680.45	0.31	23.378	578.58	0.29
			23.398	785.50	0.33	23.398	680.74	0.31	23.398	578.98	0.29
			23.418	785.72	0.33	23.418	681.08	0.31	23.418	579.36	0.29
			23.438	785.95	0.33	23.438	681.33	0.31	23.438	579.74	0.29
			23.458	786.19	0.33	23.458	681.65	0.31	23.458	580.13	0.29
			23.478	786.40	0.33	23.477	681.97	0.31	23.477	580.54	0.29
			23.498	786.60	0.33	23.497	682.33	0.31	23.497	580.87	0.29
			23.518	786.81	0.33	23.517	682.63	0.31	23.517	581.24	0.29
			23.538	787.03	0.33	23.537	682.93	0.31	23.537	581.63	0.29
			23.558	787.23	0.33	23.557	683.25	0.31	23.557	582.02	0.29
			23.577	787.45	0.33	23.577	683.53	0.31	23.577	582.42	0.29
			23.597	787.65	0.33	23.597	683.82	0.31	23.597	582.81	0.29
			23.617	787.87	0.33	23.617	684.14	0.31	23.617	583.19	0.29
			23.637	788.09	0.33	23.637	684.46	0.31	23.637	583.56	0.29
			23.657	788.31	0.33	23.657	684.74	0.31	23.657	583.94	0.29
			23.677	788.51	0.33	23.677	685.06	0.31	23.677	584.29	0.29
			23.697	788.71	0.33	23.697	685.36	0.31	23.697	584.67	0.29
			23.717	788.95	0.33	23.717	685.68	0.31	23.717	585.06	0.29
			23.737	789.17	0.33	23.737	685.95	0.31	23.737	585.44	0.29
			23.757	789.37	0.33	23.757	686.29	0.31	23.757	585.80	0.29
			23.777	789.55	0.33	23.777	686.55	0.31	23.777	586.16	0.29
			23.797	789.75	0.33	23.797	686.87	0.31	23.797	586.53	0.29
			23.817	789.95	0.33	23.817	687.15	0.31	23.817	586.91	0.29
			23.837	790.19	0.33	23.836	687.42	0.31	23.836	587.30	0.29
			23.857	790.40	0.33	23.856	687.78	0.31	23.856	587.71	0.29
			23.877	790.58	0.33	23.876	688.06	0.31	23.876	588.06	0.29
			23.897	790.77	0.33	23.896	688.36	0.31	23.896	588.40	0.29
			23.917	790.96	0.33	23.916	688.63	0.31	23.916	588.75	0.29
			23.937	791.16	0.33	23.936	688.91	0.31	23.936	589.14	0.29
			23.956	791.42	0.33	23.956	689.22	0.31	23.956	589.54	0.29
			23.976	791.63	0.33	23.976	689.51	0.31	23.976	589.90	0.29
			23.996	791.81	0.33	23.996	689.84	0.31	23.996	590.26	0.29
			24.016	792.01	0.33	24.016	690.12	0.31	24.016	590.62	0.29
			24.036	792.20	0.33	24.036	690.39	0.31	24.036	591.01	0.29
			24.056	792.39	0.33	24.056	690.71	0.31	24.056	591.38	0.29
			24.076	792.63	0.33	24.076	690.95	0.31	24.076	591.71	0.29
			24.096	792.83	0.33	24.096	691.24	0.31	24.096	592.07	0.29
			24.116	793.02	0.33	24.116	691.54	0.31	24.116	592.45	0.29



			24.136	793.22	0.33	24.136	691.84	0.31	24.136	592.79	0.29
			24.156	793.41	0.33	24.156	692.12	0.31	24.156	593.15	0.29
			24.176	793.60	0.33	24.176	692.39	0.31	24.176	593.50	0.29
			24.196	793.79	0.33	24.196	692.66	0.31	24.196	593.86	0.29
			24.216	794.05	0.33	24.215	692.90	0.31	24.215	594.21	0.29
			24.236	794.24	0.33	24.235	693.20	0.31	24.235	594.56	0.29
			24.256	794.43	0.33	24.255	693.49	0.31	24.255	594.90	0.29
			24.276	794.61	0.33	24.275	693.75	0.31	24.275	595.27	0.29
			24.296	794.83	0.33	24.295	694.01	0.31	24.295	595.63	0.29
			24.315	795.06	0.33	24.315	694.27	0.31	24.315	596.00	0.29
			24.335	795.24	0.33	24.335	694.54	0.31	24.335	596.36	0.29
			24.355	795.42	0.33	24.355	694.83	0.31	24.355	596.73	0.29
			24.375	795.61	0.33	24.375	695.05	0.31	24.375	597.09	0.29
			24.395	795.80	0.33	24.395	695.32	0.31	24.395	597.44	0.29
			24.415	796.06	0.33	24.415	695.59	0.31	24.415	597.74	0.29
			24.435	796.24	0.33	24.435	695.91	0.31	24.435	598.07	0.29
			24.455	796.43	0.33	24.455	696.18	0.31	24.455	598.44	0.29
			24.475	796.60	0.33	24.475	696.42	0.31	24.475	598.79	0.29
			24.495	796.85	0.33	24.495	696.69	0.31	24.495	599.11	0.29
			24.515	797.05	0.33	24.515	696.96	0.31	24.515	599.45	0.29
			24.535	797.23	0.33	24.535	697.25	0.31	24.535	599.82	0.29
			24.555	797.39	0.33	24.555	697.49	0.31	24.555	600.17	0.29
			24.575	797.61	0.33	24.575	697.77	0.31	24.575	600.51	0.29
			24.595	797.85	0.33	24.594	698.11	0.31	24.594	600.84	0.29
			24.615	798.01	0.33	24.614	698.34	0.31	24.614	601.17	0.29
			24.635	798.21	0.33	24.634	698.65	0.31	24.634	601.50	0.29
			24.655	798.42	0.33	24.654	698.87	0.31	24.654	601.84	0.29
			24.674	798.60	0.33	24.674	699.16	0.31	24.674	602.15	0.29
			24.694	798.78	0.33	24.694	699.46	0.31	24.694	602.47	0.29
			24.714	799.00	0.33	24.714	699.74	0.31	24.714	602.83	0.29
			24.734	799.20	0.33	24.734	700.00	0.31	24.734	603.19	0.29
			24.754	799.37	0.33	24.754	700.30	0.31	24.754	603.50	0.29
			24.774	799.59	0.33	24.774	700.50	0.31	24.774	603.82	0.29
			24.794	799.76	0.33	24.794	700.81	0.31	24.794	604.16	0.29
			24.814	799.96	0.33	24.814	701.12	0.31	24.814	604.51	0.29
			24.834	800.14	0.33	24.834	701.39	0.31	24.834	604.82	0.29
			24.854	800.34	0.33	24.854	701.66	0.31	24.854	605.13	0.29
			24.874	800.54	0.33	24.874	701.90	0.31	24.874	605.46	0.29
			24.894	800.70	0.33	24.894	702.19	0.31	24.894	605.80	0.29
			24.914	800.92	0.33	24.914	702.41	0.31	24.914	606.12	0.29
			24.934	801.12	0.33	24.934	702.71	0.31	24.934	606.44	0.29
			24.954	801.28	0.33	24.954	703.00	0.31	24.954	606.77	0.29
			24.974	801.46	0.33	24.973	703.25	0.31	24.973	607.11	0.29
			24.994	801.68	0.33	24.993	703.55	0.31	24.993	607.44	0.29
			25.014	801.87	0.33	25.013	703.82	0.31	25.013	607.76	0.29

			25.034	802.03	0.33	25.033	704.07	0.31	25.033	608.07	0.29
			25.053	802.24	0.33	25.053	704.34	0.31	25.053	608.36	0.29
			25.073	802.38	0.33	25.073	704.62	0.31	25.073	608.65	0.29
			25.093	802.59	0.33	25.093	704.87	0.31	25.093	608.99	0.29
			25.113	802.75	0.33	25.113	705.14	0.31	25.113	609.34	0.29
			25.133	802.94	0.34	25.133	705.38	0.31	25.133	609.66	0.29
			25.153	803.16	0.34	25.153	705.66	0.31	25.153	609.99	0.29
			25.173	803.34	0.34	25.173	705.92	0.31	25.173	610.30	0.29
			25.193	803.49	0.34	25.193	706.16	0.31	25.193	610.58	0.29
			25.213	803.69	0.34	25.213	706.45	0.31	25.213	610.86	0.29
			25.233	803.92	0.34	25.233	706.70	0.31	25.233	611.19	0.29
			25.253	804.07	0.34	25.253	706.94	0.31	25.253	611.53	0.29
			25.273	804.22	0.34	25.273	707.22	0.31	25.273	611.87	0.29
			25.293	804.43	0.34	25.293	707.48	0.31	25.293	612.17	0.29
			25.313	804.64	0.34	25.313	707.75	0.31	25.313	612.48	0.29
			25.333	804.82	0.34	25.332	708.03	0.31	25.332	612.78	0.29
			25.353	804.99	0.34	25.352	708.30	0.31	25.352	613.09	0.29
			25.373	805.19	0.34	25.372	708.59	0.31	25.372	613.40	0.29
			25.393	805.34	0.34	25.392	708.84	0.31	25.392	613.71	0.30
			25.412	805.56	0.34	25.412	709.11	0.31	25.412	614.01	0.30
			25.432	805.70	0.34	25.432	709.36	0.31	25.432	614.32	0.30
			25.452	805.89	0.34	25.452	709.54	0.31	25.452	614.61	0.30
			25.472	806.10	0.34	25.472	709.86	0.31	25.472	614.90	0.30
			25.492	806.27	0.34	25.492	710.09	0.31	25.492	615.18	0.30
			25.512	806.43	0.34	25.512	710.31	0.31	25.512	615.47	0.30
			25.532	806.64	0.34	25.532	710.60	0.32	25.532	615.73	0.30
			25.552	806.84	0.34	25.552	710.87	0.32	25.552	615.97	0.30
			25.572	806.99	0.34	25.572	711.14	0.32	25.572	616.33	0.30
			25.592	807.20	0.34	25.592	711.39	0.32	25.592	617.09	0.30
			25.612	807.35	0.34	25.612	711.62	0.32	25.612	617.59	0.30
			25.632	807.53	0.34	25.632	711.88	0.32	25.632	618.03	0.30
			25.652	807.74	0.34	25.652	712.16	0.32	25.652	618.47	0.30
			25.672	807.93	0.34	25.672	712.42	0.32	25.672	618.86	0.30
			25.692	808.08	0.34	25.692	712.68	0.32	25.692	619.25	0.30
			25.712	808.29	0.34	25.711	712.93	0.32	25.711	619.61	0.30
			25.732	808.44	0.34	25.731	713.15	0.32	25.731	619.95	0.30
			25.752	808.63	0.34	25.751	713.45	0.32	25.751	620.32	0.30
			25.772	808.79	0.34	25.771	713.69	0.32	25.771	620.70	0.30
			25.791	808.96	0.34	25.791	713.89	0.32	25.791	620.99	0.30
			25.811	809.16	0.34	25.811	714.16	0.32	25.811	621.32	0.30
			25.831	809.35	0.34	25.831	714.42	0.32	25.831	621.66	0.30
			25.851	809.49	0.34	25.851	714.68	0.32	25.851	622.00	0.30
			25.871	809.68	0.34	25.871	714.95	0.32	25.871	622.36	0.30
			25.891	809.87	0.34	25.891	715.14	0.32	25.891	622.71	0.30
			25.911	810.05	0.34	25.911	715.43	0.32	25.911	623.04	0.30

			25.931	810.23	0.34	25.931	715.70	0.32	25.931	623.34	0.30
			25.951	810.42	0.34	25.951	715.93	0.32	25.951	623.66	0.30
			25.971	810.61	0.34	25.971	716.17	0.32	25.971	623.99	0.30
			25.991	810.77	0.34	25.991	716.44	0.32	25.991	624.34	0.30
			26.011	810.91	0.34	26.011	716.69	0.32	26.011	624.68	0.30
			26.031	811.08	0.34	26.031	716.90	0.32	26.031	625.01	0.30
			26.051	811.27	0.34	26.051	717.15	0.32	26.051	625.33	0.30
			26.071	811.45	0.34	26.071	717.39	0.32	26.071	625.64	0.30
			26.091	811.63	0.34	26.090	717.71	0.32	26.090	625.94	0.30
			26.111	811.80	0.34	26.110	717.87	0.32	26.110	626.26	0.30
			26.131	811.98	0.34	26.130	718.19	0.32	26.130	626.58	0.30
			26.150	812.16	0.34	26.150	718.44	0.32	26.150	626.87	0.30
			26.170	812.35	0.34	26.170	718.68	0.32	26.170	627.16	0.30
			26.190	812.54	0.34	26.190	718.92	0.32	26.190	627.46	0.30
			26.210	812.68	0.34	26.210	719.11	0.32	26.210	627.77	0.30
			26.230	812.85	0.34	26.230	719.41	0.32	26.230	628.08	0.30
			26.250	813.04	0.34	26.250	719.65	0.32	26.250	628.38	0.30
			26.270	813.23	0.34	26.270	719.86	0.32	26.270	628.70	0.30
			26.290	813.40	0.34	26.290	720.08	0.32	26.290	629.05	0.30
			26.310	813.57	0.34	26.310	720.35	0.32	26.310	629.37	0.30
			26.330	813.75	0.34	26.330	720.63	0.32	26.330	629.67	0.30
			26.350	813.92	0.34	26.350	720.86	0.32	26.350	629.97	0.30
			26.370	814.04	0.34	26.370	721.06	0.32	26.370	630.25	0.30
			26.390	814.19	0.34	26.390	721.34	0.32	26.390	630.55	0.30
			26.410	814.36	0.34	26.410	721.59	0.32	26.410	630.86	0.30
			26.430	814.53	0.34	26.430	721.81	0.32	26.430	631.18	0.30
			26.450	814.71	0.34	26.450	722.02	0.32	26.450	631.49	0.30
			26.470	814.88	0.34	26.469	722.30	0.32	26.469	631.80	0.30
			26.490	815.06	0.34	26.489	722.53	0.32	26.489	632.09	0.30
			26.510	815.23	0.34	26.509	722.77	0.32	26.509	632.37	0.30
			26.529	815.40	0.34	26.529	723.00	0.32	26.529	632.65	0.30
			26.549	815.56	0.34	26.549	723.24	0.32	26.549	632.96	0.30
			26.569	815.72	0.34	26.569	723.51	0.32	26.569	633.27	0.30
			26.589	815.90	0.34	26.589	723.69	0.32	26.589	633.56	0.30
			26.609	816.12	0.34	26.609	723.95	0.32	26.609	633.85	0.30
			26.629	816.23	0.34	26.629	724.15	0.32	26.629	634.14	0.30
			26.649	816.38	0.34	26.649	724.40	0.32	26.649	634.46	0.30
			26.669	816.56	0.34	26.669	724.62	0.32	26.669	634.77	0.30
			26.689	816.73	0.34	26.689	724.86	0.32	26.689	635.07	0.30
			26.709	816.89	0.34	26.709	725.14	0.32	26.709	635.37	0.30
			26.729	817.05	0.34	26.729	725.37	0.32	26.729	635.67	0.30
			26.749	817.22	0.34	26.749	725.62	0.32	26.749	635.96	0.30
			26.769	817.38	0.34	26.769	725.86	0.32	26.769	636.25	0.30
			26.789	817.55	0.34	26.789	726.08	0.32	26.789	636.55	0.30
			26.809	817.71	0.34	26.809	726.34	0.32	26.809	636.85	0.30

			26.829	817.91	0.34	26.828	726.56	0.32	26.828	637.13	0.30
			26.849	818.11	0.34	26.848	726.80	0.32	26.848	637.40	0.30
			26.869	818.26	0.34	26.868	727.01	0.32	26.868	637.68	0.30
			26.888	818.41	0.34	26.888	727.23	0.32	26.888	637.98	0.30
			26.908	818.57	0.34	26.908	727.47	0.32	26.908	638.27	0.30
			26.928	818.73	0.34	26.928	727.69	0.32	26.928	638.57	0.30
			26.948	818.89	0.34	26.948	727.97	0.32	26.948	638.88	0.30
			26.968	819.04	0.34	26.968	728.18	0.32	26.968	639.18	0.30
			26.988	819.19	0.34	26.988	728.43	0.32	26.988	639.46	0.30
			27.008	819.35	0.34	27.008	728.65	0.32	27.008	639.74	0.30
			27.028	819.51	0.34	27.028	728.86	0.32	27.028	640.01	0.30
			27.048	819.67	0.34	27.048	729.11	0.32	27.048	640.28	0.30
			27.068	819.84	0.34	27.068	729.33	0.32	27.068	640.55	0.30
			27.088	820.03	0.34	27.088	729.52	0.32	27.088	640.83	0.30
			27.108	820.20	0.34	27.108	729.81	0.32	27.108	641.11	0.30
			27.128	820.35	0.34	27.128	730.01	0.32	27.128	641.40	0.30
			27.148	820.45	0.34	27.148	730.22	0.32	27.148	641.70	0.30
			27.168	820.60	0.34	27.168	730.48	0.32	27.168	642.00	0.30
			27.188	820.77	0.34	27.188	730.69	0.32	27.188	642.30	0.30
			27.208	820.98	0.34	27.207	730.90	0.32	27.207	642.58	0.30
			27.228	821.15	0.34	27.227	731.18	0.32	27.227	642.87	0.30
			27.247	821.29	0.34	27.247	731.36	0.32	27.247	643.14	0.30
			27.267	821.44	0.34	27.267	731.61	0.32	27.267	643.40	0.30
			27.287	821.59	0.34	27.287	731.83	0.32	27.287	643.67	0.30
			27.307	821.72	0.34	27.307	732.04	0.32	27.307	643.95	0.30
			27.327	821.89	0.34	27.327	732.25	0.32	27.327	644.23	0.30
			27.347	822.07	0.34	27.347	732.51	0.32	27.347	644.52	0.30
			27.367	822.21	0.34	27.367	732.74	0.32	27.367	644.79	0.30
			27.387	822.36	0.34	27.387	732.94	0.32	27.387	645.05	0.30
			27.407	822.54	0.34	27.407	733.18	0.32	27.407	645.32	0.30
			27.427	822.70	0.34	27.427	733.40	0.32	27.427	645.60	0.30
			27.447	822.83	0.34	27.447	733.61	0.32	27.447	645.87	0.30
			27.467	822.98	0.34	27.467	733.87	0.32	27.467	646.15	0.30
			27.487	823.15	0.34	27.487	734.07	0.32	27.487	646.41	0.30
			27.507	823.29	0.34	27.507	734.32	0.32	27.507	646.68	0.30
			27.527	823.42	0.34	27.527	734.51	0.32	27.527	646.94	0.30
			27.547	823.57	0.34	27.547	734.73	0.32	27.547	647.20	0.30
			27.567	823.74	0.34	27.567	734.95	0.32	27.567	647.47	0.30
			27.587	823.90	0.34	27.586	735.20	0.32	27.586	647.75	0.30
			27.607	824.07	0.34	27.606	735.43	0.32	27.606	648.02	0.30
			27.626	824.23	0.34	27.626	735.64	0.32	27.626	648.28	0.30
			27.646	824.39	0.34	27.646	735.86	0.32	27.646	648.55	0.30
			27.666	824.53	0.34	27.666	736.02	0.32	27.666	648.82	0.30
			27.686	824.65	0.34	27.686	736.25	0.32	27.686	649.09	0.30
			27.706	824.80	0.34	27.706	736.47	0.32	27.706	649.36	0.30

			27.726	824.96	0.34	27.726	736.70	0.32	27.726	649.63	0.30
			27.746	825.12	0.34	27.746	736.93	0.32	27.746	649.91	0.30
			27.766	825.27	0.34	27.766	737.14	0.32	27.766	650.18	0.30
			27.786	825.37	0.34	27.786	737.36	0.32	27.786	650.46	0.30
			27.806	825.48	0.34	27.806	737.57	0.32	27.806	650.73	0.30
			27.826	825.62	0.34	27.826	737.77	0.32	27.826	650.99	0.30
			27.846	825.85	0.34	27.846	737.98	0.32	27.846	651.25	0.30
			27.866	825.99	0.34	27.866	738.24	0.32	27.866	651.51	0.30
			27.886	826.16	0.34	27.886	738.46	0.32	27.886	651.77	0.30
			27.906	826.31	0.34	27.906	738.65	0.32	27.906	652.03	0.30
			27.926	826.43	0.34	27.926	738.87	0.32	27.926	652.28	0.30
			27.946	826.63	0.34	27.946	739.08	0.32	27.946	652.54	0.30
			27.966	826.76	0.34	27.965	739.32	0.32	27.965	652.79	0.30
			27.985	826.92	0.34	27.985	739.54	0.32	27.985	653.05	0.30
			28.005	827.10	0.34	28.005	739.71	0.32	28.005	653.31	0.30
			28.025	827.22	0.34	28.025	739.96	0.32	28.025	653.56	0.30
			28.045	827.35	0.34	28.045	740.12	0.32	28.045	653.82	0.30
			28.065	827.54	0.34	28.065	740.36	0.32	28.065	654.07	0.30
			28.085	827.71	0.34	28.085	740.61	0.32	28.085	654.33	0.30
			28.105	827.84	0.34	28.105	740.82	0.32	28.105	654.58	0.30
			28.125	827.98	0.34	28.125	741.03	0.32	28.125	654.84	0.30
			28.145	828.16	0.34	28.145	741.27	0.32	28.145	655.10	0.30
			28.165	828.33	0.34	28.165	741.44	0.32	28.165	655.36	0.30
			28.185	828.46	0.34	28.185	741.67	0.32	28.185	655.63	0.30
			28.205	828.58	0.34	28.205	741.85	0.32	28.205	655.89	0.30
			28.225	828.76	0.34	28.225	742.08	0.32	28.225	656.13	0.30
			28.245	828.90	0.34	28.245	742.32	0.32	28.245	656.35	0.30
			28.265	829.07	0.34	28.265	742.48	0.32	28.265	656.57	0.30
			28.285	829.21	0.34	28.285	742.71	0.32	28.285	656.79	0.30
			28.305	829.39	0.34	28.305	742.93	0.32	28.305	657.01	0.30
			28.325	829.54	0.34	28.324	743.13	0.32	28.324	657.23	0.30
			28.345	829.67	0.34	28.344	743.35	0.32	28.344	657.48	0.30
			28.364	829.80	0.34	28.364	743.54	0.32	28.364	657.77	0.30
			28.384	830.01	0.34	28.384	743.75	0.32	28.384	658.02	0.30
			28.404	830.13	0.34	28.404	744.01	0.32	28.404	658.30	0.30
			28.424	830.32	0.34	28.424	744.16	0.32	28.424	658.57	0.30
			28.444	830.44	0.34	28.444	744.38	0.32	28.444	658.80	0.30
			28.464	830.56	0.34	28.464	744.59	0.32	28.464	659.08	0.30
			28.484	830.76	0.34	28.484	744.84	0.32	28.484	659.35	0.30
			28.504	830.88	0.34	28.504	745.05	0.32	28.504	659.63	0.30
			28.524	831.07	0.34	28.524	745.20	0.32	28.524	659.93	0.30
			28.544	831.18	0.34	28.544	745.42	0.32	28.544	660.20	0.30
			28.564	831.37	0.34	28.564	745.63	0.32	28.564	660.46	0.30
			28.584	831.50	0.34	28.584	745.84	0.32	28.584	660.73	0.30
			28.604	831.67	0.34	28.604	746.07	0.32	28.604	660.98	0.30

			28.624	831.78	0.34	28.624	746.28	0.32	28.624	661.26	0.30
			28.644	831.97	0.34	28.644	746.49	0.32	28.644	661.49	0.30
			28.664	832.08	0.34	28.664	746.68	0.32	28.664	661.79	0.30
			28.684	832.28	0.34	28.684	746.88	0.32	28.684	662.09	0.30
			28.704	832.38	0.34	28.703	747.07	0.32	28.703	662.31	0.30
			28.723	832.56	0.34	28.723	747.28	0.32	28.723	662.59	0.30
			28.743	832.69	0.34	28.743	747.49	0.32	28.743	662.88	0.30
			28.763	832.86	0.34	28.763	747.70	0.32	28.763	663.16	0.30
			28.783	833.02	0.34	28.783	747.93	0.32	28.783	663.43	0.30
			28.803	833.15	0.34	28.803	748.09	0.32	28.803	663.68	0.30
			28.823	833.30	0.34	28.823	748.30	0.32	28.823	663.92	0.30
			28.843	833.45	0.34	28.843	748.55	0.32	28.843	664.25	0.30
			28.863	833.58	0.34	28.863	748.69	0.32	28.863	664.44	0.30
			28.883	833.76	0.34	28.883	748.92	0.32	28.883	664.74	0.30
			28.903	833.90	0.34	28.903	749.10	0.32	28.903	665.03	0.30
			28.923	834.08	0.34	28.923	749.34	0.32	28.923	665.30	0.30
			28.943	834.20	0.34	28.943	749.52	0.32	28.943	665.56	0.31
			28.963	834.36	0.34	28.963	749.71	0.32	28.963	665.84	0.31
			28.983	834.51	0.34	28.983	749.92	0.32	28.983	666.07	0.31
			29.003	834.66	0.34	29.003	750.12	0.32	29.003	666.34	0.31
			29.023	834.83	0.34	29.023	750.33	0.32	29.023	666.63	0.31
			29.043	834.95	0.34	29.043	750.55	0.32	29.043	666.87	0.31
			29.063	835.07	0.34	29.063	750.73	0.32	29.063	667.13	0.31
			29.083	835.27	0.34	29.082	750.87	0.32	29.082	667.40	0.31
			29.102	835.42	0.34	29.102	751.13	0.32	29.102	667.66	0.31
			29.122	835.55	0.34	29.122	751.35	0.32	29.122	667.93	0.31
			29.142	835.65	0.34	29.142	751.46	0.32	29.142	668.19	0.31
			29.162	835.83	0.34	29.162	751.70	0.32	29.162	668.44	0.31
			29.182	835.96	0.34	29.182	751.94	0.32	29.182	668.67	0.31
			29.202	836.11	0.34	29.202	752.13	0.32	29.202	668.91	0.31
			29.222	836.30	0.34	29.222	752.30	0.32	29.222	669.20	0.31
			29.242	836.42	0.34	29.242	752.49	0.32	29.242	669.47	0.31
			29.262	836.60	0.34	29.262	752.68	0.32	29.262	669.74	0.31
			29.282	836.73	0.34	29.282	752.88	0.32	29.282	669.99	0.31
			29.302	836.90	0.34	29.302	753.08	0.32	29.302	670.25	0.31
			29.322	837.01	0.34	29.322	753.28	0.32	29.322	670.49	0.31
			29.342	837.20	0.34	29.342	753.45	0.32	29.342	670.74	0.31
			29.362	837.36	0.34	29.362	753.67	0.32	29.362	670.97	0.31
			29.382	837.50	0.34	29.382	753.93	0.32	29.382	671.19	0.31
			29.402	837.61	0.34	29.402	754.12	0.32	29.402	671.44	0.31
			29.422	837.78	0.34	29.422	754.32	0.32	29.422	671.69	0.31
			29.442	837.94	0.34	29.441	754.51	0.32	29.441	671.94	0.31
			29.461	838.06	0.34	29.461	754.69	0.32	29.461	672.17	0.31
			29.481	838.24	0.34	29.481	754.87	0.32	29.481	672.41	0.31
			29.501	838.36	0.34	29.501	755.06	0.32	29.501	672.67	0.31

			29.521	838.51	0.34	29.521	755.26	0.32	29.521	672.93	0.31
			29.541	838.65	0.34	29.541	755.45	0.32	29.541	673.19	0.31
			29.561	838.78	0.34	29.561	755.64	0.32	29.561	673.43	0.31
			29.581	838.95	0.34	29.581	755.83	0.32	29.581	673.68	0.31
			29.601	839.07	0.34	29.601	756.00	0.32	29.601	673.92	0.31
			29.621	839.23	0.34	29.621	756.23	0.32	29.621	674.15	0.31
			29.641	839.38	0.34	29.641	756.45	0.32	29.641	674.38	0.31
			29.661	839.51	0.34	29.661	756.63	0.32	29.661	674.60	0.31
			29.681	839.62	0.34	29.681	756.80	0.32	29.681	674.83	0.31
			29.701	839.80	0.34	29.701	756.97	0.32	29.701	675.06	0.31
			29.721	839.96	0.34	29.721	757.20	0.32	29.721	675.30	0.31
			29.741	840.11	0.34	29.741	757.40	0.32	29.741	675.54	0.31
			29.761	840.23	0.34	29.761	757.59	0.32	29.761	675.77	0.31
			29.781	840.38	0.34	29.781	757.75	0.32	29.781	676.00	0.31
			29.801	840.49	0.34	29.801	757.96	0.32	29.801	676.23	0.31
			29.820	840.66	0.34	29.820	758.19	0.32	29.820	676.46	0.31
			29.840	840.84	0.34	29.840	758.36	0.32	29.840	676.71	0.31
			29.860	840.97	0.34	29.860	758.54	0.32	29.860	676.96	0.31
			29.880	841.11	0.34	29.880	758.72	0.32	29.880	677.21	0.31
			29.900	841.21	0.34	29.900	758.96	0.33	29.900	677.44	0.31
			29.920	841.40	0.34	29.920	759.14	0.33	29.920	677.67	0.31
			29.940	841.55	0.34	29.940	759.32	0.33	29.940	677.90	0.31
			29.960	841.69	0.34	29.960	759.48	0.33	29.960	678.12	0.31
			29.980	841.81	0.34	29.980	759.68	0.33	29.980	678.35	0.31
			30.000	841.98	0.34	30.000	759.92	0.33	30.000	678.57	0.31

Combined standard uncertainties:

$u(T) = 0.006$  K;  $u(p) = 0.0020$  MPa for  $p < 6$  MPa;  $u(p) = 0.024$  MPa for  $6 \text{ MPa} \leq p \leq 70$  MPa

$u(x_{\text{CO}_2}) = 0.0003$ ;  $u(x_{\text{SO}_2}) = 0.0002$ ;  $u(x_{\text{CH}_4}) = 0.0002$

**Table S1 (continued).**  $p\rho T$  experimental data for the CO<sub>2</sub>+SO<sub>2</sub>+CH<sub>4</sub> mixtures ( $u(\rho)$ : Combined standard uncertainty).

$x_{\text{CO}_2} = 0.9837; x_{\text{SO}_2} = 0.0009; x_{\text{CH}_4} = 0.0154$											
$T = 263.16 \pm 0.03 \text{ K}$			$T = 273.15 \pm 0.03 \text{ K}$			$T = 293.15 \pm 0.03 \text{ K}$			$T = 304.21 \pm 0.04 \text{ K}$		
$p$ (MPa)	$\rho$ (kg.m <sup>-3</sup> )	$u(\rho)$ (kg.m <sup>-3</sup> )	$p$ (MPa)	$\rho$ (kg.m <sup>-3</sup> )	$u(\rho)$ (kg.m <sup>-3</sup> )	$p$ (MPa)	$\rho$ (kg.m <sup>-3</sup> )	$u(\rho)$ (kg.m <sup>-3</sup> )	$p$ (MPa)	$\rho$ (kg.m <sup>-3</sup> )	$u(\rho)$ (kg.m <sup>-3</sup> )
0.100	1.96	0.22	0.100	2.02	0.23	0.100	1.73	0.22	0.100	1.73	0.22
0.126	2.49	0.22	0.123	2.50	0.23	0.128	2.24	0.22	0.120	2.10	0.22
0.152	3.05	0.22	0.146	2.94	0.23	0.157	2.80	0.22	0.140	2.43	0.22
0.178	3.63	0.22	0.169	3.38	0.23	0.185	3.31	0.22	0.160	2.75	0.22
0.203	4.15	0.22	0.192	3.84	0.23	0.214	3.84	0.22	0.180	3.08	0.22
0.229	4.64	0.22	0.215	4.24	0.22	0.242	4.32	0.22	0.200	3.43	0.22
0.255	5.19	0.22	0.237	4.73	0.23	0.270	4.84	0.22	0.220	3.83	0.22
0.281	5.71	0.22	0.260	5.21	0.23	0.299	5.36	0.22	0.239	4.16	0.22
0.307	6.24	0.22	0.283	5.60	0.22	0.327	5.90	0.22	0.259	4.50	0.22
0.333	6.81	0.22	0.306	6.08	0.22	0.355	6.38	0.22	0.279	4.87	0.22
0.359	7.34	0.22	0.329	6.57	0.23	0.384	6.94	0.22	0.299	5.20	0.22
0.384	7.88	0.22	0.352	6.99	0.22	0.412	7.46	0.22	0.319	5.58	0.22
0.410	8.44	0.22	0.375	7.51	0.23	0.441	8.01	0.22	0.339	5.92	0.22
0.436	9.01	0.22	0.398	7.95	0.22	0.469	8.54	0.22	0.359	6.27	0.22
0.462	9.54	0.22	0.421	8.41	0.22	0.497	9.10	0.22	0.379	6.65	0.22
0.488	10.09	0.22	0.444	8.87	0.22	0.526	9.67	0.22	0.399	7.00	0.22
0.514	10.65	0.22	0.467	9.35	0.22	0.554	10.22	0.22	0.419	7.32	0.22
0.540	11.25	0.22	0.489	9.84	0.22	0.583	10.73	0.22	0.439	7.68	0.22
0.565	11.80	0.22	0.512	10.26	0.22	0.611	11.27	0.22	0.459	8.04	0.22
0.591	12.37	0.22	0.535	10.70	0.22	0.639	11.83	0.22	0.478	8.43	0.22
0.617	12.93	0.22	0.558	11.21	0.22	0.668	12.36	0.22	0.498	8.74	0.22
0.643	13.48	0.22	0.581	11.65	0.22	0.696	12.94	0.22	0.518	9.10	0.22
0.669	14.05	0.22	0.604	12.19	0.22	0.725	13.50	0.22	0.538	9.47	0.22
0.695	14.62	0.22	0.627	12.61	0.22	0.753	14.05	0.22	0.558	9.84	0.22
0.721	15.22	0.22	0.650	13.11	0.22	0.781	14.65	0.22	0.578	10.21	0.22
0.746	15.79	0.22	0.673	13.60	0.22	0.810	15.20	0.22	0.598	10.57	0.22
0.772	16.39	0.22	0.696	14.09	0.22	0.838	15.75	0.22	0.618	10.91	0.22
0.798	16.94	0.22	0.718	14.59	0.22	0.866	16.30	0.22	0.638	11.32	0.22
0.824	17.59	0.22	0.741	15.06	0.22	0.895	16.82	0.22	0.658	11.68	0.22
0.850	18.15	0.22	0.764	15.62	0.22	0.923	17.42	0.22	0.678	12.07	0.22
0.876	18.75	0.22	0.787	16.07	0.22	0.952	17.97	0.22	0.698	12.42	0.22
0.902	19.35	0.22	0.810	16.60	0.22	0.980	18.52	0.22	0.718	12.78	0.22
0.927	19.96	0.22	0.833	17.06	0.22	1.008	19.08	0.22	0.737	13.16	0.22
0.953	20.54	0.22	0.856	17.57	0.22	1.037	19.66	0.22	0.757	13.54	0.22
0.979	21.18	0.22	0.879	18.08	0.22	1.065	20.28	0.22	0.777	13.91	0.22



1.005	21.78	0.22	0.902	18.57	0.22	1.094	20.81	0.22	0.797	14.24	0.22
1.031	22.37	0.22	0.925	19.09	0.22	1.122	21.37	0.22	0.817	14.62	0.22
1.057	22.99	0.22	0.948	19.54	0.22	1.150	21.97	0.22	0.837	15.02	0.22
1.083	23.60	0.22	0.970	20.09	0.22	1.179	22.52	0.22	0.857	15.43	0.22
1.108	24.26	0.22	0.993	20.58	0.22	1.207	23.17	0.22	0.877	15.72	0.22
1.134	24.85	0.22	1.016	21.07	0.22	1.235	23.74	0.22	0.897	16.17	0.22
1.160	25.50	0.22	1.039	21.58	0.22	1.264	24.27	0.22	0.917	16.52	0.22
1.186	26.15	0.22	1.062	22.10	0.22	1.292	24.88	0.22	0.937	16.85	0.22
1.212	26.75	0.22	1.085	22.58	0.22	1.321	25.49	0.22	0.957	17.25	0.22
1.238	27.40	0.22	1.108	23.13	0.22	1.349	26.04	0.22	0.976	17.64	0.22
1.264	28.07	0.22	1.131	23.62	0.22	1.377	26.66	0.22	0.996	18.01	0.22
1.289	28.70	0.22	1.154	24.14	0.22	1.406	27.27	0.22	1.016	18.37	0.22
1.315	29.35	0.22	1.177	24.66	0.22	1.434	27.89	0.22	1.036	18.79	0.22
1.341	30.01	0.22	1.199	25.20	0.22	1.463	28.47	0.22	1.056	19.14	0.22
1.367	30.68	0.22	1.222	25.74	0.22	1.491	29.06	0.22	1.076	19.54	0.22
1.393	31.30	0.22	1.245	26.25	0.22	1.519	29.65	0.22	1.096	19.94	0.22
1.419	31.95	0.22	1.268	26.75	0.22	1.548	30.24	0.22	1.116	20.27	0.22
1.445	32.68	0.22	1.291	27.30	0.22	1.576	30.88	0.22	1.136	20.68	0.22
1.471	33.35	0.22	1.314	27.82	0.22	1.605	31.47	0.22	1.156	21.05	0.22
1.496	34.04	0.22	1.337	28.38	0.22	1.633	32.10	0.22	1.176	21.46	0.22
1.522	34.68	0.22	1.360	28.90	0.22	1.661	32.71	0.22	1.196	21.82	0.22
1.548	35.35	0.22	1.383	29.43	0.22	1.690	33.32	0.22	1.216	22.25	0.22
1.574	36.08	0.22	1.406	29.98	0.22	1.718	33.97	0.22	1.235	22.60	0.22
1.600	36.75	0.22	1.429	30.53	0.22	1.746	34.60	0.22	1.255	23.01	0.22
1.626	37.47	0.22	1.451	31.08	0.22	1.775	35.25	0.22	1.275	23.35	0.22
1.652	38.21	0.22	1.474	31.68	0.22	1.803	35.91	0.22	1.295	23.77	0.22
1.677	38.88	0.22	1.497	32.26	0.22	1.832	36.49	0.22	1.315	24.16	0.22
1.703	39.59	0.22	1.520	32.81	0.22	1.860	37.18	0.22	1.335	24.56	0.22
1.729	40.31	0.22	1.543	33.38	0.22	1.888	37.83	0.22	1.355	24.95	0.22
1.755	41.04	0.22	1.566	33.93	0.22	1.917	38.48	0.22	1.375	25.34	0.22
1.781	41.75	0.22	1.589	34.51	0.22	1.945	39.09	0.22	1.395	25.72	0.22
1.807	42.52	0.22	1.612	35.11	0.22	1.974	39.74	0.22	1.415	26.10	0.22
1.833	43.24	0.22	1.635	35.63	0.22	2.002	40.41	0.22	1.435	26.52	0.22
1.858	43.98	0.22	1.658	36.22	0.22	2.030	41.00	0.22	1.455	26.95	0.22
1.884	44.75	0.22	1.681	36.78	0.22	2.059	41.69	0.22	1.474	27.28	0.22
1.910	45.47	0.22	1.703	37.35	0.22	2.087	42.34	0.22	1.494	27.68	0.22
1.936	46.22	0.22	1.726	37.90	0.22	2.115	43.02	0.22	1.514	28.07	0.22
1.962	46.99	0.22	1.749	38.48	0.22	2.144	43.64	0.22	1.534	28.51	0.22
1.988	47.82	0.22	1.772	39.08	0.22	2.172	44.31	0.22	1.554	28.93	0.22
2.014	48.58	0.22	1.795	39.70	0.22	2.201	45.03	0.22	1.574	29.31	0.22
2.039	49.36	0.22	1.818	40.26	0.22	2.229	45.70	0.22	1.594	29.68	0.22
2.065	50.13	0.22	1.841	40.86	0.22	2.257	46.39	0.22	1.614	30.13	0.22
2.091	50.93	0.22	1.864	41.43	0.22	2.286	47.09	0.22	1.634	30.51	0.22
2.117	51.74	0.22	1.887	42.02	0.22	2.314	47.74	0.22	1.654	30.91	0.22
2.143	52.55	0.22	1.910	42.66	0.22	2.343	48.43	0.22	1.674	31.34	0.22

2.169	53.39	0.22	1.932	43.24	0.22	2.371	49.15	0.22	1.694	31.75	0.22
2.195	54.16	0.22	1.955	43.91	0.22	2.399	49.81	0.22	1.714	32.17	0.22
2.220	55.06	0.22	1.978	44.52	0.22	2.428	50.51	0.22	1.733	32.59	0.22
2.246	55.89	0.22	2.001	45.11	0.22	2.456	51.23	0.22	1.753	32.99	0.22
2.272	56.75	0.22	2.024	45.74	0.22	2.485	51.96	0.22	1.773	33.38	0.22
2.298	57.54	0.22	2.047	46.35	0.22	2.513	52.60	0.22	1.793	33.81	0.22
2.324	58.48	0.22	2.070	46.96	0.22	2.541	53.34	0.22	1.813	34.19	0.22
2.350	59.34	0.22	2.093	47.63	0.22	2.570	54.05	0.22	1.833	34.63	0.22
2.376	60.22	0.22	2.116	48.34	0.22	2.598	54.78	0.22	1.853	35.00	0.22
2.401	61.09	0.22	2.139	48.97	0.22	2.626	55.48	0.22	1.873	35.45	0.22
2.427	62.02	0.22	2.162	49.62	0.22	2.655	56.20	0.22	1.893	35.83	0.22
2.453	62.88	0.22	2.184	50.28	0.22	2.683	56.91	0.22	1.913	36.25	0.22
2.479	63.79	0.22	2.207	50.96	0.22	2.712	57.68	0.22	1.933	36.67	0.22
2.505	64.75	0.22	2.230	51.61	0.22	2.740	58.41	0.22	1.953	37.09	0.22
2.531	65.68	0.22	2.253	52.27	0.22	2.768	59.14	0.22	1.972	37.50	0.22
2.557	66.67	0.22	2.276	52.89	0.22	2.797	59.93	0.22	1.992	37.96	0.22
2.582	67.55	0.22	2.299	53.55	0.22	2.825	60.65	0.22	2.012	38.39	0.22
2.608	68.55	0.22	2.322	54.24	0.22	2.854	61.41	0.22	2.032	38.80	0.22
2.634	69.59	0.22	2.345	54.91	0.22	2.882	62.19	0.22	2.052	39.18	0.22
2.660	70.95	0.22	2.368	55.59	0.22	2.910	62.93	0.22	2.072	39.66	0.22
3.521	968.24	0.37	2.391	56.26	0.22	2.939	63.68	0.22	2.092	40.04	0.22
3.539	968.37	0.37	2.414	56.96	0.22	2.967	64.43	0.22	2.112	40.50	0.22
3.557	968.49	0.37	2.436	57.61	0.22	2.995	65.24	0.22	2.132	40.95	0.22
3.576	968.61	0.37	2.459	58.31	0.22	3.024	65.97	0.22	2.152	41.38	0.22
3.594	968.74	0.37	2.482	58.99	0.22	3.052	66.80	0.22	2.172	41.79	0.22
3.612	968.86	0.37	2.505	59.73	0.22	3.081	67.57	0.22	2.192	42.21	0.22
3.631	968.98	0.37	2.528	60.41	0.22	3.109	68.32	0.22	2.212	42.69	0.22
3.649	969.07	0.37	2.551	61.12	0.22	3.137	69.15	0.22	2.231	43.09	0.22
3.667	969.19	0.37	2.574	61.87	0.22	3.166	69.93	0.22	2.251	43.54	0.22
3.686	969.31	0.37	2.597	62.57	0.22	3.194	70.76	0.22	2.271	44.00	0.22
3.704	969.41	0.37	2.620	63.28	0.22	3.223	71.54	0.22	2.291	44.46	0.22
3.722	969.49	0.37	2.643	64.02	0.22	3.251	72.38	0.22	2.311	44.85	0.22
3.741	969.59	0.37	2.665	64.77	0.22	3.279	73.18	0.22	2.331	45.29	0.22
3.759	969.67	0.37	2.688	65.52	0.22	3.308	73.99	0.22	2.351	45.74	0.22
3.777	969.76	0.37	2.711	66.28	0.22	3.336	74.84	0.22	2.371	46.17	0.22
3.796	969.90	0.37	2.734	67.02	0.22	3.365	75.63	0.22	2.391	46.68	0.22
3.814	970.03	0.37	2.757	67.76	0.22	3.393	76.53	0.22	2.411	47.11	0.22
3.832	970.12	0.37	2.780	68.57	0.22	3.421	77.34	0.22	2.431	47.53	0.22
3.851	970.17	0.37	2.803	69.33	0.22	3.450	78.23	0.22	2.451	47.98	0.22
3.869	970.28	0.37	2.826	70.16	0.22	3.478	79.05	0.22	2.470	48.44	0.22
3.887	970.45	0.37	2.849	70.91	0.22	3.506	79.96	0.22	2.490	48.93	0.22
3.906	970.54	0.37	2.872	71.78	0.22	3.535	80.82	0.22	2.510	49.35	0.22
3.924	970.61	0.37	2.895	72.55	0.22	3.563	81.70	0.22	2.530	49.81	0.22
3.942	970.74	0.37	2.917	73.35	0.22	3.592	82.55	0.22	2.550	50.27	0.22
3.961	970.87	0.37	2.940	74.18	0.22	3.620	83.43	0.22	2.570	50.69	0.22

3.979	971.00	0.37	2.963	74.99	0.22	3.648	84.35	0.22	2.590	51.17	0.22
3.997	971.13	0.37	2.986	75.82	0.22	3.677	85.26	0.22	2.610	51.66	0.22
4.016	971.26	0.37	3.009	76.67	0.22	3.705	86.16	0.22	2.630	52.08	0.22
4.034	971.39	0.37	3.032	77.48	0.22	3.734	87.09	0.22	2.650	52.55	0.22
4.052	971.52	0.37	3.055	78.32	0.22	3.762	87.96	0.22	2.670	53.01	0.22
4.071	971.65	0.37	3.078	79.18	0.22	3.790	88.89	0.22	2.690	53.48	0.22
4.089	971.78	0.37	3.101	80.01	0.22	3.819	89.84	0.22	2.710	53.95	0.22
4.107	971.86	0.37	3.124	80.88	0.22	3.847	90.80	0.22	2.729	54.41	0.22
4.126	972.02	0.37	3.147	81.83	0.22	3.875	91.73	0.22	2.749	54.92	0.22
4.144	972.14	0.37	3.169	82.70	0.22	3.904	92.69	0.22	2.769	55.39	0.22
4.162	972.27	0.37	3.192	83.61	0.22	3.932	93.60	0.22	2.789	55.83	0.22
4.181	972.35	0.37	3.215	84.50	0.22	3.961	94.61	0.22	2.809	56.29	0.22
4.199	972.52	0.37	3.238	85.45	0.23	3.989	95.59	0.22	2.829	56.79	0.22
4.217	972.60	0.37	3.261	86.38	0.23	4.017	96.58	0.22	2.849	57.26	0.22
4.236	972.70	0.37	3.284	87.28	0.23	4.046	97.58	0.22	2.869	57.75	0.22
4.254	972.85	0.37	3.307	88.23	0.23	4.074	98.55	0.22	2.889	58.24	0.22
4.272	972.95	0.37	3.330	89.15	0.23	4.103	99.63	0.22	2.909	58.70	0.22
4.291	973.09	0.37	3.353	90.14	0.23	4.131	100.58	0.22	2.929	59.19	0.22
4.309	973.21	0.37	3.376	91.13	0.23	4.159	101.61	0.22	2.949	59.71	0.22
4.327	973.34	0.37	3.398	92.09	0.23	4.188	102.68	0.22	2.968	60.21	0.22
4.346	973.44	0.37	3.421	93.11	0.23	4.216	103.68	0.22	2.988	60.62	0.22
4.364	973.59	0.37	3.444	94.12	0.23	4.244	104.72	0.22	3.008	61.11	0.22
4.382	973.67	0.37	3.467	95.18	0.23	4.273	105.80	0.22	3.028	61.60	0.22
4.400	973.80	0.37	3.490	96.21	0.22	4.301	106.93	0.22	3.048	62.08	0.22
4.419	973.92	0.37	3.513	97.54	0.22	4.330	107.98	0.22	3.068	62.59	0.22
4.437	974.03	0.37	4.050	912.78	0.36	4.358	109.08	0.23	3.088	63.14	0.22
4.455	974.16	0.37	4.069	912.99	0.36	4.386	110.19	0.23	3.108	63.62	0.22
4.474	974.24	0.37	4.088	913.15	0.36	4.415	111.30	0.23	3.128	64.10	0.22
4.492	974.33	0.37	4.107	913.35	0.36	4.443	112.41	0.23	3.148	64.59	0.22
4.510	974.49	0.37	4.125	913.54	0.36	4.472	113.57	0.23	3.168	65.13	0.22
4.529	974.57	0.37	4.144	913.71	0.36	4.500	114.74	0.23	3.188	65.65	0.22
4.547	974.72	0.37	4.163	913.84	0.36	4.528	115.87	0.23	3.208	66.12	0.22
4.565	974.78	0.37	4.182	914.03	0.36	4.557	117.07	0.23	3.227	66.64	0.22
4.584	974.90	0.37	4.201	914.19	0.36	4.585	118.28	0.23	3.247	67.12	0.22
4.602	975.07	0.37	4.219	914.36	0.36	4.614	119.47	0.23	3.267	67.65	0.22
4.620	975.15	0.37	4.238	914.54	0.36	4.642	120.72	0.23	3.287	68.18	0.22
4.639	975.24	0.37	4.257	914.71	0.36	4.670	121.87	0.23	3.307	68.69	0.22
4.657	975.40	0.37	4.276	914.86	0.36	4.699	123.16	0.23	3.327	69.21	0.22
4.675	975.44	0.37	4.294	915.01	0.36	4.727	124.40	0.23	3.347	69.74	0.22
4.694	975.57	0.37	4.313	915.16	0.36	4.755	125.69	0.23	3.367	70.26	0.22
4.712	975.71	0.37	4.332	915.31	0.36	4.784	126.99	0.23	3.387	70.76	0.22
4.730	975.78	0.37	4.351	915.45	0.36	4.812	128.25	0.23	3.407	71.27	0.22
4.749	975.89	0.37	4.370	915.59	0.36	4.841	129.60	0.23	3.427	71.78	0.22
4.767	975.98	0.37	4.388	915.73	0.36	4.869	130.98	0.23	3.447	72.28	0.22
4.785	976.09	0.37	4.407	915.90	0.36	4.897	132.32	0.23	3.466	72.80	0.22

4.804	976.19	0.37	4.426	916.06	0.36	4.926	133.72	0.23	3.486	73.35	0.22
4.822	976.30	0.37	4.445	916.23	0.36	4.954	135.11	0.23	3.506	73.86	0.22
4.840	976.38	0.37	4.464	916.40	0.36	4.983	136.57	0.23	3.526	74.42	0.22
4.859	976.55	0.37	4.482	916.58	0.36	5.011	137.99	0.23	3.546	74.98	0.22
4.877	976.63	0.37	4.501	916.71	0.36	5.039	139.47	0.23	3.566	75.49	0.22
4.895	976.73	0.37	4.520	916.88	0.36	5.068	140.98	0.23	3.586	76.03	0.22
4.914	976.88	0.37	4.539	917.11	0.36	5.096	142.54	0.23	3.606	76.58	0.22
4.932	976.96	0.37	4.557	917.20	0.36	5.124	144.07	0.23	3.626	77.13	0.22
4.950	977.04	0.37	4.576	917.44	0.36	5.153	145.60	0.23	3.646	77.68	0.22
4.969	977.15	0.37	4.595	917.53	0.36	5.181	147.20	0.23	3.666	78.22	0.22
4.987	977.29	0.37	4.614	917.71	0.36	5.210	148.80	0.23	3.686	78.76	0.22
5.005	977.37	0.37	4.633	917.88	0.36	5.238	150.45	0.23	3.706	79.30	0.22
5.024	977.45	0.37	4.651	918.02	0.36	5.266	152.12	0.23	3.725	79.86	0.22
5.042	977.57	0.37	4.670	918.14	0.36	5.295	153.85	0.23	3.745	80.41	0.22
5.060	977.70	0.37	4.689	918.33	0.36	5.323	155.55	0.23	3.765	80.98	0.22
5.079	977.78	0.37	4.708	918.53	0.36	5.352	157.33	0.23	3.785	81.56	0.22
5.097	977.86	0.37	4.727	918.76	0.36	5.380	159.15	0.23	3.805	82.12	0.22
5.115	978.02	0.37	4.745	918.88	0.36	5.408	161.02	0.23	3.825	82.68	0.22
5.134	978.11	0.37	4.764	919.06	0.36	5.437	163.00	0.23	3.845	83.28	0.22
5.152	978.19	0.37	4.783	919.10	0.36	5.465	164.98	0.23	3.865	83.83	0.22
5.170	978.27	0.37	4.802	919.31	0.36	5.494	166.88	0.23	3.885	84.38	0.22
5.189	978.37	0.37	4.820	919.47	0.36	5.522	168.98	0.23	3.905	84.96	0.22
5.207	978.51	0.37	4.839	919.66	0.36	5.550	171.03	0.23	3.925	85.54	0.22
5.225	978.60	0.37	4.858	919.81	0.36	5.579	173.21	0.23	3.945	86.12	0.22
5.244	978.68	0.37	4.877	919.99	0.36	5.607	175.42	0.23	3.964	86.72	0.22
5.262	978.80	0.37	4.896	920.16	0.36	5.635	177.70	0.23	3.984	87.27	0.22
5.280	978.93	0.37	4.914	920.35	0.36	5.664	180.14	0.23	4.004	87.89	0.22
5.299	979.01	0.37	4.933	920.48	0.36	5.692	182.45	0.23	4.024	88.46	0.22
5.317	979.09	0.37	4.952	920.68	0.36	5.721	184.95	0.23	4.044	89.07	0.22
5.335	979.25	0.37	4.971	920.89	0.36	5.749	187.49	0.21	4.064	89.66	0.22
5.354	979.34	0.37	4.990	921.06	0.36	5.750	187.59	0.21	4.084	90.26	0.22
5.372	979.42	0.37	5.008	921.22	0.36	5.763	189.02	0.21	4.104	90.84	0.22
5.390	979.50	0.37	5.027	921.33	0.36	5.777	190.29	0.21	4.124	91.43	0.22
5.409	979.61	0.37	5.046	921.55	0.36	5.789	191.49	0.21	4.144	92.00	0.22
5.427	979.75	0.37	5.065	921.69	0.36	6.409	766.23	0.32	4.164	92.58	0.22
5.445	979.83	0.37	5.084	921.88	0.36	6.426	766.93	0.32	4.184	93.27	0.22
5.464	979.91	0.37	5.102	921.98	0.36	6.443	767.51	0.32	4.204	93.86	0.22
5.482	980.02	0.37	5.121	922.17	0.36	6.460	768.09	0.32	4.223	94.44	0.22
5.500	980.13	0.37	5.140	922.35	0.36	6.477	768.76	0.32	4.243	95.04	0.22
5.519	980.24	0.37	5.159	922.53	0.36	6.494	769.30	0.32	4.263	95.67	0.22
5.537	980.32	0.38	5.177	922.63	0.36	6.511	769.92	0.32	4.283	96.29	0.22
5.555	980.49	0.38	5.196	922.84	0.36	6.528	770.56	0.32	4.303	96.92	0.22
5.574	980.57	0.38	5.215	922.95	0.36	6.545	771.20	0.32	4.323	97.54	0.22
5.592	980.65	0.38	5.234	923.11	0.36	6.562	771.84	0.33	4.343	98.15	0.22
5.610	980.74	0.38	5.253	923.33	0.36	6.579	772.48	0.33	4.363	98.77	0.22

5.629	980.85	0.38	5.271	923.48	0.36	6.596	773.11	0.33	4.383	99.44	0.22
5.647	980.94	0.38	5.290	923.61	0.36	6.613	773.75	0.33	4.403	100.04	0.22
5.665	981.06	0.38	5.309	923.81	0.36	6.630	774.38	0.33	4.423	100.66	0.22
5.684	981.14	0.38	5.328	924.00	0.36	6.647	774.93	0.33	4.443	101.32	0.22
5.702	981.23	0.38	5.347	924.14	0.36	6.664	775.55	0.33	4.462	101.97	0.22
5.720	981.37	0.38	5.365	924.32	0.36	6.681	776.11	0.33	4.482	102.63	0.22
5.739	981.47	0.38	5.384	924.49	0.36	6.698	776.63	0.33	4.502	103.27	0.22
5.757	981.55	0.38	5.403	924.67	0.36	6.715	777.14	0.33	4.522	103.98	0.22
5.775	981.67	0.38	5.422	924.77	0.36	6.732	777.65	0.33	4.542	104.64	0.22
5.794	981.80	0.38	5.440	924.93	0.36	6.749	778.18	0.33	4.562	105.26	0.22
5.812	981.88	0.38	5.459	925.08	0.36	6.766	778.67	0.33	4.582	105.90	0.22
5.830	981.97	0.38	5.478	925.25	0.36	6.783	779.13	0.33	4.602	106.62	0.22
5.849	982.05	0.38	5.497	925.40	0.36	6.800	779.60	0.33	4.622	107.32	0.22
5.867	982.17	0.38	5.516	925.57	0.36	6.817	780.06	0.33	4.642	107.97	0.22
5.885	982.28	0.38	5.534	925.72	0.36	6.834	780.57	0.33	4.662	108.67	0.22
5.904	982.38	0.38	5.553	925.88	0.36	6.851	781.03	0.33	4.682	109.31	0.22
5.922	982.46	0.38	5.572	926.04	0.36	6.868	781.53	0.33	4.702	110.02	0.22
5.940	982.60	0.38	5.591	926.18	0.36	6.885	781.96	0.33	4.721	110.69	0.23
5.959	982.69	0.38	5.610	926.33	0.36	6.902	782.45	0.33	4.741	111.40	0.23
5.977	982.79	0.38	5.628	926.48	0.36	6.919	782.93	0.33	4.761	112.11	0.23
5.995	982.87	0.38	5.647	926.62	0.36	6.936	783.37	0.33	4.781	112.81	0.23
6.014	983.03	0.38	5.666	926.83	0.36	6.953	783.80	0.33	4.801	113.51	0.23
6.032	983.11	0.38	5.685	926.97	0.36	6.970	784.27	0.33	4.821	114.22	0.23
6.050	983.20	0.38	5.703	927.10	0.36	6.987	784.69	0.33	4.841	114.92	0.23
6.069	983.33	0.38	5.722	927.25	0.36	7.004	785.15	0.33	4.861	115.61	0.23
6.087	983.44	0.38	5.741	927.44	0.36	7.021	785.60	0.33	4.881	116.36	0.23
6.105	983.53	0.38	5.760	927.56	0.36	7.038	786.06	0.33	4.901	117.09	0.23
6.124	983.61	0.38	5.779	927.75	0.36	7.055	786.44	0.33	4.921	117.84	0.23
6.142	983.69	0.38	5.797	927.89	0.36	7.072	786.91	0.33	4.941	118.55	0.23
6.160	983.84	0.38	5.816	928.01	0.36	7.089	787.33	0.33	4.960	119.28	0.23
6.179	983.94	0.38	5.835	928.17	0.36	7.106	787.76	0.33	4.980	120.01	0.23
6.197	984.02	0.38	5.854	928.34	0.36	7.123	788.24	0.33	5.000	120.75	0.23
6.215	984.10	0.38	5.873	928.46	0.36	7.140	788.61	0.33	5.020	121.53	0.23
6.234	984.22	0.38	5.891	928.64	0.36	7.157	789.06	0.33	5.040	122.27	0.23
6.252	984.34	0.38	5.910	928.78	0.36	7.174	789.50	0.33	5.060	123.00	0.23
6.270	984.43	0.38	5.929	928.89	0.36	7.191	789.94	0.33	5.080	123.77	0.23
6.289	984.51	0.38	5.948	929.06	0.36	7.208	790.28	0.33	5.100	124.55	0.23
6.307	984.64	0.38	5.966	929.20	0.36	7.225	790.73	0.33	5.120	125.32	0.23
6.325	984.70	0.38	5.985	929.38	0.36	7.242	791.16	0.33	5.140	126.09	0.23
6.344	984.84	0.38	6.004	929.48	0.36	7.259	791.55	0.33	5.160	126.87	0.23
6.362	984.92	0.38	6.023	929.65	0.36	7.276	791.89	0.33	5.180	127.65	0.23
6.380	985.00	0.38	6.042	929.76	0.36	7.293	792.29	0.33	5.199	128.43	0.23
6.399	985.09	0.38	6.060	929.89	0.36	7.310	792.74	0.33	5.219	129.22	0.23
6.417	985.22	0.38	6.079	930.09	0.36	7.327	793.07	0.33	5.239	130.01	0.23
6.435	985.33	0.38	6.098	930.23	0.36	7.344	793.53	0.33	5.259	130.86	0.23

6.454	985.41	0.38	6.117	930.33	0.36	7.361	793.89	0.33	5.279	131.68	0.23
6.472	985.50	0.38	6.136	930.44	0.36	7.378	794.26	0.33	5.299	132.50	0.23
6.490	985.60	0.38	6.154	930.63	0.36	7.395	794.63	0.33	5.319	133.28	0.23
6.509	985.72	0.38	6.173	930.78	0.36	7.412	795.03	0.33	5.339	134.08	0.23
6.527	985.83	0.38	6.192	930.87	0.36	7.429	795.40	0.33	5.359	134.96	0.23
6.545	985.91	0.38	6.211	931.04	0.36	7.446	795.80	0.33	5.379	135.80	0.23
6.564	986.07	0.38	6.229	931.15	0.36	7.463	796.15	0.33	5.399	136.61	0.23
6.582	986.09	0.38	6.248	931.28	0.36	7.480	796.53	0.33	5.419	137.45	0.23
6.600	986.19	0.38	6.267	931.44	0.36	7.497	796.87	0.33	5.439	138.30	0.23
6.619	986.32	0.38	6.286	931.54	0.36	7.514	797.24	0.33	5.458	139.15	0.23
6.637	986.40	0.38	6.305	931.72	0.36	7.531	797.57	0.33	5.478	140.05	0.23
6.655	986.56	0.38	6.323	931.85	0.36	7.548	797.92	0.33	5.498	140.90	0.23
6.674	986.65	0.38	6.342	932.02	0.36	7.565	798.28	0.33	5.518	141.75	0.23
6.692	986.73	0.38	6.361	932.12	0.36	7.582	798.64	0.33	5.538	142.65	0.23
6.710	986.81	0.38	6.380	932.29	0.36	7.599	798.99	0.33	5.558	143.51	0.23
6.729	986.89	0.38	6.399	932.46	0.36	7.616	799.33	0.33	5.578	144.39	0.23
6.747	987.06	0.38	6.417	932.62	0.36	7.633	799.68	0.33	5.598	145.29	0.23
6.765	987.14	0.38	6.436	932.71	0.36	7.650	799.98	0.33	5.618	146.20	0.23
6.783	987.22	0.38	6.455	932.87	0.36	7.667	800.35	0.33	5.638	147.13	0.23
6.802	987.30	0.38	6.474	933.03	0.36	7.684	800.73	0.33	5.658	148.03	0.23
6.820	987.42	0.38	6.492	933.13	0.36	7.701	801.01	0.33	5.678	148.96	0.23
6.838	987.51	0.38	6.511	933.31	0.36	7.718	801.36	0.33	5.697	149.94	0.23
6.857	987.61	0.38	6.530	933.48	0.36	7.735	801.71	0.33	5.717	150.87	0.23
6.875	987.71	0.38	6.549	933.57	0.36	7.752	802.03	0.33	5.737	151.77	0.23
6.893	987.80	0.38	6.568	933.73	0.36	7.769	802.34	0.33	5.757	152.72	0.23
6.912	987.88	0.38	6.586	933.90	0.36	7.786	802.68	0.33	5.777	153.72	0.23
6.930	988.03	0.38	6.605	934.05	0.36	7.804	803.01	0.33	5.797	154.68	0.23
6.948	988.12	0.38	6.624	934.20	0.36	7.821	803.36	0.33	5.817	155.64	0.23
6.967	988.20	0.38	6.643	934.34	0.36	7.838	803.69	0.33	5.837	156.65	0.23
6.985	988.27	0.38	6.662	934.49	0.36	7.855	803.98	0.33	5.857	157.67	0.23
7.003	988.37	0.38	6.680	934.58	0.36	7.872	804.26	0.33	5.877	158.67	0.23
7.022	988.45	0.38	6.699	934.75	0.36	7.889	804.58	0.33	5.897	159.68	0.23
7.040	988.59	0.38	6.718	934.84	0.36	7.906	804.89	0.33	5.917	160.71	0.23
7.058	988.69	0.38	6.737	934.99	0.36	7.923	805.21	0.33	5.937	161.68	0.23
7.077	988.79	0.38	6.756	935.13	0.36	7.940	805.52	0.33	5.956	162.70	0.23
7.095	988.87	0.38	6.774	935.32	0.36	7.957	805.82	0.33	5.976	163.75	0.23
7.113	988.96	0.38	6.793	935.42	0.36	7.974	806.13	0.33	5.996	164.83	0.23
7.132	989.03	0.38	6.812	935.57	0.36	7.991	806.42	0.33	6.016	165.90	0.23
7.150	989.18	0.38	6.831	935.70	0.36	8.008	806.71	0.33	6.036	166.98	0.23
7.168	989.26	0.38	6.849	935.83	0.36	8.025	806.99	0.33	6.056	168.00	0.23
7.187	989.36	0.38	6.868	936.05	0.36	8.042	807.27	0.33	6.076	169.14	0.23
7.205	989.44	0.38	6.887	936.19	0.36	8.059	807.57	0.33	6.096	170.27	0.23
7.223	989.52	0.38	6.906	936.31	0.36	8.076	807.90	0.33	6.116	171.38	0.23
7.242	989.66	0.38	6.925	936.44	0.36	8.093	808.19	0.33	6.136	172.51	0.23
7.260	989.73	0.38	6.943	936.56	0.36	8.110	808.46	0.33	6.156	173.64	0.23

7.278	989.81	0.38	6.962	936.68	0.36	8.127	808.73	0.33	6.176	174.81	0.23
7.297	989.93	0.38	6.981	936.80	0.36	8.144	808.99	0.33	6.195	175.96	0.23
7.315	990.03	0.38	7.000	936.93	0.36	8.161	809.28	0.33	6.215	177.12	0.23
7.333	990.10	0.38	7.019	937.13	0.36	8.178	809.60	0.33	6.235	178.27	0.23
7.352	990.18	0.38	7.037	937.26	0.36	8.195	809.88	0.33	6.255	179.51	0.23
7.370	990.32	0.38	7.056	937.38	0.36	8.212	810.14	0.33	6.275	180.71	0.23
7.388	990.40	0.38	7.075	937.50	0.36	8.229	810.39	0.33	6.295	181.93	0.23
7.407	990.49	0.38	7.094	937.63	0.36	8.246	810.68	0.33	6.315	183.20	0.23
7.425	990.59	0.38	7.112	937.74	0.36	8.263	810.97	0.33	6.335	184.45	0.23
7.443	990.72	0.38	7.131	937.86	0.36	8.280	811.22	0.33	6.355	185.70	0.23
7.462	990.75	0.38	7.150	938.05	0.36	8.297	811.49	0.33	6.375	186.98	0.23
7.480	990.89	0.38	7.169	938.16	0.36	8.314	811.78	0.33	6.395	188.38	0.23
7.498	990.96	0.38	7.188	938.28	0.36	8.331	812.03	0.33	6.415	189.70	0.23
7.517	991.03	0.38	7.206	938.41	0.37	8.348	812.26	0.33	6.435	191.00	0.23
7.535	991.16	0.38	7.225	938.57	0.37	8.365	812.50	0.33	6.454	192.35	0.23
7.553	991.25	0.38	7.244	938.68	0.37	8.382	812.75	0.33	6.474	193.77	0.23
7.572	991.33	0.38	7.263	938.78	0.37	8.399	813.02	0.33	6.494	195.16	0.23
7.590	991.41	0.38	7.282	938.93	0.37	8.416	813.29	0.33	6.514	196.64	0.23
7.608	991.51	0.38	7.300	939.07	0.37	8.433	813.55	0.34	6.534	198.07	0.23
7.627	991.64	0.38	7.319	939.18	0.37	8.450	813.79	0.34	6.554	199.62	0.23
7.645	991.70	0.38	7.338	939.28	0.37	8.467	814.01	0.34	6.574	201.10	0.23
7.663	991.78	0.38	7.357	939.39	0.37	8.484	814.26	0.34	6.594	202.62	0.23
7.682	991.90	0.38	7.375	939.58	0.37	8.501	814.51	0.34	6.614	204.25	0.23
7.700	991.98	0.38	7.394	939.68	0.37	8.518	814.73	0.34	6.634	205.88	0.23
7.718	992.05	0.38	7.413	939.79	0.37	8.535	814.96	0.34	6.654	207.54	0.23
7.737	992.15	0.38	7.432	939.99	0.37	8.552	815.29	0.34	6.671	209.09	0.23
7.755	992.23	0.38	7.451	940.05	0.37	8.569	815.56	0.34	6.691	210.99	0.23
7.773	992.34	0.38	7.469	940.22	0.37	8.586	815.84	0.34	6.712	212.88	0.23
7.792	992.41	0.38	7.488	940.33	0.37	8.603	816.15	0.34	6.732	214.77	0.23
7.810	992.47	0.38	7.507	940.42	0.37	8.620	816.45	0.34	6.753	216.68	0.23
7.828	992.59	0.38	7.526	940.56	0.37	8.637	816.75	0.34	6.773	218.61	0.23
7.847	992.64	0.38	7.545	940.70	0.37	8.654	816.98	0.34	6.794	220.54	0.23
7.865	992.77	0.38	7.563	940.80	0.37	8.671	817.30	0.34	6.814	222.47	0.23
7.883	992.82	0.38	7.582	940.93	0.37	8.688	817.59	0.34	6.835	224.51	0.23
7.902	992.95	0.38	7.601	941.05	0.37	8.705	817.86	0.34	6.855	226.66	0.23
7.920	993.01	0.38	7.620	941.22	0.37	8.722	818.16	0.34	6.876	228.82	0.23
7.938	993.13	0.38	7.638	941.34	0.37	8.739	818.43	0.34	6.896	230.97	0.23
7.957	993.23	0.38	7.657	941.46	0.37	8.756	818.69	0.34	6.917	233.12	0.23
7.975	993.29	0.38	7.676	941.60	0.37	8.773	819.02	0.34	6.937	235.58	0.23
7.993	993.38	0.38	7.695	941.71	0.37	8.790	819.33	0.34	6.958	238.25	0.23
8.012	993.48	0.38	7.714	941.81	0.37	8.807	819.55	0.34	6.978	240.92	0.23
8.030	993.54	0.38	7.732	941.95	0.37	8.824	819.83	0.34	6.999	243.58	0.23
8.048	993.66	0.38	7.751	942.09	0.37	8.841	820.14	0.34	7.019	246.25	0.23
8.067	993.71	0.38	7.770	942.22	0.37	8.858	820.43	0.34	7.040	248.76	0.23
8.085	993.85	0.38	7.789	942.36	0.37	8.875	820.70	0.34	7.060	251.20	0.23

8.103	993.91	0.38	7.808	942.50	0.37	8.892	820.96	0.34	7.081	253.64	0.23
8.122	994.03	0.38	7.826	942.62	0.37	8.909	821.26	0.34	7.101	256.08	0.23
8.140	994.09	0.38	7.845	942.74	0.37	8.926	821.57	0.34	7.122	258.52	0.23
8.158	994.20	0.38	7.864	942.85	0.37	8.943	821.87	0.34	7.142	261.51	0.23
8.177	994.27	0.38	7.883	943.02	0.37	8.960	822.06	0.34	7.163	265.34	0.23
8.195	994.36	0.38	7.901	943.15	0.37	8.977	822.34	0.34	7.183	269.21	0.23
8.213	994.46	0.38	7.920	943.26	0.37	8.994	822.62	0.34	7.204	271.98	0.23
8.232	994.52	0.38	7.939	943.39	0.37	9.011	822.92	0.34	7.224	276.12	0.23
8.250	994.63	0.38	7.958	943.51	0.37	9.028	823.21	0.34	7.245	280.17	0.23
8.268	994.69	0.38	7.977	943.62	0.37	9.045	823.49	0.34	7.265	285.32	0.24
8.287	994.81	0.38	7.995	943.75	0.37	9.062	823.77	0.34	7.286	290.79	0.24
8.305	994.86	0.38	8.014	943.92	0.37	9.079	823.96	0.34	7.306	296.50	0.24
8.323	994.99	0.38	8.033	944.03	0.37	9.096	824.22	0.34	7.327	301.13	0.23
8.342	995.04	0.38	8.052	944.16	0.37	9.113	824.50	0.34	7.347	309.07	0.23
8.360	995.17	0.38	8.071	944.33	0.37	9.130	824.77	0.34	7.368	315.01	0.23
8.378	995.21	0.38	8.089	944.43	0.37	9.147	825.04	0.34	7.388	321.95	0.23
8.397	995.33	0.38	8.108	944.53	0.37	9.164	825.31	0.34	7.409	328.88	0.22
8.415	995.43	0.38	8.127	944.65	0.37	9.181	825.57	0.34	7.429	336.82	0.22
8.433	995.49	0.38	8.146	944.82	0.37	9.198	825.85	0.34	7.450	348.91	0.22
8.452	995.59	0.38	8.164	944.92	0.37	9.215	826.10	0.34	7.470	365.09	0.23
8.470	995.66	0.38	8.183	945.02	0.37	9.232	826.36	0.34	7.490	386.97	0.23
8.488	995.75	0.38	8.202	945.20	0.37	9.249	826.62	0.34	7.510	405.81	0.23
8.507	995.83	0.38	8.221	945.30	0.37	9.266	826.87	0.34	7.530	428.04	0.24
8.525	995.95	0.38	8.240	945.40	0.37	9.283	827.13	0.34	7.550	449.74	0.24
8.543	996.00	0.38	8.258	945.57	0.37	9.300	827.34	0.34	7.570	469.08	0.25
8.562	996.10	0.38	8.277	945.65	0.37	9.317	827.62	0.34	7.590	487.96	0.25
8.580	996.16	0.38	8.296	945.80	0.37	9.334	827.88	0.34	7.610	507.05	0.26
8.598	996.26	0.38	8.315	945.96	0.37	9.351	828.13	0.34	7.630	528.12	0.26
8.617	996.33	0.38	8.334	946.05	0.37	9.368	828.37	0.34	7.650	543.97	0.27
8.635	996.42	0.38	8.352	946.21	0.37	9.385	828.62	0.34	7.670	556.47	0.27
8.653	996.53	0.38	8.371	946.31	0.37	9.402	828.86	0.34	7.689	568.68	0.28
8.672	996.65	0.38	8.390	946.46	0.37	9.419	829.11	0.34	7.709	579.55	0.28
8.690	996.68	0.38	8.409	946.55	0.37	9.437	829.35	0.34	7.729	588.30	0.28
8.708	996.80	0.38	8.428	946.70	0.37	9.454	829.58	0.34	7.749	595.92	0.28
8.727	996.90	0.38	8.446	946.79	0.37	9.471	829.83	0.34	7.769	601.92	0.29
8.745	996.94	0.38	8.465	946.95	0.37	9.488	830.07	0.34	7.789	606.50	0.29
8.763	997.05	0.38	8.484	947.03	0.37	9.505	830.28	0.34	7.809	611.08	0.29
8.782	997.16	0.38	8.503	947.19	0.37	9.522	830.50	0.34	7.829	614.79	0.29
8.800	997.23	0.38	8.521	947.27	0.37	9.539	830.73	0.34	7.849	618.21	0.29
8.818	997.30	0.38	8.540	947.41	0.37	9.556	831.03	0.34	7.869	621.31	0.29
8.837	997.41	0.38	8.559	947.57	0.37	9.573	831.25	0.34	7.889	624.32	0.29
8.855	997.52	0.38	8.578	947.65	0.37	9.590	831.48	0.34	7.909	627.33	0.29
8.873	997.56	0.38	8.597	947.80	0.37	9.607	831.70	0.34	7.929	630.35	0.29
8.892	997.66	0.38	8.615	947.93	0.37	9.624	832.00	0.34	7.948	633.36	0.29
8.910	997.77	0.38	8.634	948.03	0.37	9.641	832.22	0.34	7.968	636.35	0.29



8.928	997.80	0.38	8.653	948.18	0.37	9.658	832.43	0.34	7.988	638.95	0.29
8.947	997.91	0.38	8.672	948.34	0.37	9.675	832.64	0.34	8.008	641.45	0.30
8.965	998.01	0.38	8.691	948.41	0.37	9.692	832.94	0.34	8.028	644.01	0.30
8.983	998.12	0.38	8.709	948.56	0.37	9.709	833.14	0.34	8.048	646.32	0.30
9.002	998.15	0.38	8.728	948.72	0.37	9.726	833.35	0.34	8.068	648.55	0.30
9.020	998.27	0.38	8.747	948.78	0.37	9.743	833.63	0.34	8.088	650.73	0.30
9.038	998.38	0.38	8.766	948.92	0.37	9.760	833.85	0.34	8.108	652.73	0.30
9.057	998.41	0.38	8.784	949.06	0.37	9.777	834.06	0.34	8.128	654.73	0.30
9.075	998.52	0.38	8.803	949.16	0.37	9.794	834.27	0.34	8.148	656.52	0.30
9.093	998.62	0.38	8.822	949.32	0.37	9.811	834.57	0.34	8.168	658.21	0.30
9.112	998.67	0.38	8.841	949.38	0.37	9.828	834.77	0.34	8.187	659.91	0.30
9.130	998.78	0.38	8.860	949.50	0.37	9.845	835.01	0.34	8.207	661.45	0.30
9.148	998.88	0.38	8.878	949.64	0.37	9.862	835.25	0.34	8.227	662.95	0.30
9.167	998.98	0.38	8.897	949.76	0.37	9.879	835.45	0.34	8.247	664.52	0.30
9.185	999.03	0.38	8.916	949.89	0.37	9.896	835.68	0.34	8.267	665.89	0.30
9.203	999.10	0.38	8.935	950.02	0.37	9.913	835.95	0.34	8.287	667.26	0.30
9.221	999.20	0.38	8.954	950.15	0.37	9.930	836.15	0.34	8.307	668.63	0.30
9.240	999.31	0.38	8.972	950.29	0.37	9.947	836.34	0.34	8.327	670.00	0.30
9.258	999.41	0.38	8.991	950.33	0.37	9.964	836.62	0.34	8.347	671.37	0.30
9.276	999.51	0.38	9.010	950.46	0.37	9.981	836.82	0.34	8.367	672.74	0.30
9.295	999.53	0.38	9.029	950.60	0.37	9.998	837.02	0.34	8.387	674.11	0.30
9.313	999.63	0.38	9.047	950.73	0.37	10.015	837.28	0.34	8.407	675.64	0.30
9.331	999.74	0.38	9.066	950.86	0.37	10.032	837.49	0.34	8.427	676.99	0.30
9.350	999.84	0.38	9.085	950.98	0.37	10.049	837.68	0.34	8.446	678.13	0.30
9.368	999.86	0.38	9.104	951.11	0.37	10.066	837.94	0.34	8.466	679.39	0.30
9.386	999.97	0.38	9.123	951.24	0.37	10.083	838.16	0.34	8.486	680.60	0.30
9.405	1000.07	0.38	9.141	951.36	0.37	10.100	838.40	0.34	8.506	681.75	0.31
9.423	1000.18	0.38	9.160	951.48	0.37	10.117	838.63	0.34	8.526	682.99	0.31
9.441	1000.26	0.38	9.179	951.60	0.37	10.134	838.85	0.34	8.546	684.11	0.31
9.460	1000.31	0.38	9.198	951.72	0.37	10.151	839.04	0.34	8.566	685.21	0.31
9.478	1000.41	0.38	9.217	951.83	0.37	10.168	839.30	0.34	8.586	686.24	0.31
9.496	1000.51	0.38	9.235	951.95	0.37	10.185	839.49	0.34	8.606	687.30	0.31
9.515	1000.59	0.38	9.254	952.05	0.37	10.202	839.69	0.34	8.626	688.31	0.31
9.533	1000.62	0.38	9.273	952.17	0.37	10.219	839.93	0.34	8.646	689.28	0.31
9.551	1000.72	0.38	9.292	952.27	0.37	10.236	840.15	0.34	8.666	690.30	0.31
9.570	1000.82	0.38	9.310	952.41	0.37	10.253	840.38	0.34	8.685	691.28	0.31
9.588	1000.91	0.38	9.329	952.56	0.37	10.270	840.60	0.34	8.705	692.26	0.31
9.606	1001.01	0.38	9.348	952.67	0.37	10.287	840.81	0.34	8.725	693.20	0.31
9.625	1001.10	0.38	9.367	952.78	0.37	10.304	840.98	0.34	8.745	694.09	0.31
9.643	1001.20	0.38	9.386	952.89	0.37	10.321	841.21	0.34	8.765	694.99	0.31
9.661	1001.29	0.38	9.404	952.99	0.37	10.338	841.46	0.34	8.785	695.83	0.31
9.680	1001.38	0.38	9.423	953.10	0.37	10.355	841.65	0.34	8.805	696.71	0.31
9.698	1001.41	0.38	9.442	953.21	0.37	10.372	841.88	0.34	8.825	697.58	0.31
9.716	1001.49	0.38	9.461	953.39	0.37	10.389	842.05	0.34	8.845	698.37	0.31
9.735	1001.59	0.38	9.480	953.51	0.37	10.406	842.29	0.34	8.865	699.14	0.31

9.753	1001.68	0.38	9.498	953.61	0.37	10.423	842.47	0.34	8.885	699.95	0.31
9.771	1001.78	0.38	9.517	953.71	0.37	10.440	842.71	0.34	8.905	700.78	0.31
9.790	1001.88	0.38	9.536	953.82	0.37	10.457	842.89	0.34	8.925	701.51	0.31
9.808	1001.90	0.38	9.555	953.92	0.37	10.474	843.16	0.34	8.944	702.29	0.31
9.826	1001.98	0.38	9.573	954.04	0.37	10.491	843.34	0.34	8.964	703.04	0.31
9.845	1002.07	0.38	9.592	954.19	0.37	10.508	843.59	0.34	8.984	703.72	0.31
9.863	1002.16	0.38	9.611	954.29	0.37	10.525	843.77	0.34	9.004	704.43	0.31
9.881	1002.26	0.38	9.630	954.39	0.37	10.542	844.00	0.34	9.024	705.15	0.31
9.900	1002.35	0.38	9.649	954.48	0.37	10.559	844.18	0.34	9.044	705.87	0.31
9.918	1002.44	0.38	9.667	954.65	0.37	10.576	844.41	0.34	9.064	706.59	0.31
9.936	1002.54	0.38	9.686	954.75	0.37	10.593	844.64	0.34	9.084	707.52	0.31
9.955	1002.63	0.38	9.705	954.84	0.37	10.610	844.80	0.34	9.104	708.43	0.31
9.973	1002.64	0.38	9.724	954.97	0.37	10.627	845.03	0.34	9.124	709.21	0.31
9.991	1002.73	0.38	9.743	955.10	0.37	10.644	845.27	0.34	9.144	710.07	0.31
10.010	1002.83	0.38	9.761	955.19	0.37	10.661	845.49	0.34	9.164	710.84	0.31
10.028	1002.92	0.38	9.780	955.28	0.37	10.678	845.65	0.34	9.183	711.66	0.31
10.046	1003.02	0.38	9.799	955.44	0.37	10.695	845.86	0.34	9.203	712.45	0.31
10.065	1003.11	0.38	9.818	955.54	0.37	10.712	846.09	0.34	9.223	713.20	0.31
10.083	1003.19	0.38	9.836	955.62	0.37	10.729	846.27	0.34	9.243	714.02	0.31
10.101	1003.29	0.38	9.855	955.78	0.37	10.746	846.46	0.34	9.263	714.76	0.31
10.120	1003.37	0.38	9.874	955.87	0.37	10.763	846.68	0.34	9.283	715.52	0.31
10.138	1003.46	0.38	9.893	955.95	0.37	10.780	846.88	0.34	9.303	716.27	0.31
10.156	1003.48	0.38	9.912	956.05	0.37	10.797	847.04	0.34	9.323	717.00	0.31
10.175	1003.56	0.38	9.930	956.21	0.37	10.814	847.27	0.34	9.343	717.70	0.31
10.193	1003.65	0.38	9.949	956.29	0.37	10.831	847.48	0.34	9.363	718.43	0.31
10.211	1003.74	0.38	9.968	956.37	0.37	10.848	847.71	0.34	9.383	719.14	0.31
10.230	1003.83	0.38	9.987	956.48	0.37	10.865	847.87	0.34	9.403	719.79	0.31
10.248	1003.92	0.38	10.006	956.63	0.37	10.882	848.07	0.34	9.423	720.46	0.31
10.266	1004.01	0.38	10.024	956.71	0.37	10.899	848.29	0.34	9.442	721.15	0.31
10.285	1004.10	0.38	10.043	956.81	0.37	10.916	848.50	0.34	9.462	721.76	0.31
10.303	1004.19	0.38	10.062	956.95	0.37	10.933	848.72	0.34	9.482	722.42	0.31
10.321	1004.27	0.38	10.081	957.03	0.37	10.950	848.91	0.34	9.502	723.06	0.31
10.340	1004.36	0.38	10.100	957.14	0.37	10.967	849.07	0.34	9.522	723.62	0.31
10.358	1004.37	0.38	10.118	957.27	0.37	10.984	849.28	0.34	9.542	724.24	0.31
10.376	1004.46	0.38	10.137	957.37	0.37	11.001	849.49	0.34	9.562	724.85	0.31
10.395	1004.54	0.38	10.156	957.51	0.37	11.018	849.70	0.34	9.582	725.42	0.31
10.413	1004.63	0.38	10.175	957.58	0.37	11.035	849.86	0.34	9.602	725.87	0.31
10.431	1004.71	0.38	10.193	957.66	0.37	11.053	850.04	0.34	9.622	726.48	0.32
10.450	1004.80	0.38	10.212	957.80	0.37	11.070	850.25	0.34	9.642	727.16	0.32
10.468	1004.88	0.38	10.231	957.89	0.37	11.087	850.45	0.34	9.662	727.81	0.32
10.486	1004.96	0.38	10.250	958.03	0.37	11.104	850.66	0.34	9.681	728.45	0.32
10.505	1005.05	0.38	10.269	958.12	0.37	11.121	850.87	0.34	9.701	729.09	0.32
10.523	1005.13	0.38	10.287	958.24	0.37	11.138	851.07	0.34	9.721	729.73	0.32
10.541	1005.22	0.38	10.306	958.35	0.37	11.155	851.23	0.34	9.741	730.37	0.32
10.560	1005.30	0.38	10.325	958.42	0.37	11.172	851.39	0.34	9.761	730.99	0.32

10.578	1005.38	0.38	10.344	958.52	0.37	11.189	851.59	0.34	9.781	731.63	0.32
10.596	1005.46	0.38	10.363	958.65	0.37	11.206	851.79	0.34	9.801	732.31	0.32
10.615	1005.54	0.38	10.381	958.73	0.37	11.223	851.99	0.34	9.821	732.95	0.32
10.633	1005.62	0.38	10.400	958.86	0.37	11.240	852.19	0.34	9.841	733.53	0.32
10.651	1005.71	0.38	10.419	958.95	0.37	11.257	852.39	0.34	9.861	734.17	0.32
10.670	1005.79	0.38	10.438	959.07	0.37	11.274	852.59	0.34	9.881	734.77	0.32
10.688	1005.87	0.38	10.456	959.18	0.37	11.291	852.79	0.34	9.901	735.39	0.32
10.706	1005.96	0.38	10.475	959.25	0.37	11.308	852.98	0.34	9.921	736.01	0.32
10.725	1006.04	0.38	10.494	959.34	0.37	11.325	853.13	0.34	9.940	736.66	0.32
10.743	1006.13	0.38	10.513	959.47	0.37	11.342	853.32	0.34	9.960	737.23	0.32
10.761	1006.21	0.38	10.532	959.54	0.37	11.359	853.55	0.34	9.980	737.80	0.32
10.780	1006.30	0.38	10.550	959.66	0.37	11.376	853.68	0.34	10.000	738.44	0.32
10.798	1006.33	0.38	10.569	959.76	0.37	11.393	853.85	0.34	10.020	738.94	0.32
10.816	1006.39	0.38	10.588	959.85	0.37	11.410	854.03	0.34	10.040	739.49	0.32
10.835	1006.47	0.38	10.607	960.02	0.37	11.427	854.21	0.34	10.060	740.14	0.32
10.853	1006.55	0.38	10.626	960.11	0.37	11.444	854.40	0.34	10.080	740.71	0.32
10.871	1006.64	0.38	10.644	960.19	0.37	11.461	854.58	0.34	10.100	741.29	0.32
10.890	1006.73	0.38	10.663	960.31	0.37	11.478	854.79	0.34	10.120	741.83	0.32
10.908	1006.82	0.38	10.682	960.41	0.37	11.495	855.01	0.34	10.140	742.38	0.32
10.926	1006.90	0.38	10.701	960.50	0.37	11.512	855.13	0.34	10.160	742.94	0.32
10.945	1006.98	0.38	10.719	960.60	0.37	11.529	855.33	0.34	10.179	743.45	0.32
10.963	1007.06	0.38	10.738	960.77	0.37	11.546	855.55	0.34	10.199	744.05	0.32
10.981	1007.14	0.38	10.757	960.86	0.37	11.563	855.72	0.34	10.219	744.59	0.32
11.000	1007.22	0.38	10.776	960.94	0.37	11.580	855.90	0.35	10.239	745.12	0.32
11.018	1007.30	0.38	10.795	961.09	0.37	11.597	856.07	0.35	10.259	745.65	0.32
11.036	1007.38	0.38	10.813	961.18	0.37	11.614	856.25	0.35	10.279	746.19	0.32
11.055	1007.39	0.38	10.832	961.26	0.37	11.631	856.42	0.35	10.299	746.72	0.32
11.073	1007.47	0.38	10.851	961.41	0.37	11.648	856.59	0.35	10.319	747.19	0.32
11.091	1007.55	0.38	10.870	961.50	0.37	11.665	856.76	0.35	10.339	747.73	0.32
11.110	1007.63	0.38	10.889	961.58	0.37	11.682	856.94	0.35	10.359	748.26	0.32
11.128	1007.71	0.38	10.907	961.74	0.37	11.699	857.11	0.35	10.379	748.70	0.32
11.146	1007.80	0.38	10.926	961.82	0.37	11.716	857.27	0.35	10.399	749.23	0.32
11.165	1007.88	0.38	10.945	961.91	0.37	11.733	857.44	0.35	10.419	749.73	0.32
11.183	1007.96	0.38	10.964	961.99	0.37	11.750	857.62	0.35	10.438	750.26	0.32
11.201	1008.05	0.38	10.982	962.14	0.37	11.767	857.79	0.35	10.458	750.74	0.32
11.220	1008.13	0.38	11.001	962.24	0.37	11.784	857.96	0.35	10.478	751.25	0.32
11.238	1008.13	0.38	11.020	962.37	0.37	11.801	858.14	0.35	10.498	751.78	0.32
11.256	1008.22	0.38	11.039	962.44	0.37	11.818	858.32	0.35	10.518	752.22	0.32
11.275	1008.30	0.38	11.058	962.60	0.37	11.835	858.49	0.35	10.538	752.68	0.32
11.293	1008.39	0.38	11.076	962.66	0.37	11.852	858.66	0.35	10.558	753.18	0.32
11.311	1008.47	0.38	11.095	962.81	0.37	11.869	858.83	0.35	10.578	753.68	0.32
11.330	1008.56	0.38	11.114	962.88	0.37	11.886	859.03	0.35	10.598	754.11	0.32
11.348	1008.62	0.38	11.133	963.04	0.37	11.903	859.25	0.35	10.618	754.60	0.32
11.366	1008.70	0.38	11.152	963.11	0.37	11.920	859.41	0.35	10.638	755.08	0.32
11.385	1008.78	0.38	11.170	963.22	0.37	11.937	859.57	0.35	10.658	755.56	0.32

11.403	1008.83	0.38	11.189	963.33	0.37	11.954	859.73	0.35	10.677	756.02	0.32
11.421	1008.95	0.38	11.208	963.39	0.37	11.971	859.89	0.35	10.697	756.47	0.32
11.440	1009.03	0.38	11.227	963.53	0.37	11.988	860.05	0.35	10.717	756.97	0.32
11.458	1009.11	0.38	11.245	963.68	0.37	12.005	860.21	0.35	10.737	757.42	0.32
11.476	1009.18	0.38	11.264	963.73	0.37	12.022	860.36	0.35	10.757	757.83	0.32
11.495	1009.24	0.38	11.283	963.87	0.37	12.039	860.53	0.35	10.777	758.30	0.32
11.513	1009.31	0.38	11.302	963.95	0.37	12.056	860.74	0.35	10.797	758.74	0.32
11.531	1009.39	0.38	11.321	964.06	0.37	12.073	860.91	0.35	10.817	759.17	0.32
11.550	1009.46	0.38	11.339	964.19	0.37	12.090	861.06	0.35	10.837	759.66	0.32
11.568	1009.52	0.38	11.358	964.24	0.37	12.107	861.22	0.35	10.857	760.08	0.32
11.586	1009.60	0.38	11.377	964.38	0.37	12.124	861.37	0.35	10.877	760.50	0.32
11.604	1009.74	0.38	11.396	964.51	0.37	12.141	861.53	0.35	10.897	760.92	0.32
11.623	1009.81	0.38	11.415	964.55	0.37	12.158	861.67	0.35	10.917	761.35	0.32
11.641	1009.88	0.38	11.433	964.69	0.37	12.175	861.84	0.35	10.936	761.78	0.32
11.659	1009.95	0.38	11.452	964.82	0.37	12.192	862.04	0.35	10.956	762.21	0.32
11.678	1010.02	0.38	11.471	964.93	0.37	12.209	862.21	0.35	10.976	762.62	0.32
11.696	1010.11	0.38	11.490	965.00	0.37	12.226	862.35	0.35	10.996	763.00	0.32
11.714	1010.18	0.38	11.508	965.12	0.37	12.243	862.50	0.35	11.016	763.43	0.32
11.733	1010.26	0.38	11.527	965.25	0.37	12.260	862.66	0.35	11.036	763.86	0.32
11.751	1010.34	0.38	11.546	965.30	0.37	12.277	862.85	0.35	11.056	764.23	0.32
11.769	1010.42	0.38	11.565	965.42	0.37	12.294	863.01	0.35	11.076	764.66	0.32
11.788	1010.50	0.38	11.584	965.55	0.37	12.311	863.16	0.35	11.096	765.03	0.32
11.806	1010.58	0.38	11.602	965.67	0.37	12.328	863.30	0.35	11.116	765.40	0.32
11.824	1010.67	0.38	11.621	965.72	0.37	12.345	863.44	0.35	11.136	765.81	0.32
11.843	1010.75	0.38	11.640	965.85	0.37	12.362	863.59	0.35	11.156	766.22	0.32
11.861	1010.83	0.38	11.659	965.97	0.37	12.379	863.75	0.35	11.175	766.60	0.32
11.879	1010.91	0.38	11.678	966.08	0.37	12.396	863.93	0.35	11.195	766.95	0.32
11.898	1010.99	0.38	11.696	966.14	0.37	12.413	864.08	0.35	11.215	767.34	0.32
11.916	1011.04	0.38	11.715	966.26	0.37	12.430	864.21	0.35	11.235	767.74	0.32
11.934	1011.16	0.38	11.734	966.39	0.37	12.447	864.40	0.35	11.255	768.12	0.32
11.953	1011.24	0.38	11.753	966.49	0.37	12.464	864.57	0.35	11.275	768.50	0.32
11.971	1011.32	0.38	11.772	966.55	0.37	12.481	864.70	0.35	11.295	768.87	0.32
11.989	1011.40	0.38	11.790	966.66	0.37	12.498	864.85	0.35	11.315	769.25	0.32
12.008	1011.48	0.38	11.809	966.78	0.37	12.515	865.03	0.35	11.335	769.61	0.33
12.026	1011.54	0.38	11.828	966.90	0.37	12.532	865.19	0.35	11.355	769.97	0.33
12.044	1011.61	0.38	11.847	967.01	0.37	12.549	865.32	0.35	11.375	770.33	0.33
12.063	1011.73	0.38	11.865	967.12	0.37	12.566	865.45	0.35	11.395	770.69	0.33
12.081	1011.81	0.38	11.884	967.15	0.37	12.583	865.58	0.35	11.415	771.05	0.33
12.099	1011.86	0.38	11.903	967.27	0.37	12.600	865.75	0.35	11.434	771.39	0.33
12.118	1011.98	0.38	11.922	967.38	0.37	12.617	865.93	0.35	11.454	771.73	0.33
12.136	1012.06	0.38	11.941	967.49	0.37	12.634	866.06	0.35	11.474	772.06	0.33
12.154	1012.10	0.38	11.959	967.60	0.37	12.651	866.19	0.35	11.494	772.39	0.33
12.173	1012.15	0.38	11.978	967.71	0.37	12.668	866.31	0.35	11.514	772.73	0.33
12.191	1012.30	0.38	11.997	967.82	0.37	12.686	866.52	0.35	11.534	773.10	0.33
12.209	1012.35	0.38	12.016	967.92	0.37	12.703	866.64	0.35	11.554	773.43	0.33

12.228	1012.40	0.38	12.035	968.03	0.37	12.720	866.85	0.35	11.574	773.74	0.33
12.246	1012.47	0.38	12.053	968.13	0.37	12.737	866.98	0.35	11.594	774.09	0.33
12.264	1012.55	0.38	12.072	968.23	0.37	12.754	867.19	0.35	11.614	774.44	0.33
12.283	1012.63	0.38	12.091	968.34	0.37	12.771	867.31	0.35	11.634	774.75	0.33
12.301	1012.71	0.38	12.110	968.44	0.37	12.788	867.47	0.35	11.654	775.05	0.33
12.319	1012.80	0.38	12.128	968.54	0.37	12.805	867.64	0.35	11.673	775.37	0.33
12.338	1012.88	0.38	12.147	968.64	0.37	12.822	867.84	0.35	11.693	775.69	0.33
12.356	1012.96	0.38	12.166	968.74	0.37	12.839	867.96	0.35	11.713	776.01	0.33
12.374	1013.04	0.38	12.185	968.84	0.37	12.856	868.17	0.35	11.733	776.33	0.33
12.393	1013.11	0.38	12.204	968.94	0.37	12.873	868.28	0.35	11.753	776.64	0.33
12.411	1013.17	0.38	12.222	969.05	0.37	12.890	868.48	0.35	11.773	776.94	0.33
12.429	1013.29	0.38	12.241	969.14	0.37	12.907	868.60	0.35	11.793	777.24	0.33
12.448	1013.35	0.38	12.260	969.24	0.37	12.924	868.80	0.35	11.813	777.54	0.33
12.466	1013.41	0.38	12.279	969.34	0.37	12.941	868.92	0.35	11.833	777.84	0.33
12.484	1013.46	0.38	12.298	969.44	0.37	12.958	869.12	0.35	11.853	778.13	0.33
12.503	1013.59	0.38	12.316	969.54	0.37	12.975	869.24	0.35	11.873	778.40	0.33
12.521	1013.63	0.38	12.335	969.63	0.37	12.992	869.44	0.35	11.893	778.68	0.33
12.539	1013.76	0.38	12.354	969.73	0.37	13.009	869.59	0.35	11.913	779.05	0.33
12.558	1013.80	0.38	12.373	969.83	0.37	13.026	869.75	0.35	11.932	779.40	0.33
12.576	1013.86	0.38	12.391	969.92	0.37	13.043	869.88	0.35	11.952	779.77	0.33
12.594	1013.94	0.38	12.410	970.01	0.37	13.060	870.06	0.35	11.972	780.13	0.33
12.613	1014.03	0.38	12.429	970.11	0.37	13.077	870.24	0.35	11.992	780.47	0.33
12.631	1014.08	0.38	12.448	970.20	0.37	13.094	870.37	0.35	12.012	780.82	0.33
12.649	1014.19	0.38	12.467	970.34	0.37	13.111	870.54	0.35	12.032	781.18	0.33
12.668	1014.27	0.38	12.485	970.46	0.37	13.128	870.72	0.35	12.052	781.54	0.33
12.686	1014.32	0.38	12.504	970.55	0.37	13.145	870.84	0.35	12.072	781.89	0.33
12.704	1014.35	0.38	12.523	970.63	0.37	13.162	870.99	0.35	12.092	782.26	0.33
12.723	1014.48	0.38	12.542	970.72	0.37	13.179	871.15	0.35	12.112	782.61	0.33
12.741	1014.53	0.38	12.561	970.81	0.37	13.196	871.34	0.35	12.132	782.93	0.33
12.759	1014.66	0.38	12.579	970.90	0.37	13.213	871.50	0.35	12.152	783.29	0.33
12.778	1014.70	0.38	12.598	970.99	0.37	13.230	871.64	0.35	12.171	783.63	0.33
12.796	1014.82	0.38	12.617	971.08	0.37	13.247	871.78	0.35	12.191	783.99	0.33
12.814	1014.86	0.38	12.636	971.19	0.37	13.264	871.95	0.35	12.211	784.34	0.33
12.833	1014.93	0.38	12.654	971.33	0.37	13.281	872.13	0.35	12.231	784.66	0.33
12.851	1015.01	0.38	12.673	971.42	0.37	13.298	872.25	0.35	12.251	785.00	0.33
12.869	1015.09	0.38	12.692	971.50	0.37	13.315	872.42	0.35	12.271	785.31	0.33
12.888	1015.16	0.38	12.711	971.58	0.37	13.332	872.56	0.35	12.291	785.68	0.33
12.906	1015.25	0.38	12.730	971.67	0.37	13.349	872.75	0.35	12.311	785.98	0.33
12.924	1015.31	0.38	12.748	971.75	0.37	13.366	872.86	0.35	12.331	786.33	0.33
12.943	1015.42	0.38	12.767	971.87	0.37	13.383	873.06	0.35	12.351	786.64	0.33
12.961	1015.46	0.38	12.786	971.99	0.37	13.400	873.22	0.35	12.371	786.95	0.33
12.979	1015.57	0.38	12.805	972.07	0.37	13.417	873.36	0.35	12.391	787.34	0.33
12.998	1015.61	0.38	12.824	972.15	0.37	13.434	873.54	0.35	12.411	787.66	0.33
13.016	1015.72	0.38	12.842	972.26	0.37	13.451	873.69	0.35	12.430	787.99	0.33
13.034	1015.76	0.38	12.861	972.39	0.37	13.468	873.84	0.35	12.450	788.30	0.33

13.053	1015.83	0.38	12.880	972.47	0.37	13.485	873.95	0.35	12.470	788.67	0.33
13.071	1015.91	0.38	12.899	972.55	0.37	13.502	874.13	0.35	12.490	788.96	0.33
13.089	1016.02	0.38	12.917	972.64	0.37	13.519	874.29	0.35	12.510	789.11	0.33
13.108	1016.07	0.38	12.936	972.78	0.37	13.536	874.42	0.35	12.530	789.46	0.33
13.126	1016.16	0.38	12.955	972.86	0.37	13.553	874.61	0.35	12.550	789.77	0.33
13.144	1016.23	0.38	12.974	972.93	0.37	13.570	874.75	0.35	12.570	790.11	0.33
13.163	1016.32	0.38	12.993	973.01	0.37	13.587	874.89	0.35	12.590	790.45	0.33
13.181	1016.39	0.38	13.011	973.14	0.37	13.604	875.07	0.35	12.610	790.75	0.33
13.199	1016.48	0.38	13.030	973.23	0.37	13.621	875.19	0.35	12.630	791.05	0.33
13.218	1016.54	0.38	13.049	973.31	0.37	13.638	875.35	0.35	12.650	791.33	0.33
13.236	1016.58	0.38	13.068	973.38	0.37	13.655	875.51	0.35	12.669	791.70	0.33
13.254	1016.70	0.38	13.087	973.47	0.37	13.672	875.64	0.35	12.689	792.00	0.33
13.273	1016.74	0.38	13.105	973.60	0.37	13.689	875.81	0.35	12.709	792.34	0.33
13.291	1016.81	0.38	13.124	973.67	0.37	13.706	875.93	0.35	12.729	792.65	0.33
13.309	1016.92	0.38	13.143	973.74	0.37	13.723	876.08	0.35	12.749	792.94	0.33
13.328	1016.97	0.38	13.162	973.86	0.37	13.740	876.22	0.35	12.769	793.24	0.33
13.346	1017.06	0.38	13.180	973.95	0.37	13.757	876.42	0.35	12.789	793.56	0.33
13.364	1017.10	0.38	13.199	974.05	0.37	13.774	876.54	0.35	12.809	793.85	0.33
13.383	1017.22	0.38	13.218	974.17	0.37	13.791	876.71	0.35	12.829	794.16	0.33
13.401	1017.27	0.38	13.237	974.24	0.37	13.808	876.83	0.35	12.849	794.46	0.33
13.419	1017.38	0.38	13.256	974.31	0.37	13.825	876.99	0.35	12.869	794.77	0.33
13.438	1017.43	0.38	13.274	974.43	0.37	13.842	877.14	0.35	12.889	795.09	0.33
13.456	1017.55	0.38	13.293	974.52	0.37	13.859	877.26	0.35	12.909	795.39	0.33
13.474	1017.57	0.38	13.312	974.59	0.37	13.876	877.44	0.35	12.928	795.68	0.33
13.493	1017.68	0.38	13.331	974.66	0.37	13.893	877.55	0.35	12.948	795.94	0.33
13.511	1017.79	0.38	13.350	974.79	0.37	13.910	877.74	0.35	12.968	796.28	0.33
13.529	1017.83	0.38	13.368	974.86	0.37	13.927	877.89	0.35	12.988	796.57	0.33
13.548	1017.88	0.38	13.387	974.96	0.37	13.944	878.04	0.35	13.008	796.85	0.33
13.566	1017.97	0.38	13.406	975.07	0.37	13.961	878.16	0.35	13.028	797.17	0.33
13.584	1018.04	0.38	13.425	975.13	0.37	13.978	878.34	0.35	13.048	797.50	0.33
13.603	1018.12	0.38	13.444	975.24	0.37	13.995	878.45	0.35	13.068	797.78	0.33
13.621	1018.20	0.38	13.462	975.33	0.37	14.012	878.61	0.35	13.088	798.05	0.33
13.639	1018.26	0.38	13.481	975.41	0.37	14.029	878.73	0.35	13.108	798.38	0.33
13.658	1018.37	0.38	13.500	975.53	0.37	14.046	878.92	0.35	13.128	798.65	0.33
13.676	1018.39	0.38	13.519	975.60	0.37	14.063	879.05	0.35	13.148	798.93	0.33
13.694	1018.49	0.38	13.537	975.68	0.37	14.080	879.21	0.35	13.167	799.26	0.33
13.713	1018.53	0.38	13.556	975.79	0.37	14.097	879.32	0.35	13.187	799.52	0.33
13.731	1018.61	0.38	13.575	975.85	0.37	14.114	879.49	0.35	13.207	799.82	0.33
13.749	1018.71	0.38	13.594	975.91	0.37	14.131	879.60	0.35	13.227	800.11	0.33
13.768	1018.78	0.38	13.613	975.99	0.37	14.148	879.76	0.35	13.247	800.40	0.33
13.786	1018.83	0.38	13.631	976.11	0.37	14.165	879.89	0.35	13.267	800.66	0.33
13.804	1018.93	0.38	13.650	976.17	0.37	14.182	880.07	0.35	13.287	800.93	0.33
13.823	1019.02	0.38	13.669	976.27	0.37	14.199	880.19	0.35	13.307	801.28	0.33
13.841	1019.06	0.38	13.688	976.38	0.37	14.216	880.34	0.35	13.327	801.52	0.33
13.859	1019.16	0.38	13.707	976.44	0.37	14.233	880.51	0.35	13.347	801.83	0.33

13.878	1019.26	0.38	13.725	976.52	0.37	14.250	880.62	0.35	13.367	802.07	0.33
13.896	1019.29	0.38	13.744	976.62	0.37	14.267	880.79	0.35	13.387	802.33	0.33
13.914	1019.39	0.38	13.763	976.70	0.37	14.284	880.89	0.35	13.407	802.66	0.33
13.933	1019.43	0.38	13.782	976.80	0.37	14.301	881.05	0.35	13.426	802.92	0.33
13.951	1019.50	0.38	13.800	976.90	0.37	14.319	881.16	0.35	13.446	803.23	0.33
13.969	1019.60	0.38	13.819	977.01	0.37	14.336	881.34	0.35	13.466	803.46	0.33
13.988	1019.69	0.38	13.838	977.10	0.37	14.353	881.51	0.35	13.486	803.78	0.33
14.006	1019.76	0.38	13.857	977.20	0.37	14.370	881.64	0.35	13.506	804.00	0.33
14.024	1019.80	0.38	13.876	977.30	0.37	14.387	881.76	0.35	13.526	804.31	0.33
14.042	1019.90	0.38	13.894	977.40	0.37	14.404	881.93	0.35	13.546	804.58	0.33
14.061	1019.92	0.38	13.913	977.49	0.37	14.421	882.05	0.35	13.566	804.85	0.33
14.079	1020.02	0.38	13.932	977.58	0.37	14.438	882.17	0.35	13.586	805.13	0.33
14.097	1020.11	0.38	13.951	977.67	0.37	14.455	882.34	0.35	13.606	805.43	0.33
14.116	1020.17	0.38	13.970	977.75	0.37	14.472	882.51	0.35	13.626	805.66	0.33
14.134	1020.23	0.38	13.988	977.91	0.37	14.489	882.62	0.35	13.646	805.91	0.33
14.152	1020.32	0.38	14.007	977.99	0.37	14.506	882.74	0.35	13.665	806.21	0.33
14.171	1020.42	0.38	14.026	978.07	0.37	14.523	882.91	0.35	13.685	806.50	0.33
14.189	1020.50	0.38	14.045	978.13	0.37	14.540	883.03	0.35	13.705	806.78	0.33
14.207	1020.52	0.38	14.063	978.24	0.37	14.557	883.16	0.35	13.725	807.06	0.33
14.226	1020.61	0.38	14.082	978.32	0.37	14.574	883.32	0.35	13.745	807.28	0.33
14.244	1020.71	0.38	14.101	978.43	0.37	14.591	883.44	0.35	13.765	807.58	0.33
14.262	1020.74	0.38	14.120	978.51	0.37	14.608	883.57	0.35	13.785	807.87	0.33
14.281	1020.81	0.39	14.139	978.58	0.37	14.625	883.74	0.35	13.805	808.14	0.33
14.299	1020.90	0.39	14.157	978.73	0.37	14.642	883.91	0.35	13.825	808.36	0.33
14.317	1020.91	0.39	14.176	978.82	0.37	14.659	884.02	0.35	13.845	808.64	0.33
14.336	1021.01	0.39	14.195	978.89	0.37	14.676	884.15	0.35	13.865	808.94	0.33
14.354	1021.10	0.39	14.214	978.97	0.37	14.693	884.31	0.35	13.885	809.16	0.33
14.372	1021.20	0.39	14.233	979.05	0.37	14.710	884.42	0.35	13.905	809.44	0.33
14.391	1021.29	0.39	14.251	979.13	0.37	14.727	884.55	0.35	13.924	809.72	0.33
14.409	1021.32	0.39	14.270	979.25	0.37	14.744	884.71	0.35	13.944	809.99	0.33
14.427	1021.38	0.39	14.289	979.32	0.37	14.761	884.87	0.35	13.964	810.25	0.33
14.446	1021.47	0.39	14.308	979.45	0.38	14.778	884.99	0.35	13.984	810.48	0.33
14.464	1021.56	0.39	14.326	979.51	0.38	14.795	885.12	0.35	14.004	810.76	0.33
14.482	1021.57	0.39	14.345	979.62	0.38	14.812	885.27	0.35	14.024	811.03	0.33
14.501	1021.66	0.39	14.364	979.70	0.38	14.829	885.42	0.35	14.044	811.29	0.33
14.519	1021.75	0.39	14.383	979.79	0.38	14.846	885.54	0.35	14.064	811.55	0.33
14.537	1021.83	0.39	14.402	979.89	0.38	14.863	885.64	0.35	14.084	811.81	0.33
14.556	1021.89	0.39	14.420	980.03	0.38	14.880	885.79	0.35	14.104	812.10	0.33
14.574	1021.93	0.39	14.439	980.09	0.38	14.897	885.94	0.35	14.124	812.30	0.33
14.592	1022.01	0.39	14.458	980.14	0.38	14.914	886.09	0.35	14.144	812.58	0.33
14.611	1022.10	0.39	14.477	980.28	0.38	14.931	886.24	0.35	14.163	812.83	0.33
14.629	1022.18	0.39	14.496	980.34	0.38	14.948	886.39	0.35	14.183	813.08	0.33
14.647	1022.22	0.39	14.514	980.44	0.38	14.965	886.48	0.35	14.203	813.34	0.33
14.666	1022.27	0.39	14.533	980.53	0.38	14.982	886.61	0.35	14.223	813.58	0.34
14.684	1022.35	0.39	14.552	980.60	0.38	14.999	886.75	0.35	14.243	813.84	0.34

14.702	1022.43	0.39	14.571	980.71	0.38	15.016	886.90	0.35	14.263	814.09	0.34
14.721	1022.51	0.39	14.589	980.83	0.38	15.033	887.04	0.35	14.283	814.38	0.34
14.739	1022.59	0.39	14.608	980.88	0.38	15.050	887.19	0.35	14.303	814.64	0.34
14.757	1022.62	0.39	14.627	981.01	0.38	15.067	887.32	0.35	14.323	814.89	0.34
14.776	1022.67	0.39	14.646	981.09	0.38	15.084	887.40	0.35	14.343	815.14	0.34
14.794	1022.75	0.39	14.665	981.17	0.38	15.101	887.55	0.35	14.363	815.39	0.34
14.812	1022.83	0.39	14.683	981.29	0.38	15.118	887.70	0.35	14.383	815.64	0.34
14.831	1022.90	0.39	14.702	981.33	0.38	15.135	887.84	0.35	14.403	815.88	0.34
14.849	1022.98	0.39	14.721	981.45	0.38	15.152	887.98	0.35	14.422	816.14	0.34
14.867	1023.06	0.39	14.740	981.56	0.38	15.169	888.09	0.35	14.442	816.36	0.34
14.886	1023.14	0.39	14.759	981.60	0.38	15.186	888.19	0.35	14.462	816.61	0.34
14.904	1023.22	0.39	14.777	981.72	0.38	15.203	888.33	0.35	14.482	816.86	0.34
14.922	1023.28	0.39	14.796	981.82	0.38	15.220	888.48	0.35	14.502	817.12	0.34
14.941	1023.28	0.39	14.815	981.86	0.38	15.237	888.62	0.35	14.522	817.35	0.34
14.959	1023.36	0.39	14.834	981.97	0.38	15.254	888.76	0.35	14.542	817.58	0.34
14.977	1023.43	0.39	14.852	982.08	0.38	15.271	888.90	0.35	14.562	817.82	0.34
14.996	1023.51	0.39	14.871	982.19	0.38	15.288	889.04	0.35	14.582	818.12	0.34
15.014	1023.59	0.39	14.890	982.23	0.38	15.305	889.18	0.35	14.602	818.37	0.34
15.032	1023.66	0.39	14.909	982.34	0.38	15.322	889.32	0.35	14.622	818.60	0.34
15.051	1023.74	0.39	14.928	982.45	0.38	15.339	889.44	0.35	14.642	818.83	0.34
15.069	1023.82	0.39	14.946	982.56	0.38	15.356	889.51	0.35	14.661	819.07	0.34
15.087	1023.89	0.39	14.965	982.60	0.38	15.373	889.65	0.35	14.681	819.30	0.34
15.106	1023.93	0.39	14.984	982.71	0.38	15.390	889.79	0.35	14.701	819.56	0.34
15.124	1023.96	0.39	15.003	982.81	0.38	15.407	889.92	0.35	14.721	819.80	0.34
15.142	1024.04	0.39	15.022	982.88	0.38	15.424	890.06	0.35	14.741	820.03	0.34
15.161	1024.11	0.39	15.040	982.94	0.38	15.441	890.19	0.35	14.761	820.26	0.34
15.179	1024.19	0.39	15.059	983.04	0.38	15.458	890.32	0.35	14.781	820.48	0.34
15.197	1024.26	0.39	15.078	983.15	0.38	15.475	890.45	0.35	14.801	820.75	0.34
15.216	1024.33	0.39	15.097	983.26	0.38	15.492	890.58	0.35	14.821	821.02	0.34
15.234	1024.41	0.39	15.116	983.36	0.38	15.509	890.71	0.35	14.841	821.23	0.34
15.252	1024.42	0.39	15.134	983.46	0.38	15.526	890.84	0.35	14.861	821.46	0.34
15.271	1024.52	0.39	15.153	983.49	0.38	15.543	890.97	0.35	14.881	821.72	0.34
15.289	1024.63	0.39	15.172	983.60	0.38	15.560	891.10	0.35	14.901	821.93	0.34
15.307	1024.67	0.39	15.191	983.70	0.38	15.577	891.23	0.35	14.920	822.14	0.34
15.326	1024.69	0.39	15.209	983.79	0.38	15.594	891.33	0.35	14.940	822.39	0.34
15.344	1024.76	0.39	15.228	983.89	0.38	15.611	891.42	0.35	14.960	822.64	0.34
15.362	1024.85	0.39	15.247	983.99	0.38	15.628	891.61	0.35	14.980	822.84	0.34
15.381	1024.91	0.39	15.266	984.03	0.38	15.645	891.69	0.35	15.000	823.12	0.34
15.399	1025.00	0.39	15.285	984.11	0.38	15.662	891.79	0.35	15.020	823.33	0.34
15.417	1025.08	0.39	15.303	984.20	0.38	15.679	891.92	0.35	15.040	823.57	0.34
15.436	1025.11	0.39	15.322	984.30	0.38	15.696	892.05	0.35	15.060	823.79	0.34
15.454	1025.19	0.39	15.341	984.39	0.38	15.713	892.24	0.35	15.080	824.06	0.34
15.472	1025.24	0.39	15.360	984.48	0.38	15.730	892.33	0.35	15.100	824.25	0.34
15.491	1025.32	0.39	15.379	984.58	0.38	15.747	892.44	0.35	15.120	824.51	0.34
15.509	1025.40	0.39	15.397	984.66	0.38	15.764	892.62	0.35	15.140	824.71	0.34



15.527	1025.49	0.39	15.416	984.75	0.38	15.781	892.73	0.35	15.159	824.95	0.34
15.546	1025.57	0.39	15.435	984.84	0.38	15.798	892.85	0.35	15.179	825.16	0.34
15.564	1025.58	0.39	15.454	984.93	0.38	15.815	892.98	0.35	15.199	825.42	0.34
15.582	1025.65	0.39	15.472	985.01	0.38	15.832	893.10	0.35	15.219	825.63	0.34
15.601	1025.73	0.39	15.491	985.10	0.38	15.849	893.21	0.35	15.239	825.86	0.34
15.619	1025.81	0.39	15.510	985.19	0.38	15.866	893.33	0.35	15.259	826.08	0.34
15.637	1025.88	0.39	15.529	985.27	0.38	15.883	893.45	0.35	15.279	826.28	0.34
15.656	1025.95	0.39	15.548	985.35	0.38	15.900	893.57	0.35	15.299	826.56	0.34
15.674	1026.02	0.39	15.566	985.44	0.38	15.917	893.69	0.35	15.319	826.77	0.34
15.692	1026.06	0.39	15.585	985.52	0.38	15.935	893.80	0.35	15.339	827.01	0.34
15.711	1026.14	0.39	15.604	985.61	0.38	15.952	893.92	0.35	15.359	827.23	0.34
15.729	1026.22	0.39	15.623	985.69	0.38	15.969	894.04	0.35	15.379	827.43	0.34
15.747	1026.30	0.39	15.642	985.78	0.38	15.986	894.16	0.35	15.398	827.66	0.34
15.766	1026.31	0.39	15.660	985.86	0.38	16.003	894.28	0.35	15.418	827.86	0.34
15.784	1026.39	0.39	15.679	985.94	0.38	16.020	894.39	0.35	15.438	828.04	0.34
15.802	1026.47	0.39	15.698	986.06	0.38	16.037	894.50	0.35	15.458	828.32	0.34
15.821	1026.55	0.39	15.717	986.14	0.38	16.054	894.62	0.35	15.478	828.52	0.34
15.839	1026.63	0.39	15.735	986.21	0.38	16.071	894.73	0.35	15.498	828.61	0.34
15.857	1026.71	0.39	15.754	986.34	0.38	16.088	894.86	0.35	15.518	828.88	0.34
15.876	1026.76	0.39	15.773	986.42	0.38	16.105	894.99	0.35	15.538	828.92	0.34
15.894	1026.82	0.39	15.792	986.50	0.38	16.122	895.12	0.35	15.558	829.13	0.34
15.912	1026.88	0.39	15.811	986.57	0.38	16.139	895.24	0.35	15.578	829.30	0.34
15.931	1026.96	0.39	15.829	986.66	0.38	16.156	895.37	0.35	15.598	829.46	0.34
15.949	1027.04	0.39	15.848	986.74	0.38	16.173	895.48	0.35	15.618	829.66	0.34
15.967	1027.08	0.39	15.867	986.81	0.38	16.190	895.60	0.35	15.638	829.87	0.34
15.986	1027.16	0.39	15.886	986.89	0.38	16.207	895.72	0.35	15.657	830.11	0.34
16.004	1027.22	0.39	15.905	986.96	0.38	16.224	895.84	0.35	15.677	830.32	0.34
16.022	1027.28	0.39	15.923	987.10	0.38	16.241	895.95	0.35	15.697	830.51	0.34
16.041	1027.34	0.39	15.942	987.19	0.38	16.258	896.07	0.35	15.717	830.70	0.34
16.059	1027.45	0.39	15.961	987.26	0.38	16.275	896.19	0.35	15.737	830.88	0.34
16.077	1027.47	0.39	15.980	987.34	0.38	16.292	896.33	0.35	15.757	831.07	0.34
16.096	1027.61	0.39	15.998	987.41	0.38	16.309	896.46	0.35	15.777	831.25	0.34
16.114	1027.61	0.39	16.017	987.48	0.38	16.326	896.58	0.35	15.797	831.43	0.34
16.132	1027.69	0.39	16.036	987.55	0.38	16.343	896.70	0.35	15.817	831.60	0.34
16.151	1027.78	0.39	16.055	987.62	0.38	16.360	896.81	0.35	15.837	831.77	0.34
16.169	1027.86	0.39	16.074	987.77	0.38	16.377	896.93	0.35	15.857	832.01	0.34
16.187	1027.93	0.39	16.092	987.84	0.38	16.394	897.10	0.35	15.877	832.21	0.34
16.206	1028.00	0.39	16.111	987.91	0.38	16.411	897.20	0.35	15.896	832.37	0.34
16.224	1028.02	0.39	16.130	987.98	0.38	16.428	897.34	0.35	15.916	832.63	0.34
16.242	1028.10	0.39	16.149	988.05	0.38	16.445	897.46	0.35	15.936	832.80	0.34
16.261	1028.16	0.39	16.168	988.13	0.38	16.462	897.58	0.35	15.956	833.06	0.34
16.279	1028.22	0.39	16.186	988.26	0.38	16.479	897.70	0.35	15.976	833.24	0.34
16.297	1028.27	0.39	16.205	988.33	0.38	16.496	897.82	0.35	15.996	833.47	0.34
16.316	1028.41	0.39	16.224	988.40	0.38	16.513	897.93	0.35	16.016	833.65	0.34
16.334	1028.43	0.39	16.243	988.46	0.38	16.530	898.05	0.35	16.036	833.88	0.34

16.352	1028.51	0.39	16.261	988.55	0.38	16.547	898.17	0.35	16.056	834.08	0.34
16.371	1028.59	0.39	16.280	988.68	0.38	16.564	898.29	0.35	16.076	834.28	0.34
16.389	1028.66	0.39	16.299	988.74	0.38	16.581	898.40	0.36	16.096	834.48	0.34
16.407	1028.67	0.39	16.318	988.81	0.38	16.598	898.51	0.36	16.116	834.71	0.34
16.425	1028.76	0.39	16.337	988.87	0.38	16.615	898.62	0.36	16.136	834.88	0.34
16.444	1028.84	0.39	16.355	988.96	0.38	16.632	898.81	0.36	16.155	835.13	0.34
16.462	1028.91	0.39	16.374	989.08	0.38	16.649	898.93	0.36	16.175	835.30	0.34
16.480	1028.96	0.39	16.393	989.14	0.38	16.666	899.04	0.36	16.195	835.53	0.34
16.499	1029.02	0.39	16.412	989.21	0.38	16.683	899.15	0.36	16.215	835.69	0.34
16.517	1029.08	0.39	16.431	989.30	0.38	16.700	899.26	0.36	16.235	835.93	0.34
16.535	1029.12	0.39	16.449	989.41	0.38	16.717	899.37	0.36	16.255	836.17	0.34
16.554	1029.24	0.39	16.468	989.47	0.38	16.734	899.49	0.36	16.275	836.35	0.34
16.572	1029.30	0.39	16.487	989.53	0.38	16.751	899.66	0.36	16.295	836.58	0.34
16.590	1029.33	0.39	16.506	989.59	0.38	16.768	899.77	0.36	16.315	836.74	0.34
16.609	1029.40	0.39	16.524	989.65	0.38	16.785	899.88	0.36	16.335	836.97	0.34
16.627	1029.49	0.39	16.543	989.77	0.38	16.802	899.99	0.36	16.355	837.14	0.34
16.645	1029.51	0.39	16.562	989.84	0.38	16.819	900.10	0.36	16.375	837.36	0.34
16.664	1029.57	0.39	16.581	989.91	0.38	16.836	900.21	0.36	16.394	837.58	0.34
16.682	1029.66	0.39	16.600	990.03	0.38	16.853	900.33	0.36	16.414	837.79	0.34
16.700	1029.74	0.39	16.618	990.10	0.38	16.870	900.46	0.36	16.434	837.96	0.34
16.719	1029.81	0.39	16.637	990.15	0.38	16.887	900.64	0.36	16.454	838.20	0.34
16.737	1029.82	0.39	16.656	990.21	0.38	16.904	900.76	0.36	16.474	838.36	0.34
16.755	1029.90	0.39	16.675	990.31	0.38	16.921	900.83	0.36	16.494	838.59	0.34
16.774	1029.98	0.39	16.694	990.40	0.38	16.938	900.99	0.36	16.514	838.77	0.34
16.792	1030.03	0.39	16.712	990.46	0.38	16.955	901.11	0.36	16.534	838.97	0.34
16.810	1030.09	0.39	16.731	990.51	0.38	16.972	901.22	0.36	16.554	839.18	0.34
16.829	1030.14	0.39	16.750	990.59	0.38	16.989	901.33	0.36	16.574	839.40	0.34
16.847	1030.23	0.39	16.769	990.70	0.38	17.006	901.44	0.36	16.594	839.57	0.34
16.865	1030.31	0.39	16.788	990.75	0.38	17.023	901.56	0.36	16.614	839.80	0.34
16.884	1030.39	0.39	16.806	990.83	0.38	17.040	901.67	0.36	16.634	839.94	0.34
16.902	1030.44	0.39	16.825	990.93	0.38	17.057	901.78	0.36	16.653	840.16	0.34
16.920	1030.47	0.39	16.844	991.04	0.38	17.074	901.89	0.36	16.673	840.39	0.34
16.939	1030.55	0.39	16.863	991.12	0.38	17.091	902.01	0.36	16.693	840.54	0.34
16.957	1030.64	0.39	16.881	991.18	0.38	17.108	902.19	0.36	16.713	840.76	0.34
16.975	1030.67	0.39	16.900	991.23	0.38	17.125	902.29	0.36	16.733	840.95	0.34
16.994	1030.77	0.39	16.919	991.30	0.38	17.142	902.39	0.36	16.753	841.12	0.34
17.012	1030.80	0.39	16.938	991.40	0.38	17.159	902.52	0.36	16.773	841.34	0.34
17.030	1030.88	0.39	16.957	991.46	0.38	17.176	902.64	0.36	16.793	841.56	0.34
17.049	1030.96	0.39	16.975	991.52	0.38	17.193	902.77	0.36	16.813	841.70	0.34
17.067	1031.04	0.39	16.994	991.61	0.38	17.210	902.89	0.36	16.833	841.93	0.34
17.085	1031.06	0.39	17.013	991.68	0.38	17.227	902.99	0.36	16.853	842.10	0.34
17.104	1031.13	0.39	17.032	991.81	0.38	17.244	903.09	0.36	16.873	842.30	0.34
17.122	1031.21	0.39	17.051	991.87	0.38	17.261	903.19	0.36	16.892	842.51	0.34
17.140	1031.29	0.39	17.069	991.92	0.38	17.278	903.36	0.36	16.912	842.72	0.34
17.159	1031.32	0.39	17.088	992.05	0.38	17.295	903.46	0.36	16.932	842.91	0.34

17.177	1031.37	0.39	17.107	992.12	0.38	17.312	903.56	0.36	16.952	843.07	0.34
17.195	1031.45	0.39	17.126	992.17	0.38	17.329	903.70	0.36	16.972	843.22	0.34
17.214	1031.53	0.39	17.144	992.30	0.38	17.346	903.84	0.36	16.992	843.43	0.34
17.232	1031.56	0.39	17.163	992.37	0.38	17.363	903.93	0.36	17.012	843.64	0.34
17.250	1031.64	0.39	17.182	992.41	0.38	17.380	904.02	0.36	17.032	843.85	0.34
17.269	1031.70	0.39	17.201	992.55	0.38	17.397	904.15	0.36	17.052	843.98	0.34
17.287	1031.78	0.39	17.220	992.58	0.38	17.414	904.30	0.36	17.072	844.20	0.34
17.305	1031.86	0.39	17.238	992.69	0.38	17.431	904.40	0.36	17.092	844.42	0.34
17.324	1031.92	0.39	17.257	992.74	0.38	17.448	904.49	0.36	17.112	844.57	0.34
17.342	1031.94	0.39	17.276	992.87	0.38	17.465	904.59	0.36	17.132	844.78	0.34
17.360	1032.02	0.39	17.295	992.98	0.38	17.482	904.77	0.36	17.151	844.98	0.34
17.379	1032.05	0.39	17.314	993.05	0.38	17.499	904.86	0.36	17.171	845.16	0.34
17.397	1032.12	0.39	17.332	993.06	0.38	17.516	904.96	0.36	17.191	845.35	0.34
17.415	1032.19	0.39	17.351	993.17	0.38	17.533	905.05	0.36	17.211	845.54	0.34
17.434	1032.27	0.39	17.370	993.23	0.38	17.550	905.21	0.36	17.231	845.72	0.34
17.452	1032.35	0.39	17.389	993.34	0.38	17.568	905.32	0.36	17.251	845.91	0.34
17.470	1032.39	0.39	17.407	993.39	0.38	17.585	905.42	0.36	17.271	846.11	0.34
17.489	1032.43	0.39	17.426	993.49	0.38	17.602	905.51	0.36	17.291	846.24	0.34
17.507	1032.51	0.39	17.445	993.59	0.38	17.619	905.64	0.36	17.311	846.49	0.34
17.525	1032.60	0.39	17.464	993.63	0.38	17.636	905.78	0.36	17.331	846.64	0.34
17.544	1032.67	0.39	17.483	993.72	0.38	17.653	905.87	0.36	17.351	846.82	0.34
17.562	1032.68	0.39	17.501	993.83	0.38	17.670	905.96	0.36	17.371	847.03	0.34
17.580	1032.76	0.39	17.520	993.93	0.38	17.687	906.13	0.36	17.390	847.23	0.34
17.599	1032.84	0.39	17.539	993.96	0.38	17.704	906.23	0.36	17.410	847.40	0.34
17.617	1032.90	0.39	17.558	994.04	0.38	17.721	906.32	0.36	17.430	847.57	0.34
17.635	1032.92	0.39	17.577	994.16	0.38	17.738	906.44	0.36	17.450	847.77	0.34
17.654	1033.00	0.39	17.595	994.20	0.38	17.755	906.59	0.36	17.470	847.97	0.34
17.672	1033.08	0.39	17.614	994.28	0.38	17.772	906.68	0.36	17.490	848.13	0.34
17.690	1033.17	0.39	17.633	994.38	0.38	17.789	906.77	0.36	17.510	848.36	0.34
17.709	1033.17	0.39	17.652	994.46	0.38	17.806	906.92	0.36	17.530	848.51	0.34
17.727	1033.25	0.39	17.670	994.54	0.38	17.823	907.03	0.36	17.550	848.71	0.34
17.745	1033.33	0.39	17.689	994.62	0.38	17.840	907.11	0.36	17.570	848.88	0.34
17.764	1033.41	0.39	17.708	994.70	0.38	17.857	907.28	0.36	17.590	849.06	0.34
17.782	1033.44	0.39	17.727	994.79	0.38	17.874	907.36	0.36	17.610	849.26	0.34
17.800	1033.49	0.39	17.746	994.85	0.38	17.891	907.45	0.36	17.630	849.46	0.34
17.819	1033.57	0.39	17.764	994.93	0.38	17.908	907.56	0.36	17.649	849.61	0.34
17.837	1033.66	0.39	17.783	995.02	0.38	17.925	907.72	0.36	17.669	849.84	0.34
17.855	1033.72	0.39	17.802	995.10	0.38	17.942	907.80	0.36	17.689	849.98	0.34
17.874	1033.74	0.39	17.821	995.18	0.38	17.959	907.93	0.36	17.709	850.16	0.34
17.892	1033.82	0.39	17.840	995.26	0.38	17.976	908.06	0.36	17.729	850.36	0.34
17.910	1033.86	0.39	17.858	995.34	0.38	17.993	908.14	0.36	17.749	850.54	0.34
17.929	1033.98	0.39	17.877	995.42	0.38	18.010	908.23	0.36	17.769	850.72	0.34
17.947	1033.98	0.39	17.896	995.50	0.38	18.027	908.36	0.36	17.789	850.90	0.34
17.965	1034.06	0.39	17.915	995.56	0.38	18.044	908.48	0.36	17.809	851.09	0.34
17.984	1034.15	0.39	17.933	995.67	0.38	18.061	908.57	0.36	17.829	851.22	0.34

18.002	1034.22	0.39	17.952	995.75	0.38	18.078	908.71	0.36	17.849	851.43	0.34
18.020	1034.26	0.39	17.971	995.83	0.38	18.095	908.81	0.36	17.869	851.57	0.34
18.039	1034.34	0.39	17.990	995.91	0.38	18.112	908.90	0.36	17.888	851.79	0.34
18.057	1034.39	0.39	18.009	995.99	0.38	18.129	909.06	0.36	17.908	851.97	0.34
18.075	1034.47	0.39	18.027	996.07	0.38	18.146	909.15	0.36	17.928	852.17	0.34
18.094	1034.55	0.39	18.046	996.12	0.38	18.163	909.24	0.36	17.948	852.32	0.34
18.112	1034.63	0.39	18.065	996.24	0.38	18.180	909.40	0.36	17.968	852.54	0.34
18.130	1034.68	0.39	18.084	996.32	0.38	18.197	909.49	0.36	17.988	852.67	0.34
18.149	1034.72	0.39	18.103	996.35	0.38	18.214	909.58	0.36	18.008	852.88	0.34
18.167	1034.80	0.39	18.121	996.48	0.38	18.231	909.67	0.36	18.028	853.02	0.34
18.185	1034.88	0.39	18.140	996.50	0.38	18.248	909.78	0.36	18.048	853.20	0.34
18.204	1034.96	0.39	18.159	996.63	0.38	18.265	909.92	0.36	18.068	853.40	0.34
18.222	1034.99	0.39	18.178	996.69	0.38	18.282	910.03	0.36	18.088	853.57	0.34
18.240	1035.04	0.39	18.196	996.76	0.38	18.299	910.16	0.36	18.108	853.76	0.34
18.259	1035.13	0.39	18.215	996.83	0.38	18.316	910.24	0.36	18.128	853.91	0.34
18.277	1035.21	0.39	18.234	996.90	0.38	18.333	910.35	0.36	18.147	854.07	0.34
18.295	1035.29	0.39	18.253	996.97	0.38	18.350	910.48	0.36	18.167	854.26	0.34
18.314	1035.30	0.39	18.272	997.05	0.38	18.367	910.56	0.36	18.187	854.45	0.34
18.332	1035.37	0.39	18.290	997.19	0.38	18.384	910.66	0.36	18.207	854.59	0.34
18.350	1035.45	0.39	18.309	997.26	0.38	18.401	910.80	0.36	18.227	854.79	0.34
18.369	1035.53	0.39	18.328	997.34	0.38	18.418	910.89	0.36	18.247	854.99	0.34
18.387	1035.55	0.39	18.347	997.40	0.38	18.435	911.04	0.36	18.267	855.09	0.34
18.405	1035.62	0.39	18.366	997.46	0.38	18.452	911.11	0.36	18.287	855.29	0.34
18.424	1035.70	0.39	18.384	997.54	0.38	18.469	911.19	0.36	18.307	855.49	0.34
18.442	1035.78	0.39	18.403	997.62	0.38	18.486	911.34	0.36	18.327	855.63	0.34
18.460	1035.78	0.39	18.422	997.74	0.38	18.503	911.42	0.36	18.347	855.81	0.34
18.479	1035.86	0.39	18.441	997.80	0.38	18.520	911.57	0.36	18.367	856.01	0.34
18.497	1035.94	0.39	18.460	997.87	0.38	18.537	911.66	0.36	18.386	856.17	0.34
18.515	1035.98	0.39	18.478	997.95	0.38	18.554	911.78	0.36	18.406	856.31	0.34
18.534	1036.03	0.39	18.497	998.03	0.38	18.571	911.89	0.36	18.426	856.51	0.35
18.552	1036.11	0.39	18.516	998.10	0.38	18.588	911.96	0.36	18.446	856.70	0.35
18.570	1036.19	0.39	18.535	998.19	0.38	18.605	912.07	0.36	18.466	856.83	0.35
18.589	1036.24	0.39	18.553	998.29	0.38	18.622	912.20	0.36	18.486	857.03	0.35
18.607	1036.27	0.39	18.572	998.35	0.38	18.639	912.30	0.36	18.506	857.22	0.35
18.625	1036.35	0.39	18.591	998.43	0.38	18.656	912.43	0.36	18.526	857.40	0.35
18.644	1036.43	0.39	18.610	998.49	0.38	18.673	912.51	0.36	18.546	857.50	0.35
18.662	1036.48	0.39	18.629	998.60	0.38	18.690	912.59	0.36	18.566	857.67	0.35
18.680	1036.56	0.39	18.647	998.66	0.38	18.707	912.74	0.36	18.586	857.85	0.35
18.699	1036.60	0.39	18.666	998.69	0.38	18.724	912.82	0.36	18.606	858.04	0.35
18.717	1036.68	0.39	18.685	998.82	0.38	18.741	912.97	0.36	18.626	858.22	0.35
18.735	1036.72	0.39	18.704	998.85	0.38	18.758	913.06	0.36	18.645	858.41	0.35
18.754	1036.79	0.39	18.723	998.98	0.38	18.775	913.13	0.36	18.665	858.54	0.35
18.772	1036.84	0.39	18.741	999.02	0.38	18.792	913.28	0.36	18.685	858.70	0.35
18.790	1036.92	0.39	18.760	999.15	0.38	18.809	913.37	0.36	18.705	858.88	0.35
18.809	1036.96	0.39	18.779	999.20	0.38	18.826	913.44	0.36	18.725	859.05	0.35

18.827	1037.03	0.39	18.798	999.25	0.38	18.843	913.57	0.36	18.745	859.23	0.35
18.845	1037.09	0.39	18.816	999.38	0.38	18.860	913.68	0.36	18.765	859.40	0.35
18.863	1037.17	0.39	18.835	999.42	0.38	18.877	913.79	0.36	18.785	859.58	0.35
18.882	1037.25	0.39	18.854	999.49	0.38	18.894	913.91	0.36	18.805	859.77	0.35
18.900	1037.33	0.39	18.873	999.58	0.38	18.911	914.00	0.36	18.825	859.91	0.35
18.918	1037.33	0.39	18.892	999.65	0.38	18.928	914.13	0.36	18.845	860.03	0.35
18.937	1037.41	0.39	18.910	999.74	0.38	18.945	914.21	0.36	18.865	860.21	0.35
18.955	1037.49	0.39	18.929	999.82	0.38	18.962	914.28	0.36	18.884	860.37	0.35
18.973	1037.58	0.39	18.948	999.89	0.38	18.979	914.42	0.36	18.904	860.53	0.35
18.992	1037.58	0.39	18.967	1000.00	0.38	18.996	914.51	0.36	18.924	860.69	0.35
19.010	1037.66	0.39	18.986	1000.06	0.38	19.013	914.62	0.36	18.944	860.90	0.35
19.028	1037.74	0.39	19.004	1000.14	0.38	19.030	914.73	0.36	18.964	861.09	0.35
19.047	1037.81	0.39	19.023	1000.22	0.38	19.047	914.82	0.36	18.984	861.26	0.35
19.065	1037.90	0.39	19.042	1000.28	0.38	19.064	914.95	0.36	19.004	861.43	0.35
19.083	1037.90	0.39	19.061	1000.39	0.38	19.081	915.02	0.36	19.024	861.55	0.35
19.102	1037.98	0.39	19.079	1000.42	0.38	19.098	915.16	0.36	19.044	861.68	0.35
19.120	1038.07	0.39	19.098	1000.53	0.38	19.115	915.24	0.36	19.064	861.85	0.35
19.138	1038.10	0.39	19.117	1000.56	0.38	19.132	915.36	0.36	19.084	862.01	0.35
19.157	1038.15	0.39	19.136	1000.68	0.38	19.149	915.46	0.36	19.104	862.22	0.35
19.175	1038.23	0.39	19.155	1000.71	0.38	19.166	915.54	0.36	19.124	862.40	0.35
19.193	1038.31	0.39	19.173	1000.82	0.38	19.183	915.67	0.36	19.143	862.55	0.35
19.212	1038.37	0.39	19.192	1000.87	0.38	19.201	915.74	0.36	19.163	862.70	0.35
19.230	1038.48	0.39	19.211	1000.96	0.38	19.218	915.86	0.36	19.183	862.86	0.35
19.248	1038.47	0.39	19.230	1001.06	0.38	19.235	916.00	0.36	19.203	863.01	0.35
19.267	1038.56	0.39	19.249	1001.12	0.38	19.252	916.11	0.36	19.223	863.17	0.35
19.285	1038.64	0.39	19.267	1001.18	0.38	19.269	916.19	0.36	19.243	863.33	0.35
19.303	1038.72	0.39	19.286	1001.28	0.38	19.286	916.32	0.36	19.263	863.49	0.35
19.322	1038.77	0.39	19.305	1001.31	0.38	19.303	916.39	0.36	19.283	863.65	0.35
19.340	1038.80	0.39	19.324	1001.41	0.38	19.320	916.51	0.36	19.303	863.80	0.35
19.358	1038.88	0.39	19.342	1001.51	0.38	19.337	916.60	0.36	19.323	863.97	0.35
19.377	1038.92	0.39	19.361	1001.53	0.38	19.354	916.69	0.36	19.343	864.19	0.35
19.395	1039.01	0.39	19.380	1001.63	0.38	19.371	916.82	0.36	19.363	864.34	0.35
19.413	1039.05	0.39	19.399	1001.73	0.38	19.388	916.89	0.36	19.382	864.48	0.35
19.432	1039.13	0.39	19.418	1001.83	0.38	19.405	917.02	0.36	19.402	864.62	0.35
19.450	1039.21	0.39	19.436	1001.85	0.38	19.422	917.10	0.36	19.422	864.77	0.35
19.468	1039.29	0.39	19.455	1001.94	0.38	19.439	917.21	0.36	19.442	864.91	0.35
19.487	1039.29	0.39	19.474	1002.04	0.38	19.456	917.32	0.36	19.462	865.09	0.35
19.505	1039.37	0.39	19.493	1002.09	0.38	19.473	917.39	0.36	19.482	865.29	0.35
19.523	1039.46	0.39	19.512	1002.16	0.38	19.490	917.53	0.36	19.502	865.44	0.35
19.542	1039.54	0.39	19.530	1002.26	0.38	19.507	917.60	0.36	19.522	865.59	0.35
19.560	1039.59	0.39	19.549	1002.36	0.38	19.524	917.71	0.36	19.542	865.74	0.35
19.578	1039.62	0.39	19.568	1002.42	0.38	19.541	917.82	0.36	19.562	865.89	0.35
19.597	1039.70	0.39	19.587	1002.47	0.38	19.558	917.90	0.36	19.582	866.04	0.35
19.615	1039.78	0.39	19.605	1002.56	0.38	19.575	918.03	0.36	19.602	866.18	0.35
19.633	1039.86	0.39	19.624	1002.66	0.38	19.592	918.10	0.36	19.622	866.32	0.35

19.652	1039.88	0.39	19.643	1002.74	0.38	19.609	918.16	0.36	19.641	866.51	0.35
19.670	1039.95	0.39	19.662	1002.76	0.38	19.626	918.26	0.36	19.661	866.69	0.35
19.688	1040.03	0.39	19.681	1002.86	0.38	19.643	918.39	0.36	19.681	866.82	0.35
19.707	1040.06	0.39	19.699	1002.96	0.38	19.660	918.51	0.36	19.701	866.96	0.35
19.725	1040.15	0.39	19.718	1003.05	0.38	19.677	918.58	0.36	19.721	867.16	0.35
19.743	1040.20	0.39	19.737	1003.07	0.38	19.694	918.69	0.36	19.741	867.30	0.35
19.762	1040.27	0.39	19.756	1003.15	0.38	19.711	918.79	0.36	19.761	867.43	0.35
19.780	1040.31	0.39	19.775	1003.24	0.38	19.728	918.85	0.36	19.781	867.57	0.35
19.798	1040.39	0.39	19.793	1003.33	0.38	19.745	918.97	0.36	19.801	867.72	0.35
19.817	1040.45	0.39	19.812	1003.42	0.38	19.762	919.10	0.36	19.821	867.92	0.35
19.835	1040.52	0.39	19.831	1003.48	0.38	19.779	919.19	0.36	19.841	868.06	0.35
19.853	1040.60	0.39	19.850	1003.50	0.38	19.796	919.26	0.36	19.861	868.20	0.35
19.872	1040.60	0.39	19.868	1003.59	0.38	19.813	919.39	0.36	19.880	868.34	0.35
19.890	1040.68	0.39	19.887	1003.68	0.38	19.830	919.46	0.36	19.900	868.50	0.35
19.908	1040.76	0.39	19.906	1003.77	0.38	19.847	919.56	0.36	19.920	868.68	0.35
19.927	1040.79	0.39	19.925	1003.87	0.38	19.864	919.67	0.36	19.940	868.81	0.35
19.945	1040.86	0.39	19.944	1003.88	0.38	19.881	919.73	0.36	19.960	868.94	0.35
19.963	1040.93	0.39	19.962	1003.97	0.38	19.898	919.84	0.36	19.980	869.07	0.35
19.982	1041.00	0.39	19.981	1004.05	0.38	19.915	919.96	0.36	20.000	869.23	0.35
20.000	1041.09	0.39	20.000	1004.14	0.38	19.932	920.07	0.36			
						19.949	920.13	0.36			
						19.966	920.23	0.36			
						19.983	920.34	0.36			
						20.000	920.46	0.36			

Combined standard uncertainties:

$$u(T) = 0.006 \text{ K}; u(p) = 0.0020 \text{ MPa for } p < 6 \text{ MPa}; u(p) = 0.024 \text{ MPa for } 6 \text{ MPa} \leq p \leq 70 \text{ MPa}$$

$$u(x_{\text{CO}_2}) = 0.0003; u(x_{\text{SO}_2}) = 0.0002; u(x_{\text{CH}_4}) = 0.0002$$

**Table S1 (continued).**  $p\rho T$  experimental data for the CO<sub>2</sub>+SO<sub>2</sub>+CH<sub>4</sub> mixtures ( $u(\rho)$ : Combined standard uncertainty).

$x_{\text{CO}_2} = 0.9837; x_{\text{SO}_2} = 0.0009; x_{\text{CH}_4} = 0.0154$											
$T = 313.16 \pm 0.02 \text{ K}$			$T = 333.16 \pm 0.03 \text{ K}$			$T = 353.15 \pm 0.03 \text{ K}$			$T = 373.16 \pm 0.04 \text{ K}$		
$p$ (MPa)	$\rho$ (kg.m <sup>-3</sup> )	$u(\rho)$ (kg.m <sup>-3</sup> )	$p$ (MPa)	$\rho$ (kg.m <sup>-3</sup> )	$u(\rho)$ (kg.m <sup>-3</sup> )	$p$ (MPa)	$\rho$ (kg.m <sup>-3</sup> )	$u(\rho)$ (kg.m <sup>-3</sup> )	$p$ (MPa)	$\rho$ (kg.m <sup>-3</sup> )	$u(\rho)$ (kg.m <sup>-3</sup> )
0.100	1.68	0.22	0.100	1.64	0.23	0.100	1.48	0.22	0.103	1.32	0.21
0.120	1.96	0.22	0.120	1.80	0.22	0.120	1.65	0.21	0.123	1.63	0.22
0.140	2.27	0.22	0.140	2.11	0.22	0.140	1.94	0.21	0.143	1.93	0.22
0.160	2.61	0.22	0.160	2.42	0.22	0.160	2.26	0.21	0.163	2.17	0.22
0.180	2.93	0.22	0.180	2.73	0.22	0.180	2.56	0.22	0.183	2.45	0.22
0.200	3.29	0.22	0.200	3.05	0.22	0.200	2.85	0.22	0.203	2.72	0.22
0.220	3.65	0.22	0.220	3.36	0.22	0.220	3.19	0.22	0.223	3.05	0.22
0.239	3.94	0.22	0.240	3.67	0.22	0.240	3.48	0.22	0.243	3.33	0.22
0.259	4.28	0.22	0.260	3.99	0.22	0.260	3.76	0.22	0.263	3.57	0.22
0.279	4.66	0.22	0.280	4.30	0.22	0.280	4.08	0.22	0.283	3.88	0.22
0.299	4.99	0.22	0.299	4.61	0.22	0.299	4.41	0.22	0.302	4.14	0.22
0.319	5.36	0.22	0.319	4.87	0.22	0.319	4.75	0.22	0.322	4.42	0.22
0.339	5.70	0.22	0.339	5.24	0.22	0.339	5.06	0.22	0.342	4.71	0.22
0.359	6.04	0.22	0.359	5.55	0.22	0.359	5.30	0.22	0.362	5.04	0.22
0.379	6.36	0.22	0.379	5.86	0.22	0.379	5.61	0.22	0.382	5.29	0.22
0.399	6.73	0.22	0.399	6.17	0.22	0.399	5.92	0.22	0.402	5.59	0.22
0.419	7.07	0.22	0.419	6.49	0.22	0.419	6.23	0.22	0.422	5.86	0.22
0.439	7.43	0.22	0.439	6.82	0.22	0.439	6.54	0.22	0.442	6.19	0.22
0.459	7.77	0.22	0.459	7.15	0.22	0.459	6.83	0.22	0.462	6.47	0.22
0.478	8.16	0.22	0.479	7.46	0.22	0.479	7.17	0.22	0.482	6.75	0.22
0.498	8.49	0.22	0.499	7.74	0.22	0.499	7.42	0.22	0.502	7.01	0.22
0.518	8.87	0.22	0.519	8.10	0.22	0.519	7.71	0.22	0.522	7.29	0.22
0.538	9.22	0.22	0.539	8.44	0.22	0.539	8.02	0.22	0.542	7.61	0.22
0.558	9.57	0.22	0.559	8.82	0.22	0.559	8.34	0.22	0.562	7.88	0.22
0.578	9.96	0.22	0.579	9.14	0.22	0.579	8.65	0.22	0.582	8.18	0.22
0.598	10.26	0.22	0.599	9.45	0.22	0.599	8.96	0.22	0.602	8.47	0.22
0.618	10.64	0.22	0.619	9.77	0.22	0.619	9.27	0.22	0.622	8.72	0.22
0.638	11.03	0.22	0.639	10.08	0.22	0.639	9.58	0.22	0.642	9.04	0.22
0.658	11.34	0.22	0.659	10.44	0.22	0.659	9.89	0.22	0.661	9.31	0.22
0.678	11.72	0.22	0.678	10.79	0.22	0.678	10.21	0.22	0.681	9.59	0.22
0.698	12.08	0.22	0.698	11.05	0.22	0.698	10.48	0.22	0.701	9.85	0.22
0.718	12.43	0.22	0.718	11.41	0.22	0.718	10.81	0.22	0.721	10.15	0.22
0.737	12.76	0.22	0.738	11.72	0.22	0.738	11.08	0.22	0.741	10.44	0.22
0.757	13.13	0.22	0.758	12.06	0.22	0.758	11.44	0.22	0.761	10.71	0.22
0.777	13.53	0.22	0.778	12.41	0.22	0.778	11.77	0.22	0.781	11.04	0.22

0.797	13.88	0.22	0.798	12.74	0.22	0.798	12.07	0.22	0.801	11.27	0.22
0.817	14.23	0.22	0.818	13.05	0.22	0.818	12.35	0.22	0.821	11.57	0.22
0.837	14.58	0.22	0.838	13.37	0.22	0.838	12.63	0.22	0.841	11.86	0.22
0.857	14.95	0.22	0.858	13.71	0.22	0.858	12.97	0.22	0.861	12.18	0.22
0.877	15.33	0.22	0.878	14.10	0.22	0.878	13.29	0.22	0.881	12.47	0.22
0.897	15.70	0.22	0.898	14.39	0.22	0.898	13.59	0.22	0.901	12.71	0.22
0.917	16.04	0.22	0.918	14.71	0.22	0.918	13.89	0.22	0.921	13.03	0.22
0.937	16.48	0.22	0.938	15.06	0.22	0.938	14.23	0.22	0.941	13.35	0.22
0.957	16.80	0.22	0.958	15.45	0.22	0.958	14.52	0.22	0.961	13.59	0.22
0.976	17.20	0.22	0.978	15.75	0.22	0.978	14.85	0.22	0.981	13.90	0.22
0.996	17.58	0.22	0.998	16.11	0.22	0.998	15.18	0.22	1.001	14.20	0.22
1.016	17.96	0.22	1.018	16.39	0.22	1.018	15.42	0.22	1.020	14.50	0.22
1.036	18.34	0.22	1.037	16.72	0.22	1.037	15.82	0.22	1.040	14.78	0.22
1.056	18.69	0.22	1.057	17.05	0.22	1.057	16.10	0.22	1.060	15.04	0.22
1.076	19.03	0.22	1.077	17.44	0.22	1.077	16.41	0.22	1.080	15.37	0.22
1.096	19.45	0.22	1.097	17.75	0.22	1.097	16.70	0.22	1.100	15.64	0.22
1.116	19.80	0.22	1.117	18.04	0.22	1.117	17.03	0.22	1.120	15.95	0.22
1.136	20.19	0.22	1.137	18.41	0.22	1.137	17.34	0.22	1.140	16.20	0.22
1.156	20.54	0.22	1.157	18.76	0.22	1.157	17.64	0.22	1.160	16.50	0.22
1.176	20.92	0.22	1.177	19.11	0.22	1.177	17.92	0.22	1.180	16.78	0.22
1.196	21.28	0.22	1.197	19.44	0.22	1.197	18.27	0.22	1.200	17.12	0.22
1.216	21.66	0.22	1.217	19.78	0.22	1.217	18.60	0.22	1.220	17.42	0.22
1.235	22.09	0.22	1.237	20.10	0.22	1.237	18.93	0.22	1.240	17.69	0.22
1.255	22.42	0.22	1.257	20.41	0.22	1.257	19.25	0.22	1.260	17.97	0.22
1.275	22.83	0.22	1.277	20.79	0.22	1.277	19.55	0.22	1.280	18.28	0.22
1.295	23.19	0.22	1.297	21.10	0.22	1.297	19.86	0.22	1.300	18.58	0.22
1.315	23.55	0.22	1.317	21.43	0.22	1.317	20.15	0.22	1.320	18.87	0.22
1.335	23.96	0.22	1.337	21.78	0.22	1.337	20.51	0.22	1.340	19.16	0.22
1.355	24.36	0.22	1.357	22.12	0.22	1.357	20.79	0.22	1.360	19.45	0.22
1.375	24.72	0.22	1.377	22.51	0.22	1.377	21.13	0.22	1.380	19.77	0.22
1.395	25.07	0.22	1.397	22.82	0.22	1.397	21.47	0.22	1.399	20.09	0.22
1.415	25.45	0.22	1.416	23.20	0.22	1.416	21.79	0.22	1.419	20.39	0.22
1.435	25.83	0.22	1.436	23.50	0.22	1.436	22.08	0.22	1.439	20.69	0.22
1.455	26.21	0.22	1.456	23.87	0.22	1.456	22.45	0.22	1.459	20.98	0.22
1.474	26.56	0.22	1.476	24.21	0.22	1.476	22.71	0.22	1.479	21.26	0.22
1.494	26.95	0.22	1.496	24.55	0.22	1.496	23.05	0.22	1.499	21.58	0.22
1.514	27.34	0.22	1.516	24.97	0.22	1.516	23.39	0.22	1.519	21.90	0.22
1.534	27.72	0.22	1.536	25.30	0.22	1.536	23.71	0.22	1.539	22.20	0.22
1.554	28.10	0.22	1.556	25.62	0.22	1.556	24.03	0.22	1.559	22.50	0.22
1.574	28.50	0.22	1.576	26.01	0.22	1.576	24.34	0.22	1.579	22.79	0.22
1.594	28.85	0.22	1.596	26.36	0.22	1.596	24.64	0.22	1.599	23.10	0.22
1.614	29.26	0.22	1.616	26.69	0.22	1.616	25.01	0.22	1.619	23.41	0.22
1.634	29.63	0.22	1.636	27.06	0.22	1.636	25.31	0.22	1.639	23.72	0.22
1.654	30.01	0.22	1.656	27.43	0.22	1.656	25.62	0.22	1.659	24.03	0.22
1.674	30.40	0.22	1.676	27.78	0.22	1.676	25.94	0.22	1.679	24.35	0.22



1.694	30.80	0.22	1.696	28.15	0.22	1.696	26.26	0.22	1.699	24.67	0.22
1.714	31.18	0.22	1.716	28.48	0.22	1.716	26.62	0.22	1.719	24.98	0.22
1.733	31.56	0.22	1.736	28.80	0.22	1.736	26.96	0.22	1.739	25.29	0.22
1.753	31.92	0.22	1.756	29.17	0.22	1.756	27.31	0.22	1.758	25.61	0.22
1.773	32.36	0.22	1.776	29.56	0.22	1.776	27.63	0.22	1.778	25.92	0.22
1.793	32.73	0.22	1.795	29.87	0.22	1.795	27.94	0.22	1.798	26.24	0.22
1.813	33.09	0.22	1.815	30.24	0.22	1.815	28.26	0.22	1.818	26.57	0.22
1.833	33.51	0.22	1.835	30.63	0.22	1.835	28.59	0.22	1.838	26.83	0.22
1.853	33.88	0.22	1.855	30.96	0.22	1.855	28.96	0.22	1.858	27.12	0.22
1.873	34.31	0.22	1.875	31.37	0.22	1.875	29.25	0.22	1.878	27.43	0.22
1.893	34.67	0.22	1.895	31.72	0.22	1.895	29.62	0.22	1.898	27.74	0.22
1.913	35.08	0.22	1.915	32.09	0.22	1.915	29.92	0.22	1.918	28.10	0.22
1.933	35.45	0.22	1.935	32.42	0.22	1.935	30.26	0.22	1.938	28.39	0.22
1.953	35.87	0.22	1.955	32.80	0.22	1.955	30.60	0.22	1.958	28.68	0.22
1.972	36.29	0.22	1.975	33.17	0.22	1.975	30.92	0.22	1.978	29.00	0.22
1.992	36.65	0.22	1.995	33.56	0.22	1.995	31.28	0.22	1.998	29.31	0.22
2.012	37.09	0.22	2.015	33.90	0.22	2.015	31.63	0.22	2.018	29.65	0.22
2.032	37.49	0.22	2.035	34.25	0.22	2.035	31.97	0.22	2.038	29.93	0.22
2.052	37.89	0.22	2.055	34.67	0.22	2.055	32.31	0.22	2.058	30.27	0.22
2.072	38.27	0.22	2.075	35.00	0.22	2.075	32.64	0.22	2.078	30.59	0.22
2.092	38.66	0.22	2.095	35.41	0.22	2.095	32.96	0.22	2.098	30.86	0.22
2.112	39.10	0.22	2.115	35.75	0.22	2.115	33.28	0.22	2.117	31.22	0.22
2.132	39.48	0.22	2.135	36.14	0.22	2.135	33.60	0.22	2.137	31.52	0.22
2.152	39.91	0.22	2.155	36.53	0.22	2.155	33.99	0.22	2.157	31.83	0.22
2.172	40.31	0.22	2.174	36.90	0.22	2.174	34.28	0.22	2.177	32.12	0.22
2.192	40.71	0.22	2.194	37.28	0.22	2.194	34.65	0.22	2.197	32.45	0.22
2.212	41.11	0.22	2.214	37.64	0.22	2.214	34.94	0.22	2.217	32.79	0.22
2.231	41.53	0.22	2.234	38.02	0.22	2.234	35.32	0.22	2.237	33.08	0.22
2.251	41.96	0.22	2.254	38.38	0.22	2.254	35.68	0.22	2.257	33.40	0.22
2.271	42.38	0.22	2.274	38.74	0.22	2.274	35.95	0.22	2.277	33.72	0.22
2.291	42.71	0.22	2.294	39.09	0.22	2.294	36.36	0.22	2.297	33.99	0.22
2.311	43.20	0.22	2.314	39.42	0.22	2.314	36.70	0.22	2.317	34.34	0.22
2.331	43.61	0.22	2.334	39.84	0.22	2.334	37.00	0.22	2.337	34.66	0.22
2.351	44.00	0.22	2.354	40.18	0.22	2.354	37.33	0.22	2.357	34.96	0.22
2.371	44.41	0.22	2.374	40.58	0.22	2.374	37.72	0.22	2.377	35.26	0.22
2.391	44.86	0.22	2.394	40.96	0.22	2.394	38.02	0.22	2.397	35.62	0.22
2.411	45.27	0.22	2.414	41.29	0.22	2.414	38.38	0.22	2.417	35.90	0.22
2.431	45.71	0.22	2.434	41.70	0.22	2.434	38.73	0.22	2.437	36.25	0.22
2.451	46.09	0.22	2.454	42.08	0.22	2.454	39.05	0.22	2.457	36.52	0.22
2.470	46.52	0.22	2.474	42.47	0.22	2.474	39.40	0.22	2.476	36.87	0.22
2.490	46.96	0.22	2.494	42.84	0.22	2.494	39.75	0.22	2.496	37.20	0.22
2.510	47.39	0.22	2.514	43.22	0.22	2.514	40.09	0.22	2.516	37.45	0.22
2.530	47.81	0.22	2.533	43.59	0.22	2.533	40.43	0.22	2.536	37.78	0.22
2.550	48.23	0.22	2.553	43.96	0.22	2.553	40.77	0.22	2.556	38.11	0.22
2.570	48.65	0.22	2.573	44.33	0.22	2.573	41.17	0.22	2.576	38.42	0.22

2.590	49.07	0.22	2.593	44.75	0.22	2.593	41.51	0.22	2.596	38.73	0.22
2.610	49.54	0.22	2.613	45.10	0.22	2.613	41.83	0.22	2.616	39.05	0.22
2.630	49.94	0.22	2.633	45.46	0.22	2.633	42.22	0.22	2.636	39.43	0.22
2.650	50.39	0.22	2.653	45.89	0.22	2.653	42.54	0.22	2.656	39.72	0.22
2.670	50.80	0.22	2.673	46.23	0.22	2.673	42.89	0.22	2.676	40.03	0.22
2.690	51.22	0.22	2.693	46.65	0.22	2.693	43.23	0.22	2.696	40.32	0.22
2.710	51.67	0.22	2.713	47.02	0.22	2.713	43.61	0.22	2.716	40.68	0.22
2.729	52.11	0.22	2.733	47.40	0.22	2.733	43.93	0.22	2.736	41.02	0.22
2.749	52.55	0.22	2.753	47.81	0.22	2.753	44.28	0.22	2.756	41.33	0.22
2.769	52.98	0.22	2.773	48.15	0.22	2.773	44.63	0.22	2.776	41.66	0.22
2.789	53.43	0.22	2.793	48.55	0.22	2.793	45.00	0.22	2.796	41.95	0.22
2.809	53.89	0.22	2.813	48.93	0.22	2.813	45.38	0.22	2.816	42.30	0.22
2.829	54.32	0.22	2.833	49.33	0.22	2.833	45.70	0.22	2.835	42.65	0.22
2.849	54.79	0.22	2.853	49.69	0.22	2.853	46.08	0.22	2.855	42.91	0.22
2.869	55.23	0.22	2.873	50.12	0.22	2.873	46.46	0.22	2.875	43.26	0.22
2.889	55.64	0.22	2.893	50.51	0.22	2.893	46.77	0.22	2.895	43.59	0.22
2.909	56.10	0.22	2.912	50.89	0.22	2.912	47.10	0.22	2.915	43.93	0.22
2.929	56.54	0.22	2.932	51.29	0.22	2.932	47.47	0.22	2.935	44.26	0.22
2.949	56.99	0.22	2.952	51.66	0.22	2.952	47.81	0.22	2.955	44.57	0.22
2.968	57.44	0.22	2.972	52.09	0.22	2.972	48.18	0.22	2.975	44.89	0.22
2.988	57.88	0.22	2.992	52.47	0.22	2.992	48.55	0.22	2.995	45.21	0.22
3.008	58.36	0.22	3.012	52.87	0.22	3.012	48.91	0.22	3.015	45.52	0.22
3.028	58.84	0.22	3.032	53.23	0.22	3.032	49.25	0.22	3.035	45.83	0.22
3.048	59.27	0.22	3.052	53.68	0.22	3.052	49.56	0.22	3.055	46.18	0.22
3.068	59.70	0.22	3.072	54.09	0.22	3.072	49.96	0.22	3.075	46.52	0.22
3.088	60.15	0.22	3.092	54.51	0.22	3.092	50.27	0.22	3.095	46.81	0.22
3.108	60.63	0.22	3.112	54.88	0.22	3.112	50.66	0.22	3.115	47.18	0.22
3.128	61.11	0.22	3.132	55.24	0.22	3.132	51.05	0.22	3.135	47.46	0.22
3.148	61.58	0.22	3.152	55.64	0.22	3.152	51.34	0.22	3.155	47.83	0.22
3.168	62.00	0.22	3.172	56.11	0.22	3.172	51.73	0.22	3.175	48.12	0.22
3.188	62.46	0.22	3.192	56.51	0.22	3.192	52.09	0.22	3.194	48.47	0.22
3.208	62.92	0.22	3.212	56.90	0.22	3.212	52.46	0.22	3.214	48.81	0.22
3.227	63.38	0.22	3.232	57.29	0.22	3.232	52.83	0.22	3.234	49.15	0.22
3.247	63.88	0.22	3.252	57.67	0.22	3.252	53.19	0.22	3.254	49.44	0.22
3.267	64.38	0.22	3.272	58.11	0.22	3.272	53.54	0.22	3.274	49.78	0.22
3.287	64.84	0.22	3.291	58.47	0.22	3.291	53.88	0.22	3.294	50.12	0.22
3.307	65.29	0.22	3.311	58.92	0.22	3.311	54.24	0.22	3.314	50.45	0.22
3.327	65.73	0.22	3.331	59.27	0.22	3.331	54.58	0.22	3.334	50.78	0.22
3.347	66.22	0.22	3.351	59.72	0.22	3.351	55.00	0.22	3.354	51.12	0.22
3.367	66.70	0.22	3.371	60.16	0.22	3.371	55.33	0.22	3.374	51.44	0.22
3.387	67.19	0.22	3.391	60.56	0.22	3.391	55.72	0.22	3.394	51.78	0.22
3.407	67.66	0.22	3.411	60.94	0.22	3.411	56.07	0.22	3.414	52.15	0.22
3.427	68.14	0.22	3.431	61.36	0.22	3.431	56.40	0.22	3.434	52.46	0.22
3.447	68.63	0.22	3.451	61.79	0.22	3.451	56.79	0.22	3.454	52.77	0.22
3.466	69.10	0.22	3.471	62.21	0.22	3.471	57.12	0.22	3.474	53.16	0.22

3.486	69.57	0.22	3.491	62.59	0.22	3.491	57.52	0.22	3.494	53.47	0.22
3.506	70.04	0.22	3.511	63.04	0.22	3.511	57.91	0.22	3.514	53.78	0.22
3.526	70.53	0.22	3.531	63.42	0.22	3.531	58.29	0.22	3.534	54.09	0.22
3.546	71.04	0.22	3.551	63.86	0.22	3.551	58.67	0.22	3.553	54.46	0.22
3.566	71.55	0.22	3.571	64.26	0.22	3.571	58.97	0.22	3.573	54.79	0.22
3.586	72.06	0.22	3.591	64.65	0.22	3.591	59.35	0.22	3.593	55.16	0.22
3.606	72.52	0.22	3.611	65.12	0.22	3.611	59.74	0.22	3.613	55.46	0.22
3.626	72.97	0.22	3.631	65.51	0.22	3.631	60.11	0.22	3.633	55.80	0.22
3.646	73.47	0.22	3.651	65.91	0.22	3.651	60.52	0.22	3.653	56.15	0.22
3.666	73.97	0.22	3.670	66.38	0.22	3.670	60.85	0.22	3.673	56.46	0.22
3.686	74.47	0.22	3.690	66.76	0.22	3.690	61.22	0.22	3.693	56.80	0.22
3.706	74.98	0.22	3.710	67.22	0.22	3.710	61.65	0.22	3.713	57.13	0.22
3.725	75.50	0.22	3.730	67.60	0.22	3.730	61.99	0.22	3.733	57.50	0.22
3.745	75.99	0.22	3.750	68.06	0.22	3.750	62.37	0.22	3.753	57.81	0.22
3.765	76.47	0.22	3.770	68.50	0.22	3.770	62.75	0.22	3.773	58.14	0.22
3.785	77.01	0.22	3.790	68.85	0.22	3.790	63.14	0.22	3.793	58.48	0.22
3.805	77.53	0.22	3.810	69.30	0.22	3.810	63.48	0.22	3.813	58.86	0.22
3.825	78.00	0.22	3.830	69.74	0.22	3.830	63.87	0.22	3.833	59.15	0.22
3.845	78.50	0.22	3.850	70.16	0.22	3.850	64.25	0.22	3.853	59.54	0.22
3.865	79.02	0.22	3.870	70.59	0.22	3.870	64.58	0.22	3.873	59.85	0.22
3.885	79.55	0.22	3.890	71.02	0.22	3.890	64.98	0.22	3.893	60.19	0.22
3.905	80.09	0.22	3.910	71.44	0.22	3.910	65.36	0.22	3.912	60.55	0.22
3.925	80.61	0.22	3.930	71.89	0.22	3.930	65.75	0.22	3.932	60.89	0.22
3.945	81.12	0.22	3.950	72.35	0.22	3.950	66.13	0.22	3.952	61.22	0.22
3.964	81.62	0.22	3.970	72.76	0.22	3.970	66.50	0.22	3.972	61.56	0.22
3.984	82.13	0.22	3.990	73.17	0.22	3.990	66.88	0.22	3.992	61.95	0.22
4.004	82.67	0.22	4.010	73.66	0.22	4.010	67.27	0.22	4.012	62.28	0.22
4.024	83.21	0.22	4.029	74.07	0.22	4.029	67.68	0.22	4.032	62.59	0.22
4.044	83.71	0.22	4.049	74.51	0.22	4.049	68.06	0.22	4.052	62.97	0.22
4.064	84.21	0.22	4.069	74.95	0.22	4.069	68.42	0.22	4.072	63.28	0.22
4.084	84.74	0.22	4.089	75.42	0.22	4.089	68.81	0.22	4.092	63.65	0.22
4.104	85.28	0.22	4.109	75.80	0.22	4.109	69.21	0.22	4.112	63.98	0.22
4.124	85.86	0.22	4.129	76.26	0.22	4.129	69.59	0.22	4.132	64.33	0.22
4.144	86.42	0.22	4.149	76.71	0.22	4.149	69.99	0.22	4.152	64.71	0.22
4.164	86.94	0.22	4.169	77.15	0.22	4.169	70.36	0.22	4.172	65.07	0.22
4.184	87.46	0.22	4.189	77.57	0.22	4.189	70.75	0.22	4.192	65.34	0.22
4.204	87.99	0.22	4.209	78.07	0.22	4.209	71.17	0.22	4.212	65.70	0.22
4.223	88.53	0.22	4.229	78.50	0.22	4.229	71.50	0.22	4.232	66.05	0.22
4.243	89.09	0.22	4.249	78.92	0.22	4.249	71.92	0.22	4.252	66.40	0.22
4.263	89.65	0.22	4.269	79.40	0.22	4.269	72.32	0.22	4.271	66.74	0.22
4.283	90.22	0.22	4.289	79.89	0.22	4.289	72.72	0.22	4.291	67.09	0.22
4.303	90.77	0.22	4.309	80.29	0.22	4.309	73.06	0.22	4.311	67.42	0.22
4.323	91.32	0.22	4.329	80.77	0.22	4.329	73.50	0.22	4.331	67.79	0.22
4.343	91.87	0.22	4.349	81.21	0.22	4.349	73.84	0.22	4.351	68.16	0.22
4.363	92.42	0.22	4.369	81.64	0.22	4.369	74.27	0.22	4.371	68.49	0.22

4.383	92.96	0.22	4.389	82.11	0.22	4.389	74.63	0.22	4.391	68.82	0.22
4.403	93.52	0.22	4.408	82.58	0.22	4.408	75.03	0.22	4.411	69.23	0.22
4.423	94.06	0.22	4.428	83.04	0.22	4.428	75.43	0.22	4.431	69.54	0.22
4.443	94.61	0.22	4.448	83.51	0.22	4.448	75.84	0.22	4.451	69.93	0.22
4.462	95.17	0.22	4.468	83.96	0.22	4.468	76.25	0.22	4.471	70.25	0.22
4.482	95.77	0.22	4.488	84.43	0.22	4.488	76.59	0.22	4.491	70.62	0.22
4.502	96.35	0.22	4.508	84.88	0.22	4.508	77.01	0.22	4.511	70.94	0.22
4.522	96.93	0.22	4.528	85.33	0.22	4.528	77.38	0.22	4.531	71.31	0.22
4.542	97.49	0.22	4.548	85.77	0.22	4.548	77.83	0.22	4.551	71.69	0.22
4.562	98.05	0.22	4.568	86.22	0.22	4.568	78.23	0.22	4.571	71.98	0.22
4.582	98.61	0.22	4.588	86.73	0.22	4.588	78.61	0.22	4.591	72.35	0.22
4.602	99.19	0.22	4.608	87.18	0.22	4.608	78.99	0.22	4.611	72.71	0.22
4.622	99.78	0.22	4.628	87.61	0.22	4.628	79.37	0.22	4.630	73.08	0.22
4.642	100.40	0.22	4.648	88.12	0.22	4.648	79.83	0.22	4.650	73.44	0.22
4.662	101.01	0.22	4.668	88.55	0.22	4.668	80.21	0.22	4.670	73.80	0.22
4.682	101.59	0.22	4.688	89.05	0.22	4.688	80.62	0.22	4.690	74.15	0.22
4.702	102.16	0.22	4.708	89.51	0.22	4.708	81.02	0.22	4.710	74.51	0.22
4.721	102.75	0.22	4.728	89.99	0.22	4.728	81.46	0.22	4.730	74.86	0.22
4.741	103.33	0.22	4.748	90.49	0.22	4.748	81.84	0.22	4.750	75.21	0.22
4.761	103.94	0.22	4.768	90.93	0.22	4.768	82.28	0.22	4.770	75.53	0.22
4.781	104.55	0.22	4.787	91.41	0.22	4.787	82.65	0.22	4.790	75.96	0.22
4.801	105.16	0.22	4.807	91.90	0.22	4.807	83.07	0.22	4.810	76.30	0.22
4.821	105.77	0.22	4.827	92.39	0.22	4.827	83.47	0.22	4.830	76.63	0.22
4.841	106.36	0.22	4.847	92.84	0.22	4.847	83.92	0.22	4.850	76.99	0.22
4.861	106.94	0.22	4.867	93.35	0.22	4.867	84.28	0.22	4.870	77.36	0.22
4.881	107.58	0.22	4.887	93.78	0.22	4.887	84.71	0.22	4.890	77.69	0.22
4.901	108.23	0.22	4.907	94.28	0.22	4.907	85.15	0.22	4.910	78.11	0.22
4.921	108.84	0.22	4.927	94.78	0.22	4.927	85.52	0.22	4.930	78.43	0.22
4.941	109.46	0.22	4.947	95.29	0.22	4.947	85.99	0.22	4.950	78.82	0.22
4.960	110.06	0.22	4.967	95.79	0.22	4.967	86.37	0.22	4.970	79.15	0.22
4.980	110.66	0.22	4.987	96.27	0.22	4.987	86.76	0.22	4.989	79.54	0.22
5.000	111.30	0.22	5.007	96.77	0.22	5.007	87.20	0.22	5.009	79.85	0.22
5.020	111.96	0.22	5.027	97.26	0.22	5.027	87.59	0.22	5.029	80.24	0.22
5.040	112.58	0.22	5.047	97.76	0.22	5.047	88.04	0.22	5.049	80.64	0.22
5.060	113.18	0.22	5.067	98.23	0.22	5.067	88.44	0.22	5.069	81.00	0.22
5.080	113.83	0.22	5.087	98.71	0.22	5.087	88.85	0.22	5.089	81.32	0.22
5.100	114.49	0.22	5.107	99.18	0.22	5.107	89.30	0.22	5.109	81.71	0.22
5.120	115.14	0.22	5.127	99.67	0.22	5.127	89.65	0.22	5.129	82.08	0.22
5.140	115.78	0.22	5.147	100.17	0.22	5.147	90.09	0.22	5.149	82.46	0.22
5.160	116.42	0.22	5.166	100.69	0.22	5.166	90.51	0.22	5.169	82.75	0.22
5.180	117.07	0.22	5.186	101.16	0.22	5.186	90.94	0.22	5.189	83.17	0.22
5.200	117.72	0.22	5.206	101.69	0.22	5.206	91.38	0.22	5.209	83.49	0.22
5.219	118.37	0.22	5.226	102.16	0.22	5.226	91.80	0.22	5.229	83.87	0.22
5.239	119.02	0.22	5.246	102.64	0.22	5.246	92.18	0.22	5.249	84.22	0.22
5.259	119.68	0.22	5.266	103.20	0.22	5.266	92.64	0.22	5.269	84.58	0.22

5.279	120.35	0.22	5.286	103.70	0.22	5.286	93.07	0.22	5.289	84.95	0.22
5.299	121.05	0.23	5.306	104.16	0.22	5.306	93.48	0.22	5.309	85.35	0.22
5.319	121.73	0.23	5.326	104.69	0.22	5.326	93.90	0.22	5.329	85.74	0.22
5.339	122.38	0.23	5.346	105.24	0.22	5.346	94.30	0.22	5.348	86.07	0.22
5.359	123.05	0.23	5.366	105.70	0.22	5.366	94.71	0.22	5.368	86.46	0.22
5.379	123.74	0.23	5.386	106.24	0.22	5.386	95.18	0.22	5.388	86.80	0.22
5.399	124.43	0.23	5.406	106.76	0.22	5.406	95.60	0.22	5.408	87.18	0.22
5.419	125.13	0.23	5.426	107.25	0.22	5.426	96.01	0.22	5.428	87.55	0.22
5.439	125.82	0.23	5.446	107.74	0.22	5.446	96.43	0.22	5.448	87.93	0.22
5.458	126.49	0.23	5.466	108.28	0.22	5.466	96.87	0.22	5.468	88.26	0.22
5.478	127.17	0.23	5.486	108.80	0.22	5.486	97.30	0.22	5.488	88.69	0.22
5.498	127.89	0.23	5.506	109.34	0.22	5.506	97.74	0.22	5.508	89.03	0.22
5.518	128.61	0.23	5.525	109.85	0.22	5.525	98.17	0.22	5.528	89.42	0.22
5.538	129.33	0.23	5.545	110.38	0.22	5.545	98.58	0.22	5.548	89.78	0.22
5.558	130.05	0.23	5.565	110.90	0.22	5.565	99.05	0.22	5.568	90.15	0.22
5.578	130.73	0.23	5.585	111.42	0.22	5.585	99.43	0.22	5.588	90.53	0.22
5.598	131.43	0.23	5.605	111.94	0.22	5.605	99.88	0.22	5.608	90.95	0.22
5.618	132.17	0.23	5.625	112.45	0.22	5.625	100.33	0.22	5.628	91.30	0.22
5.638	132.91	0.23	5.645	112.97	0.22	5.645	100.78	0.22	5.648	91.65	0.22
5.658	133.62	0.23	5.665	113.54	0.22	5.665	101.19	0.22	5.668	92.08	0.22
5.678	134.33	0.23	5.685	114.06	0.22	5.685	101.67	0.22	5.688	92.41	0.22
5.698	135.07	0.23	5.705	114.57	0.22	5.705	102.06	0.22	5.707	92.82	0.22
5.717	135.81	0.23	5.725	115.09	0.22	5.725	102.49	0.22	5.727	93.15	0.22
5.737	136.54	0.23	5.745	115.65	0.22	5.745	102.93	0.22	5.747	93.57	0.22
5.757	137.28	0.23	5.765	116.17	0.22	5.765	103.38	0.22	5.767	93.94	0.22
5.777	138.04	0.23	5.785	116.70	0.22	5.785	103.81	0.22	5.787	94.30	0.22
5.797	138.80	0.23	5.805	117.25	0.22	5.805	104.24	0.22	5.807	94.69	0.22
5.817	139.56	0.23	5.825	117.79	0.22	5.825	104.67	0.22	5.827	95.11	0.22
5.837	140.32	0.23	5.845	118.33	0.22	5.845	105.11	0.22	5.847	95.48	0.22
5.857	141.08	0.23	5.865	118.86	0.22	5.865	105.55	0.22	5.867	95.86	0.22
5.877	141.86	0.23	5.885	119.44	0.22	5.885	106.03	0.22	5.887	96.26	0.22
5.897	142.67	0.23	5.904	119.96	0.22	5.904	106.45	0.22	5.907	96.64	0.22
5.917	143.43	0.23	5.924	120.49	0.22	5.924	106.89	0.22	5.927	97.02	0.22
5.937	144.17	0.23	5.944	121.07	0.22	5.944	107.38	0.22	5.947	97.41	0.22
5.956	144.98	0.23	5.964	121.64	0.22	5.964	107.80	0.22	5.967	97.78	0.22
5.976	145.78	0.23	5.984	122.19	0.22	5.984	108.24	0.22	5.987	98.22	0.22
5.996	146.55	0.23	6.004	122.70	0.22	6.004	108.67	0.22	6.007	98.60	0.22
6.016	147.35	0.23	6.024	123.25	0.22	6.024	109.11	0.22	6.027	98.97	0.22
6.036	148.19	0.23	6.044	123.82	0.22	6.044	109.59	0.22	6.047	99.35	0.22
6.056	149.00	0.23	6.064	124.37	0.22	6.064	110.02	0.22	6.066	99.78	0.22
6.076	149.81	0.23	6.084	124.91	0.22	6.084	110.44	0.22	6.086	100.14	0.22
6.096	150.63	0.23	6.104	125.46	0.22	6.104	110.94	0.22	6.106	100.58	0.22
6.116	151.44	0.23	6.124	126.08	0.22	6.124	111.34	0.22	6.126	100.93	0.22
6.136	152.25	0.23	6.144	126.66	0.22	6.144	111.82	0.22	6.146	101.37	0.22
6.156	153.06	0.23	6.164	127.20	0.22	6.164	112.24	0.22	6.166	101.79	0.22

6.176	153.89	0.23	6.184	127.75	0.22	6.184	112.71	0.22	6.186	102.14	0.22
6.196	154.77	0.23	6.204	128.29	0.22	6.204	113.19	0.22	6.206	102.57	0.22
6.215	155.63	0.23	6.224	128.91	0.22	6.224	113.67	0.22	6.226	102.93	0.22
6.235	156.49	0.23	6.244	129.46	0.22	6.244	114.07	0.22	6.246	103.33	0.22
6.255	157.33	0.23	6.264	130.06	0.22	6.264	114.54	0.22	6.266	103.75	0.22
6.275	158.16	0.23	6.283	130.62	0.22	6.283	115.02	0.22	6.286	104.09	0.22
6.295	159.00	0.23	6.303	131.17	0.22	6.303	115.48	0.22	6.306	104.51	0.22
6.315	159.94	0.23	6.323	131.77	0.22	6.323	115.95	0.22	6.326	104.92	0.22
6.335	160.81	0.23	6.343	132.39	0.23	6.343	116.41	0.22	6.346	105.32	0.22
6.355	161.70	0.23	6.363	132.95	0.23	6.363	116.89	0.22	6.366	105.64	0.22
6.375	162.60	0.23	6.383	133.54	0.23	6.383	117.33	0.22	6.386	106.07	0.22
6.395	163.43	0.23	6.403	134.11	0.23	6.403	117.80	0.22	6.406	106.45	0.22
6.415	164.31	0.23	6.423	134.70	0.23	6.423	118.27	0.22	6.425	106.87	0.22
6.435	165.23	0.23	6.443	135.30	0.23	6.443	118.72	0.22	6.445	107.25	0.22
6.454	166.17	0.23	6.463	135.87	0.23	6.463	119.17	0.22	6.465	107.64	0.22
6.474	167.06	0.23	6.483	136.45	0.23	6.483	119.70	0.22	6.485	108.04	0.22
6.494	167.98	0.23	6.503	137.06	0.23	6.503	120.14	0.22	6.505	108.44	0.22
6.514	168.91	0.23	6.523	137.67	0.23	6.523	120.58	0.22	6.525	108.81	0.22
6.534	169.87	0.23	6.543	138.29	0.23	6.543	121.03	0.22	6.545	109.21	0.22
6.554	170.81	0.23	6.563	138.88	0.23	6.563	121.55	0.22	6.565	109.62	0.22
6.574	171.75	0.23	6.583	139.46	0.23	6.583	121.99	0.22	6.585	110.07	0.22
6.594	172.71	0.23	6.603	140.05	0.23	6.603	122.51	0.22	6.605	110.43	0.22
6.614	173.70	0.23	6.623	140.72	0.23	6.623	122.95	0.22	6.625	110.80	0.22
6.634	174.70	0.23	6.642	141.33	0.23	6.642	123.44	0.22	6.645	111.18	0.22
6.654	175.64	0.23	6.662	141.93	0.23	6.662	123.94	0.22	6.665	111.60	0.22
6.674	176.65	0.23	6.682	142.53	0.23	6.682	124.38	0.22	6.685	112.00	0.22
6.693	177.67	0.23	6.702	143.14	0.23	6.702	124.88	0.22	6.705	112.38	0.22
6.713	178.64	0.23	6.722	143.73	0.23	6.722	125.34	0.22	6.725	112.83	0.22
6.733	179.64	0.23	6.742	144.35	0.23	6.742	125.83	0.22	6.745	113.19	0.22
6.753	180.64	0.23	6.762	144.93	0.23	6.762	126.32	0.22	6.765	113.64	0.22
6.773	181.66	0.23	6.782	145.62	0.23	6.782	126.81	0.22	6.784	113.99	0.22
6.793	182.68	0.23	6.802	146.22	0.23	6.802	127.26	0.22	6.804	114.45	0.22
6.813	183.73	0.23	6.822	146.82	0.23	6.822	127.74	0.22	6.824	114.79	0.22
6.833	184.75	0.23	6.842	147.47	0.23	6.842	128.28	0.22	6.844	115.23	0.22
6.853	185.78	0.23	6.862	148.09	0.23	6.862	128.76	0.22	6.864	115.65	0.22
6.873	186.89	0.23	6.882	148.73	0.23	6.882	129.22	0.22	6.884	116.01	0.22
6.893	187.94	0.23	6.902	149.35	0.23	6.902	129.68	0.22	6.904	116.44	0.22
6.913	188.99	0.23	6.922	149.98	0.23	6.922	130.23	0.22	6.924	116.83	0.22
6.933	190.08	0.23	6.942	150.61	0.23	6.942	130.69	0.22	6.944	117.22	0.22
6.952	191.17	0.23	6.962	151.24	0.23	6.962	131.14	0.22	6.964	117.63	0.22
6.972	192.25	0.23	6.982	151.90	0.23	6.982	131.68	0.22	6.984	118.06	0.22
6.992	193.37	0.23	7.002	152.53	0.23	7.002	132.16	0.22	7.004	118.48	0.22
7.012	194.51	0.23	7.021	153.13	0.23	7.021	132.66	0.23	7.024	118.88	0.22
7.032	195.65	0.23	7.041	153.80	0.23	7.041	133.17	0.23	7.044	119.29	0.22
7.052	196.82	0.23	7.061	154.47	0.23	7.061	133.64	0.23	7.064	119.66	0.22

7.072	197.96	0.23	7.081	155.11	0.23	7.081	134.16	0.23	7.084	120.07	0.22
7.092	199.09	0.23	7.101	155.78	0.23	7.101	134.59	0.23	7.104	120.49	0.22
7.112	200.25	0.23	7.121	156.40	0.23	7.121	135.10	0.23	7.124	120.90	0.22
7.132	201.37	0.23	7.141	157.06	0.23	7.141	135.62	0.23	7.143	121.30	0.22
7.152	202.63	0.23	7.161	157.71	0.23	7.161	136.15	0.23	7.163	121.71	0.22
7.172	203.83	0.23	7.181	158.38	0.23	7.181	136.66	0.23	7.183	122.12	0.22
7.191	205.02	0.23	7.201	159.05	0.23	7.201	137.17	0.23	7.203	122.53	0.22
7.211	206.25	0.23	7.221	159.71	0.23	7.221	137.61	0.23	7.223	122.92	0.22
7.231	207.51	0.23	7.241	160.37	0.23	7.241	138.15	0.23	7.243	123.40	0.22
7.251	208.80	0.23	7.261	161.03	0.23	7.261	138.62	0.23	7.263	123.81	0.22
7.271	210.04	0.23	7.281	161.70	0.23	7.281	139.12	0.23	7.283	124.20	0.22
7.291	211.29	0.23	7.301	162.37	0.23	7.301	139.62	0.23	7.303	124.60	0.22
7.311	212.60	0.23	7.321	163.04	0.23	7.321	140.18	0.23	7.323	125.01	0.22
7.331	213.91	0.23	7.341	163.77	0.23	7.341	140.69	0.23	7.343	125.40	0.22
7.351	215.23	0.23	7.361	164.43	0.23	7.361	141.18	0.23	7.363	125.86	0.22
7.371	216.53	0.23	7.381	165.08	0.23	7.381	141.68	0.23	7.383	126.27	0.22
7.391	217.88	0.23	7.400	165.82	0.23	7.400	142.16	0.23	7.403	126.73	0.22
7.411	219.31	0.23	7.420	166.49	0.23	7.420	142.65	0.23	7.423	127.13	0.22
7.431	220.61	0.23	7.440	167.21	0.23	7.440	143.22	0.23	7.443	127.51	0.22
7.450	221.91	0.23	7.460	167.88	0.23	7.460	143.71	0.23	7.463	127.97	0.22
7.470	223.33	0.23	7.480	168.55	0.23	7.480	144.22	0.23	7.483	128.35	0.22
7.490	224.73	0.23	7.500	169.26	0.23	7.500	144.76	0.23	7.502	128.80	0.22
7.510	226.16	0.23	7.520	169.95	0.23	7.520	145.24	0.23	7.522	129.19	0.22
7.530	227.54	0.23	7.540	170.66	0.23	7.540	145.81	0.23	7.542	129.64	0.22
7.550	228.93	0.23	7.560	171.37	0.23	7.560	146.27	0.23	7.562	130.03	0.22
7.570	230.41	0.23	7.580	172.07	0.23	7.580	146.85	0.23	7.582	130.46	0.22
7.590	231.90	0.23	7.600	172.80	0.23	7.600	147.31	0.23	7.602	130.90	0.22
7.610	233.40	0.23	7.620	173.47	0.23	7.620	147.86	0.23	7.622	131.27	0.22
7.630	234.87	0.23	7.640	174.15	0.23	7.640	148.31	0.23	7.642	131.72	0.22
7.650	236.42	0.23	7.660	174.90	0.23	7.660	148.87	0.23	7.662	132.16	0.22
7.670	237.99	0.23	7.680	175.59	0.23	7.680	149.37	0.23	7.682	132.59	0.22
7.689	239.59	0.23	7.700	176.37	0.23	7.700	149.88	0.23	7.702	133.04	0.22
7.709	241.18	0.23	7.720	177.13	0.23	7.720	150.42	0.23	7.722	133.40	0.22
7.729	242.79	0.23	7.740	177.82	0.23	7.740	150.95	0.23	7.742	133.83	0.22
7.749	244.39	0.23	7.760	178.51	0.23	7.760	151.46	0.23	7.762	134.26	0.22
7.769	246.09	0.23	7.779	179.24	0.23	7.779	152.02	0.23	7.782	134.70	0.22
7.789	247.74	0.23	7.799	180.03	0.23	7.799	152.51	0.23	7.802	135.12	0.22
7.809	249.45	0.23	7.819	180.80	0.23	7.819	153.08	0.23	7.822	135.55	0.22
7.829	251.31	0.23	7.839	181.49	0.23	7.839	153.57	0.23	7.842	135.98	0.22
7.849	253.00	0.23	7.859	182.18	0.23	7.859	154.14	0.23	7.861	136.41	0.22
7.869	254.87	0.23	7.879	182.95	0.23	7.879	154.63	0.23	7.881	136.87	0.22
7.889	256.78	0.23	7.899	183.74	0.23	7.899	155.18	0.23	7.901	137.32	0.22
7.909	258.73	0.23	7.919	184.45	0.23	7.919	155.68	0.23	7.921	137.75	0.22
7.929	260.72	0.23	7.939	185.21	0.23	7.939	156.22	0.23	7.941	138.16	0.22
7.948	262.74	0.24	7.959	186.01	0.23	7.959	156.79	0.23	7.961	138.58	0.22

7.968	264.67	0.24	7.979	186.73	0.23	7.979	157.33	0.23	7.981	138.99	0.22
7.988	266.57	0.24	7.999	187.48	0.23	7.999	157.84	0.23	8.001	139.48	0.22
8.008	268.51	0.24	8.019	188.25	0.23	8.019	158.37	0.23	8.021	139.90	0.22
8.028	270.54	0.24	8.039	189.02	0.23	8.039	158.92	0.23	8.041	140.29	0.22
8.048	272.41	0.24	8.059	189.81	0.23	8.059	159.48	0.23	8.061	140.78	0.22
8.068	274.30	0.24	8.079	190.61	0.23	8.079	160.01	0.23	8.081	141.19	0.22
8.088	276.18	0.24	8.099	191.39	0.23	8.099	160.55	0.23	8.101	141.59	0.22
8.108	278.07	0.24	8.119	192.11	0.23	8.119	161.11	0.23	8.121	142.07	0.22
8.128	279.96	0.24	8.138	192.89	0.23	8.138	161.62	0.23	8.141	142.47	0.22
8.148	282.23	0.24	8.158	193.69	0.23	8.158	162.16	0.23	8.161	142.94	0.22
8.168	284.52	0.24	8.178	194.49	0.23	8.178	162.71	0.23	8.181	143.35	0.22
8.187	286.91	0.24	8.198	195.25	0.23	8.198	163.25	0.23	8.201	143.82	0.22
8.207	289.53	0.24	8.218	196.04	0.23	8.218	163.83	0.23	8.221	144.20	0.22
8.227	291.88	0.24	8.238	196.83	0.23	8.238	164.39	0.23	8.240	144.68	0.22
8.247	294.33	0.24	8.258	197.67	0.23	8.258	164.91	0.23	8.260	145.14	0.22
8.267	296.84	0.24	8.278	198.49	0.23	8.278	165.44	0.23	8.280	145.53	0.22
8.287	299.48	0.24	8.298	199.27	0.23	8.298	166.06	0.23	8.300	146.00	0.22
8.307	301.99	0.24	8.318	200.10	0.23	8.318	166.57	0.23	8.320	146.46	0.22
8.327	304.33	0.24	8.338	200.89	0.23	8.338	167.10	0.23	8.340	146.85	0.22
8.347	306.94	0.24	8.358	201.73	0.23	8.358	167.68	0.23	8.360	147.35	0.22
8.367	309.68	0.24	8.378	202.57	0.23	8.378	168.24	0.23	8.380	147.76	0.22
8.387	312.25	0.24	8.398	203.36	0.23	8.398	168.81	0.23	8.400	148.20	0.22
8.407	314.86	0.24	8.418	204.18	0.23	8.418	169.34	0.23	8.420	148.63	0.23
8.427	317.53	0.24	8.438	205.06	0.23	8.438	169.93	0.23	8.440	149.14	0.23
8.446	320.11	0.24	8.458	205.90	0.23	8.458	170.50	0.23	8.460	149.56	0.23
8.466	322.55	0.24	8.478	206.73	0.23	8.478	171.04	0.23	8.480	149.99	0.23
8.486	325.00	0.24	8.498	207.57	0.23	8.498	171.62	0.23	8.500	150.42	0.23
8.506	330.05	0.24	8.517	208.40	0.23	8.517	172.19	0.23	8.520	150.90	0.23
8.526	333.78	0.24	8.537	209.25	0.23	8.537	172.74	0.23	8.540	151.32	0.23
8.546	336.86	0.24	8.557	210.12	0.23	8.557	173.33	0.23	8.560	151.80	0.23
8.566	340.37	0.24	8.577	210.95	0.23	8.577	173.86	0.23	8.580	152.22	0.23
8.586	343.66	0.24	8.597	211.80	0.23	8.597	174.46	0.23	8.599	152.70	0.23
8.606	346.66	0.24	8.617	212.69	0.23	8.617	175.00	0.23	8.619	153.11	0.23
8.626	350.70	0.24	8.637	213.54	0.23	8.637	175.59	0.23	8.639	153.60	0.23
8.646	354.90	0.24	8.657	214.40	0.23	8.657	176.19	0.23	8.659	154.05	0.23
8.666	358.66	0.24	8.677	215.26	0.23	8.677	176.72	0.23	8.679	154.48	0.23
8.685	362.48	0.24	8.697	216.16	0.23	8.697	177.31	0.23	8.699	154.94	0.23
8.705	366.75	0.24	8.717	217.02	0.23	8.717	177.89	0.23	8.719	155.42	0.23
8.725	370.43	0.24	8.737	217.89	0.23	8.737	178.48	0.23	8.739	155.83	0.23
8.745	374.50	0.24	8.757	218.76	0.23	8.757	179.00	0.23	8.759	156.30	0.23
8.765	379.11	0.24	8.777	219.68	0.23	8.777	179.65	0.23	8.779	156.76	0.23
8.785	383.39	0.25	8.797	220.56	0.23	8.797	180.16	0.23	8.799	157.23	0.23
8.805	388.32	0.25	8.817	221.43	0.23	8.817	180.76	0.23	8.819	157.68	0.23
8.825	392.24	0.25	8.837	222.33	0.23	8.837	181.34	0.23	8.839	158.08	0.23
8.845	396.82	0.25	8.857	223.21	0.23	8.857	181.92	0.23	8.859	158.56	0.23



8.865	401.53	0.25	8.877	224.11	0.23	8.877	182.51	0.23	8.879	159.02	0.23
8.885	405.96	0.25	8.896	225.02	0.23	8.896	183.09	0.23	8.899	159.48	0.23
8.905	411.00	0.25	8.916	225.96	0.23	8.916	183.67	0.23	8.919	159.95	0.23
8.925	416.31	0.25	8.936	226.89	0.23	8.936	184.26	0.23	8.939	160.42	0.23
8.944	420.92	0.25	8.956	227.82	0.23	8.956	184.91	0.23	8.958	160.86	0.23
8.964	425.04	0.25	8.976	228.70	0.23	8.976	185.49	0.23	8.978	161.32	0.23
8.984	429.86	0.25	8.996	229.61	0.23	8.996	186.07	0.23	8.998	161.77	0.23
9.004	434.39	0.25	9.016	230.58	0.23	9.016	186.63	0.23	9.018	162.30	0.23
9.024	438.56	0.25	9.036	231.56	0.23	9.036	187.28	0.23	9.038	162.73	0.23
9.044	446.62	0.26	9.056	232.46	0.23	9.056	187.85	0.23	9.058	163.18	0.23
9.064	452.58	0.26	9.076	233.43	0.23	9.076	188.42	0.23	9.078	163.64	0.23
9.084	458.02	0.26	9.096	234.37	0.23	9.096	189.04	0.23	9.098	164.08	0.23
9.104	463.28	0.26	9.116	235.36	0.23	9.116	189.63	0.23	9.118	164.53	0.23
9.124	468.29	0.26	9.136	236.26	0.23	9.136	190.27	0.23	9.138	165.05	0.23
9.144	472.60	0.26	9.156	237.28	0.23	9.156	190.84	0.23	9.158	165.48	0.23
9.164	477.03	0.26	9.176	238.18	0.23	9.176	191.45	0.23	9.178	165.94	0.23
9.183	481.82	0.26	9.196	239.22	0.23	9.196	192.06	0.23	9.198	166.42	0.23
9.203	485.52	0.26	9.216	240.18	0.23	9.216	192.68	0.23	9.218	166.86	0.23
9.223	489.76	0.26	9.236	241.16	0.23	9.236	193.23	0.23	9.238	167.34	0.23
9.243	494.10	0.26	9.256	242.12	0.23	9.256	193.89	0.23	9.258	167.81	0.23
9.263	498.67	0.27	9.275	243.13	0.23	9.275	194.51	0.23	9.278	168.32	0.23
9.283	502.68	0.27	9.295	244.13	0.23	9.295	195.10	0.23	9.298	168.75	0.23
9.303	507.14	0.27	9.315	245.09	0.23	9.315	195.70	0.23	9.317	169.26	0.23
9.323	510.57	0.27	9.335	246.12	0.23	9.335	196.32	0.23	9.337	169.68	0.23
9.343	514.14	0.27	9.355	247.16	0.23	9.355	196.96	0.23	9.357	170.16	0.23
9.363	517.80	0.27	9.375	248.15	0.23	9.375	197.60	0.23	9.377	170.62	0.23
9.383	520.99	0.27	9.395	249.15	0.23	9.395	198.17	0.23	9.397	171.11	0.23
9.403	524.02	0.27	9.415	250.17	0.23	9.415	198.81	0.23	9.417	171.58	0.23
9.423	527.58	0.27	9.435	251.18	0.23	9.435	199.46	0.23	9.437	172.04	0.23
9.442	530.65	0.27	9.455	252.22	0.23	9.455	200.11	0.23	9.457	172.53	0.23
9.462	533.76	0.27	9.475	253.27	0.23	9.475	200.66	0.23	9.477	173.00	0.23
9.482	536.80	0.27	9.495	254.32	0.23	9.495	201.28	0.23	9.497	173.45	0.23
9.502	539.50	0.27	9.515	255.37	0.23	9.515	201.92	0.23	9.517	173.97	0.23
9.522	542.22	0.27	9.535	256.44	0.24	9.535	202.55	0.23	9.537	174.44	0.23
9.542	544.93	0.28	9.555	257.46	0.24	9.555	203.17	0.23	9.557	174.93	0.23
9.562	547.50	0.28	9.575	258.50	0.24	9.575	203.80	0.23	9.577	175.40	0.23
9.582	550.18	0.28	9.595	259.58	0.24	9.595	204.45	0.23	9.597	175.87	0.23
9.602	552.68	0.28	9.615	260.66	0.24	9.615	205.06	0.23	9.617	176.37	0.23
9.622	554.95	0.28	9.634	261.75	0.24	9.634	205.69	0.23	9.637	176.82	0.23
9.642	557.22	0.28	9.654	262.82	0.24	9.654	206.39	0.23	9.657	177.33	0.23
9.662	559.49	0.28	9.674	263.85	0.24	9.674	207.02	0.23	9.676	177.83	0.23
9.681	561.76	0.28	9.694	264.93	0.24	9.694	207.63	0.23	9.696	178.26	0.23
9.701	564.04	0.28	9.714	266.06	0.24	9.714	208.26	0.23	9.716	178.76	0.23
9.721	566.74	0.28	9.734	267.16	0.24	9.734	208.88	0.23	9.736	179.27	0.23
9.741	569.18	0.28	9.754	268.26	0.24	9.754	209.58	0.23	9.756	179.76	0.23

9.761	571.58	0.28	9.774	269.36	0.24	9.774	210.22	0.23	9.776	180.19	0.23
9.781	573.67	0.28	9.794	270.49	0.24	9.794	210.82	0.23	9.796	180.68	0.23
9.801	575.76	0.28	9.814	271.59	0.24	9.814	211.47	0.23	9.816	181.17	0.23
9.821	578.11	0.28	9.834	272.71	0.24	9.834	212.14	0.23	9.836	181.68	0.23
9.841	580.42	0.28	9.854	273.85	0.24	9.854	212.79	0.23	9.856	182.17	0.23
9.861	582.53	0.28	9.874	274.95	0.24	9.874	213.44	0.23	9.876	182.66	0.23
9.881	584.59	0.28	9.894	276.06	0.24	9.894	214.05	0.23	9.896	183.14	0.23
9.901	586.97	0.28	9.914	277.25	0.24	9.914	214.73	0.23	9.916	183.61	0.23
9.921	588.80	0.28	9.934	278.39	0.24	9.934	215.36	0.23	9.936	184.12	0.23
9.940	590.90	0.29	9.954	279.54	0.24	9.954	216.05	0.23	9.956	184.60	0.23
9.960	592.94	0.29	9.974	280.67	0.24	9.974	216.66	0.23	9.976	185.08	0.23
9.980	594.79	0.29	9.994	281.84	0.24	9.994	217.36	0.23	9.996	185.57	0.23
10.000	596.80	0.29	10.013	283.02	0.24	10.013	218.03	0.23	10.016	186.06	0.23
10.020	598.64	0.29	10.033	284.21	0.24	10.033	218.65	0.23	10.035	186.53	0.23
10.040	600.30	0.29	10.053	285.38	0.24	10.053	219.31	0.23	10.055	187.01	0.23
10.060	602.26	0.29	10.073	286.57	0.24	10.073	219.96	0.23	10.075	187.55	0.23
10.080	603.96	0.29	10.093	287.78	0.24	10.093	220.63	0.23	10.095	188.04	0.23
10.100	605.62	0.29	10.113	288.96	0.24	10.113	221.31	0.23	10.115	188.52	0.23
10.120	607.41	0.29	10.133	290.19	0.24	10.133	222.01	0.23	10.135	188.99	0.23
10.140	608.84	0.29	10.153	291.42	0.24	10.153	222.69	0.23	10.155	189.53	0.23
10.160	610.30	0.29	10.173	292.64	0.24	10.173	223.27	0.23	10.175	190.01	0.23
10.179	611.91	0.29	10.193	293.80	0.24	10.193	223.97	0.23	10.195	190.49	0.23
10.199	613.45	0.29	10.213	295.04	0.24	10.213	224.65	0.23	10.215	190.99	0.23
10.219	615.08	0.29	10.233	296.32	0.24	10.233	225.32	0.23	10.235	191.49	0.23
10.239	616.49	0.29	10.253	297.60	0.24	10.253	226.06	0.23	10.255	191.97	0.23
10.259	617.90	0.29	10.273	298.81	0.24	10.273	226.73	0.23	10.275	192.49	0.23
10.279	619.52	0.29	10.293	300.12	0.24	10.293	227.41	0.23	10.295	192.96	0.23
10.299	620.99	0.29	10.313	301.36	0.24	10.313	228.08	0.23	10.315	193.45	0.23
10.319	622.44	0.29	10.333	302.59	0.24	10.333	228.73	0.23	10.335	193.97	0.23
10.339	623.90	0.29	10.353	303.85	0.24	10.353	229.40	0.23	10.355	194.48	0.23
10.359	625.38	0.29	10.373	305.13	0.24	10.373	230.07	0.23	10.375	194.97	0.23
10.379	626.82	0.29	10.392	306.43	0.24	10.392	230.78	0.23	10.394	195.49	0.23
10.399	628.11	0.29	10.412	307.72	0.24	10.412	231.48	0.23	10.414	195.96	0.23
10.419	629.32	0.29	10.432	309.01	0.24	10.432	232.15	0.23	10.434	196.51	0.23
10.438	630.52	0.29	10.452	310.30	0.24	10.452	232.88	0.23	10.454	197.02	0.23
10.458	631.95	0.29	10.472	311.61	0.24	10.472	233.56	0.23	10.474	197.47	0.23
10.478	633.20	0.29	10.492	312.98	0.24	10.492	234.22	0.23	10.494	197.99	0.23
10.498	634.47	0.29	10.512	314.23	0.24	10.512	234.97	0.23	10.514	198.52	0.23
10.518	635.76	0.30	10.532	315.56	0.24	10.532	235.62	0.23	10.534	198.97	0.23
10.538	637.04	0.30	10.552	316.85	0.24	10.552	236.35	0.23	10.554	199.52	0.23
10.558	638.26	0.30	10.572	318.15	0.24	10.572	237.02	0.23	10.574	200.06	0.23
10.578	639.38	0.30	10.592	319.49	0.24	10.592	237.75	0.23	10.594	200.56	0.23
10.598	640.56	0.30	10.612	320.86	0.24	10.612	238.42	0.23	10.614	201.04	0.23
10.618	641.73	0.30	10.632	322.24	0.24	10.632	239.13	0.23	10.634	201.56	0.23
10.638	642.82	0.30	10.652	323.53	0.24	10.652	239.79	0.23	10.654	202.08	0.23

10.658	643.98	0.30	10.672	324.89	0.24	10.672	240.53	0.23	10.674	202.55	0.23
10.677	645.08	0.30	10.692	326.27	0.24	10.692	241.24	0.23	10.694	203.06	0.23
10.697	646.25	0.30	10.712	327.68	0.24	10.712	241.91	0.23	10.714	203.59	0.23
10.717	647.40	0.30	10.732	329.00	0.24	10.732	242.64	0.23	10.734	204.12	0.23
10.737	648.39	0.30	10.752	330.38	0.24	10.752	243.36	0.23	10.753	204.64	0.23
10.757	649.47	0.30	10.771	331.72	0.24	10.771	244.07	0.23	10.773	205.16	0.23
10.777	650.52	0.30	10.791	333.11	0.24	10.791	244.79	0.23	10.793	205.68	0.23
10.797	651.55	0.30	10.811	334.52	0.24	10.811	245.51	0.23	10.813	206.15	0.23
10.817	652.54	0.30	10.831	335.95	0.24	10.831	246.22	0.23	10.833	206.64	0.23
10.837	653.60	0.30	10.851	337.34	0.24	10.851	246.94	0.23	10.853	207.16	0.23
10.857	654.56	0.30	10.871	338.73	0.24	10.871	247.65	0.23	10.873	207.74	0.23
10.877	655.59	0.30	10.891	340.20	0.24	10.891	248.38	0.23	10.893	208.24	0.23
10.897	656.53	0.30	10.911	341.58	0.25	10.911	249.10	0.23	10.913	208.70	0.23
10.917	657.53	0.30	10.931	342.94	0.25	10.931	249.81	0.23	10.933	209.30	0.23
10.936	658.55	0.30	10.951	344.38	0.25	10.951	250.52	0.23	10.953	209.80	0.23
10.956	659.51	0.30	10.971	345.83	0.25	10.971	251.26	0.23	10.973	210.30	0.23
10.976	660.54	0.30	10.991	347.23	0.25	10.991	252.03	0.23	10.993	210.81	0.23
10.996	661.40	0.30	11.011	348.68	0.25	11.011	252.72	0.23	11.013	211.31	0.23
11.016	662.32	0.30	11.031	350.08	0.25	11.031	253.46	0.23	11.033	211.82	0.23
11.036	663.15	0.30	11.051	351.58	0.25	11.051	254.21	0.23	11.053	212.38	0.23
11.056	663.99	0.30	11.071	353.02	0.25	11.071	254.90	0.23	11.073	212.91	0.23
11.076	664.88	0.30	11.091	354.41	0.25	11.091	255.64	0.24	11.093	213.42	0.23
11.096	665.74	0.30	11.111	355.90	0.25	11.111	256.40	0.24	11.112	213.98	0.23
11.116	666.56	0.30	11.130	357.32	0.25	11.130	257.12	0.24	11.132	214.49	0.23
11.136	667.39	0.30	11.150	358.78	0.25	11.150	257.87	0.24	11.152	214.97	0.23
11.156	668.25	0.30	11.170	360.29	0.25	11.170	258.58	0.24	11.172	215.55	0.23
11.175	669.00	0.30	11.190	361.74	0.25	11.190	259.35	0.24	11.192	216.04	0.23
11.195	669.84	0.30	11.210	363.18	0.25	11.210	260.11	0.24	11.212	216.61	0.23
11.215	670.55	0.30	11.230	364.63	0.25	11.230	260.83	0.24	11.232	217.10	0.23
11.235	671.35	0.30	11.250	366.05	0.25	11.250	261.58	0.24	11.252	217.66	0.23
11.255	672.07	0.30	11.270	367.43	0.25	11.270	262.36	0.24	11.272	218.16	0.23
11.275	672.81	0.30	11.290	368.81	0.25	11.290	263.11	0.24	11.292	218.71	0.23
11.295	673.54	0.30	11.310	370.27	0.25	11.310	263.79	0.24	11.312	219.22	0.23
11.315	674.32	0.30	11.330	371.73	0.25	11.330	264.65	0.24	11.332	219.75	0.23
11.335	675.03	0.30	11.350	373.15	0.25	11.350	265.34	0.24	11.352	220.26	0.23
11.355	675.80	0.30	11.370	374.58	0.25	11.370	266.07	0.24	11.372	220.83	0.23
11.375	676.49	0.30	11.390	375.95	0.25	11.390	266.83	0.24	11.392	221.35	0.23
11.395	677.20	0.30	11.410	377.45	0.25	11.410	267.65	0.24	11.412	221.88	0.23
11.415	677.89	0.30	11.430	378.87	0.25	11.430	268.40	0.24	11.432	222.41	0.23
11.434	678.59	0.30	11.450	380.28	0.25	11.450	269.15	0.24	11.452	222.92	0.23
11.454	679.29	0.30	11.470	381.70	0.25	11.470	269.90	0.24	11.471	223.48	0.23
11.474	679.95	0.30	11.490	383.19	0.25	11.490	270.66	0.24	11.491	224.03	0.23
11.494	680.58	0.31	11.509	384.62	0.25	11.509	271.40	0.24	11.511	224.55	0.23
11.514	681.23	0.31	11.529	385.98	0.25	11.529	272.16	0.24	11.531	225.05	0.23
11.534	681.87	0.31	11.549	387.39	0.25	11.549	272.92	0.24	11.551	225.61	0.23

11.554	682.53	0.31	11.569	388.83	0.25	11.569	273.69	0.24	11.571	226.16	0.23
11.574	683.18	0.31	11.589	390.25	0.25	11.589	274.50	0.24	11.591	226.71	0.23
11.594	683.82	0.31	11.609	391.59	0.25	11.609	275.29	0.24	11.611	227.26	0.23
11.614	684.44	0.31	11.629	392.97	0.25	11.629	276.05	0.24	11.631	227.81	0.23
11.634	685.01	0.31	11.649	394.39	0.25	11.649	276.82	0.24	11.651	228.35	0.23
11.654	685.60	0.31	11.669	395.80	0.25	11.669	277.58	0.24	11.671	228.89	0.23
11.673	686.21	0.31	11.689	397.16	0.25	11.689	278.38	0.24	11.691	229.43	0.23
11.693	686.81	0.31	11.709	398.41	0.25	11.709	279.15	0.24	11.711	229.93	0.23
11.713	687.39	0.31	11.729	399.79	0.25	11.729	279.95	0.24	11.731	230.42	0.23
11.733	687.96	0.31	11.749	401.16	0.25	11.749	280.70	0.24	11.751	230.98	0.23
11.753	688.53	0.31	11.769	402.49	0.25	11.769	281.52	0.24	11.771	231.58	0.23
11.773	689.07	0.31	11.789	403.80	0.25	11.789	282.31	0.24	11.791	232.13	0.23
11.793	689.50	0.31	11.809	405.07	0.25	11.809	283.12	0.24	11.811	232.66	0.23
11.813	689.94	0.31	11.829	406.43	0.25	11.829	283.87	0.24	11.830	233.20	0.23
11.833	690.57	0.31	11.849	407.69	0.25	11.849	284.64	0.24	11.850	233.72	0.23
11.853	691.20	0.31	11.869	409.01	0.25	11.869	285.41	0.24	11.870	234.29	0.23
11.873	691.92	0.31	11.888	410.29	0.25	11.888	286.20	0.24	11.890	234.87	0.23
11.893	692.58	0.31	11.908	411.56	0.25	11.908	287.03	0.24	11.910	235.40	0.23
11.913	693.18	0.31	11.928	412.87	0.25	11.928	287.87	0.24	11.930	235.94	0.23
11.932	693.83	0.31	11.948	413.89	0.25	11.948	288.64	0.24	11.950	236.47	0.23
11.952	694.43	0.31	11.968	415.31	0.25	11.968	289.39	0.24	11.970	236.99	0.23
11.972	695.09	0.31	11.988	416.73	0.25	11.988	290.18	0.24	11.990	237.59	0.23
11.992	695.72	0.31	12.008	418.15	0.26	12.008	291.02	0.24	12.010	238.11	0.23
12.012	696.39	0.31	12.028	419.57	0.26	12.028	291.80	0.24	12.030	238.73	0.23
12.032	696.99	0.31	12.048	421.07	0.26	12.048	292.60	0.24	12.050	239.24	0.23
12.052	697.66	0.31	12.068	422.52	0.26	12.068	293.42	0.24	12.070	239.77	0.23
12.072	698.25	0.31	12.088	423.96	0.26	12.088	294.25	0.24	12.090	240.34	0.23
12.092	698.85	0.31	12.108	425.36	0.26	12.108	295.06	0.24	12.110	240.88	0.23
12.112	699.50	0.31	12.128	426.81	0.26	12.128	295.81	0.24	12.130	241.46	0.23
12.132	700.11	0.31	12.148	428.33	0.26	12.148	296.66	0.24	12.150	241.99	0.23
12.152	700.75	0.31	12.168	429.80	0.26	12.168	297.47	0.24	12.170	242.55	0.23
12.171	701.35	0.31	12.188	431.37	0.26	12.188	298.30	0.24	12.189	243.14	0.23
12.191	701.91	0.31	12.208	432.85	0.26	12.208	299.11	0.24	12.209	243.69	0.23
12.211	702.49	0.31	12.228	434.27	0.26	12.228	299.91	0.24	12.229	244.23	0.23
12.231	703.06	0.31	12.248	435.73	0.26	12.248	300.73	0.24	12.249	244.81	0.23
12.251	703.68	0.31	12.267	437.14	0.26	12.267	301.53	0.24	12.269	245.37	0.23
12.271	704.26	0.31	12.287	438.55	0.26	12.287	302.35	0.24	12.289	245.89	0.23
12.291	704.84	0.31	12.307	439.96	0.26	12.307	303.20	0.24	12.309	246.47	0.23
12.311	705.44	0.31	12.327	441.40	0.26	12.327	304.00	0.24	12.329	247.05	0.23
12.331	705.96	0.31	12.347	442.83	0.26	12.347	304.82	0.24	12.349	247.55	0.23
12.351	706.49	0.31	12.367	444.23	0.26	12.367	305.67	0.24	12.369	248.11	0.23
12.371	707.06	0.31	12.387	445.79	0.26	12.387	306.50	0.24	12.389	248.69	0.23
12.391	707.57	0.31	12.407	447.15	0.26	12.407	307.34	0.24	12.409	249.27	0.23
12.411	708.23	0.31	12.427	448.57	0.26	12.427	308.14	0.24	12.429	249.83	0.23
12.430	708.77	0.31	12.447	450.08	0.26	12.447	308.95	0.24	12.449	250.39	0.23

12.450	709.31	0.31	12.467	451.49	0.26	12.467	309.78	0.24	12.469	250.97	0.23
12.470	709.83	0.31	12.487	452.95	0.26	12.487	310.61	0.24	12.489	251.54	0.23
12.490	710.34	0.31	12.507	454.42	0.26	12.507	311.42	0.24	12.509	252.11	0.23
12.510	710.93	0.31	12.527	455.81	0.26	12.527	312.27	0.24	12.529	252.66	0.23
12.530	711.42	0.31	12.547	457.25	0.26	12.547	313.11	0.24	12.548	253.22	0.23
12.550	711.96	0.31	12.567	458.64	0.26	12.567	313.93	0.24	12.568	253.80	0.23
12.570	712.46	0.31	12.587	460.04	0.26	12.587	314.75	0.24	12.588	254.36	0.23
12.590	713.01	0.31	12.607	461.51	0.26	12.607	315.60	0.24	12.608	254.92	0.23
12.610	713.51	0.31	12.626	462.85	0.26	12.626	316.43	0.24	12.628	255.48	0.23
12.630	713.99	0.31	12.646	464.17	0.26	12.646	317.26	0.24	12.648	256.04	0.23
12.650	714.52	0.31	12.666	465.57	0.26	12.666	318.13	0.24	12.668	256.58	0.23
12.669	714.98	0.31	12.686	466.76	0.26	12.686	318.96	0.24	12.688	257.14	0.23
12.689	715.52	0.31	12.706	468.18	0.26	12.706	319.81	0.24	12.708	257.70	0.23
12.709	716.00	0.31	12.726	469.62	0.26	12.726	320.65	0.24	12.728	258.30	0.23
12.729	716.54	0.31	12.746	470.88	0.26	12.746	321.47	0.24	12.748	258.87	0.23
12.749	716.98	0.31	12.766	472.38	0.26	12.766	322.33	0.24	12.768	259.46	0.23
12.769	717.47	0.31	12.786	473.78	0.26	12.786	323.24	0.24	12.788	260.05	0.23
12.789	717.98	0.31	12.806	475.15	0.26	12.806	324.11	0.24	12.808	260.59	0.23
12.809	718.46	0.31	12.826	476.47	0.27	12.826	324.94	0.24	12.828	261.13	0.23
12.829	718.89	0.31	12.846	477.81	0.27	12.846	325.76	0.24	12.848	261.73	0.23
12.849	719.32	0.31	12.866	479.23	0.27	12.866	326.60	0.24	12.868	262.30	0.23
12.869	719.75	0.31	12.886	480.52	0.27	12.886	327.45	0.24	12.888	262.90	0.23
12.889	720.21	0.31	12.906	481.83	0.27	12.906	328.32	0.24	12.907	263.45	0.23
12.909	720.72	0.31	12.926	483.03	0.27	12.926	329.18	0.24	12.927	264.03	0.24
12.928	721.16	0.31	12.946	484.41	0.27	12.946	330.03	0.24	12.947	264.61	0.24
12.948	721.63	0.31	12.966	485.68	0.27	12.966	330.88	0.24	12.967	265.16	0.24
12.968	722.06	0.31	12.986	486.94	0.27	12.986	331.73	0.24	12.987	265.76	0.24
12.988	722.48	0.31	13.005	488.26	0.27	13.005	332.60	0.24	13.007	266.36	0.24
13.008	722.92	0.31	13.025	489.60	0.27	13.025	333.46	0.24	13.027	266.90	0.24
13.028	723.38	0.31	13.045	490.88	0.27	13.045	334.31	0.24	13.047	267.47	0.24
13.048	723.83	0.31	13.065	492.16	0.27	13.065	335.15	0.24	13.067	268.06	0.24
13.068	724.21	0.31	13.085	493.40	0.27	13.085	336.02	0.24	13.087	268.67	0.24
13.088	724.63	0.31	13.105	494.66	0.27	13.105	336.90	0.24	13.107	269.26	0.24
13.108	725.08	0.31	13.125	496.04	0.27	13.125	337.76	0.24	13.127	269.79	0.24
13.128	725.47	0.31	13.145	497.29	0.27	13.145	338.63	0.25	13.147	270.37	0.24
13.148	725.84	0.31	13.165	498.54	0.27	13.165	339.48	0.25	13.167	270.97	0.24
13.167	726.22	0.31	13.185	499.82	0.27	13.185	340.32	0.25	13.187	271.56	0.24
13.187	726.68	0.32	13.205	501.07	0.27	13.205	341.20	0.25	13.207	272.13	0.24
13.207	727.14	0.32	13.225	502.29	0.27	13.225	342.06	0.25	13.227	272.71	0.24
13.227	727.59	0.32	13.245	503.48	0.27	13.245	342.89	0.25	13.247	273.31	0.24
13.247	728.06	0.32	13.265	504.69	0.27	13.265	343.78	0.25	13.266	273.88	0.24
13.267	728.54	0.32	13.285	505.84	0.27	13.285	344.66	0.25	13.286	274.45	0.24
13.287	728.98	0.32	13.305	507.06	0.27	13.305	345.47	0.25	13.306	275.03	0.24
13.307	729.44	0.32	13.325	508.33	0.27	13.325	346.32	0.25	13.326	275.61	0.24
13.327	729.82	0.32	13.345	509.58	0.27	13.345	347.19	0.25	13.346	276.18	0.24

13.347	730.30	0.32	13.365	510.83	0.27	13.365	348.10	0.25	13.366	276.81	0.24
13.367	730.79	0.32	13.384	512.02	0.27	13.384	348.96	0.25	13.386	277.40	0.24
13.387	731.17	0.32	13.404	513.23	0.27	13.404	349.78	0.25	13.406	277.97	0.24
13.407	731.61	0.32	13.424	514.29	0.27	13.424	350.66	0.25	13.426	278.54	0.24
13.426	732.08	0.32	13.444	515.52	0.27	13.444	351.54	0.25	13.446	279.11	0.24
13.446	732.54	0.32	13.464	516.68	0.27	13.464	352.41	0.25	13.466	279.74	0.24
13.466	732.92	0.32	13.484	517.84	0.27	13.484	353.26	0.25	13.486	280.31	0.24
13.486	733.36	0.32	13.504	519.01	0.27	13.504	354.11	0.25	13.506	280.89	0.24
13.506	733.80	0.32	13.524	520.11	0.27	13.524	354.95	0.25	13.526	281.54	0.24
13.526	734.16	0.32	13.544	521.29	0.27	13.544	355.80	0.25	13.546	282.09	0.24
13.546	734.60	0.32	13.564	522.48	0.27	13.564	356.68	0.25	13.566	282.65	0.24
13.566	735.05	0.32	13.584	523.60	0.27	13.584	357.54	0.25	13.586	283.25	0.24
13.586	735.48	0.32	13.604	524.68	0.27	13.604	358.39	0.25	13.606	283.87	0.24
13.606	735.89	0.32	13.624	525.75	0.27	13.624	359.24	0.25	13.625	284.48	0.24
13.626	736.37	0.32	13.644	526.89	0.27	13.644	360.08	0.25	13.645	285.03	0.24
13.646	736.75	0.32	13.664	527.97	0.27	13.664	360.90	0.25	13.665	285.62	0.24
13.665	737.17	0.32	13.684	529.01	0.28	13.684	361.73	0.25	13.685	286.21	0.24
13.685	737.62	0.32	13.704	530.04	0.28	13.704	362.61	0.25	13.705	286.78	0.24
13.705	738.01	0.32	13.724	531.10	0.28	13.724	363.48	0.25	13.725	287.41	0.24
13.725	738.40	0.32	13.744	532.17	0.28	13.744	364.33	0.25	13.745	288.01	0.24
13.745	738.80	0.32	13.763	533.18	0.28	13.763	365.19	0.25	13.765	288.58	0.24
13.765	739.20	0.32	13.783	534.18	0.28	13.783	366.03	0.25	13.785	289.16	0.24
13.785	739.61	0.32	13.803	535.18	0.28	13.803	366.87	0.25	13.805	289.77	0.24
13.805	739.99	0.32	13.823	536.17	0.28	13.823	367.71	0.25	13.825	290.36	0.24
13.825	740.36	0.32	13.843	537.20	0.28	13.843	368.55	0.25	13.845	290.97	0.24
13.845	740.76	0.32	13.863	538.20	0.28	13.863	369.38	0.25	13.865	291.57	0.24
13.865	741.16	0.32	13.883	539.16	0.28	13.883	370.24	0.25	13.885	292.16	0.24
13.885	741.51	0.32	13.903	540.13	0.28	13.903	371.10	0.25	13.905	292.74	0.24
13.905	741.88	0.32	13.923	541.11	0.28	13.923	371.91	0.25	13.925	293.34	0.24
13.924	742.24	0.32	13.943	542.02	0.28	13.943	372.71	0.25	13.945	293.94	0.24
13.944	742.58	0.32	13.963	542.98	0.28	13.963	373.55	0.25	13.965	294.54	0.24
13.964	742.94	0.32	13.983	543.93	0.28	13.983	374.40	0.25	13.984	295.19	0.24
13.984	743.23	0.32	14.003	544.85	0.28	14.003	375.24	0.25	14.004	295.79	0.24
14.004	743.66	0.32	14.023	545.76	0.28	14.023	376.06	0.25	14.024	296.37	0.24
14.024	744.02	0.32	14.043	546.70	0.28	14.043	376.89	0.25	14.044	296.95	0.24
14.044	744.41	0.32	14.063	547.59	0.28	14.063	377.74	0.25	14.064	297.54	0.24
14.064	744.73	0.32	14.083	548.46	0.28	14.083	378.57	0.25	14.084	298.17	0.24
14.084	745.11	0.32	14.103	549.35	0.28	14.103	379.37	0.25	14.104	298.78	0.24
14.104	745.47	0.32	14.122	550.28	0.28	14.122	380.17	0.25	14.124	299.35	0.24
14.124	745.91	0.32	14.142	551.18	0.28	14.142	381.01	0.25	14.144	299.93	0.24
14.144	746.25	0.32	14.162	552.04	0.28	14.162	381.86	0.25	14.164	300.56	0.24
14.163	746.67	0.32	14.182	552.86	0.28	14.182	382.67	0.25	14.184	301.18	0.24
14.183	747.07	0.32	14.202	553.66	0.28	14.202	383.47	0.25	14.204	301.75	0.24
14.203	747.41	0.32	14.222	554.53	0.28	14.222	384.28	0.25	14.224	302.37	0.24
14.223	747.77	0.32	14.242	555.41	0.28	14.242	385.10	0.25	14.244	303.00	0.24

14.243	748.16	0.32	14.262	556.27	0.28	14.262	385.91	0.25	14.264	303.61	0.24
14.263	748.55	0.32	14.282	557.02	0.28	14.282	386.73	0.25	14.284	304.19	0.24
14.283	748.90	0.32	14.302	557.82	0.28	14.302	387.54	0.25	14.304	304.79	0.24
14.303	749.34	0.32	14.322	558.64	0.28	14.322	388.32	0.25	14.324	305.39	0.24
14.323	749.69	0.32	14.342	559.40	0.28	14.342	389.11	0.25	14.343	306.00	0.24
14.343	750.05	0.32	14.362	560.17	0.28	14.362	389.90	0.25	14.363	306.62	0.24
14.363	750.47	0.32	14.382	560.96	0.28	14.382	390.71	0.25	14.383	307.22	0.24
14.383	750.79	0.32	14.402	561.74	0.28	14.402	391.52	0.25	14.403	307.80	0.24
14.403	751.17	0.32	14.422	562.52	0.28	14.422	392.32	0.25	14.423	308.46	0.24
14.422	751.53	0.32	14.442	563.29	0.28	14.442	393.11	0.25	14.443	309.06	0.24
14.442	751.88	0.32	14.462	564.04	0.28	14.462	393.91	0.25	14.463	309.65	0.24
14.462	752.27	0.32	14.482	564.73	0.28	14.482	394.68	0.25	14.483	310.26	0.24
14.482	752.57	0.32	14.501	565.43	0.28	14.501	395.46	0.25	14.503	310.85	0.24
14.502	752.95	0.32	14.521	566.12	0.28	14.521	396.22	0.25	14.523	311.45	0.24
14.522	753.34	0.32	14.541	566.81	0.28	14.541	396.89	0.25	14.543	312.06	0.24
14.542	753.69	0.32	14.561	567.72	0.28	14.561	397.55	0.25	14.563	312.69	0.24
14.562	753.96	0.32	14.581	568.58	0.28	14.581	398.24	0.25	14.583	313.31	0.24
14.582	754.28	0.32	14.601	569.51	0.28	14.601	399.10	0.25	14.603	313.91	0.24
14.602	754.69	0.32	14.621	570.36	0.28	14.621	399.93	0.25	14.623	314.48	0.24
14.622	755.02	0.32	14.641	571.22	0.28	14.641	400.79	0.25	14.643	315.09	0.24
14.642	755.35	0.32	14.661	572.03	0.28	14.661	401.68	0.25	14.663	315.73	0.24
14.661	755.69	0.32	14.681	572.86	0.28	14.681	402.52	0.25	14.683	316.36	0.24
14.681	756.04	0.32	14.701	573.68	0.28	14.701	403.37	0.25	14.702	316.97	0.24
14.701	756.43	0.32	14.721	574.56	0.28	14.721	404.21	0.25	14.722	317.53	0.24
14.721	756.76	0.32	14.741	575.38	0.28	14.741	405.09	0.25	14.742	318.16	0.24
14.741	757.10	0.32	14.761	576.19	0.28	14.761	405.94	0.25	14.762	318.78	0.24
14.761	757.47	0.32	14.781	577.03	0.28	14.781	406.76	0.25	14.782	319.40	0.24
14.781	757.79	0.32	14.801	577.88	0.28	14.801	407.60	0.25	14.802	320.02	0.24
14.801	758.15	0.32	14.821	578.60	0.28	14.821	408.46	0.25	14.822	320.63	0.24
14.821	758.48	0.32	14.841	579.51	0.28	14.841	409.32	0.25	14.842	321.25	0.24
14.841	758.74	0.32	14.861	580.31	0.28	14.861	410.20	0.25	14.862	321.85	0.24
14.861	759.13	0.32	14.880	581.08	0.28	14.880	411.05	0.25	14.882	322.46	0.24
14.881	759.47	0.32	14.900	581.89	0.28	14.900	411.82	0.26	14.902	323.06	0.24
14.901	759.79	0.32	14.920	582.70	0.28	14.920	412.69	0.26	14.922	323.70	0.24
14.920	760.09	0.32	14.940	583.52	0.29	14.940	413.52	0.26	14.942	324.34	0.24
14.940	760.48	0.32	14.960	584.32	0.29	14.960	414.33	0.26	14.962	324.93	0.24
14.960	760.78	0.32	14.980	585.09	0.29	14.980	415.18	0.26	14.982	325.55	0.24
14.980	761.13	0.32	15.000	585.84	0.29	15.000	416.04	0.26	15.002	326.20	0.24
15.000	761.45	0.32	15.020	586.64	0.29	15.020	416.86	0.26	15.022	326.78	0.24
15.020	761.79	0.32	15.040	587.38	0.29	15.040	417.76	0.26	15.042	327.37	0.24
15.040	762.16	0.32	15.060	588.13	0.29	15.060	418.67	0.26	15.061	328.00	0.24
15.060	762.48	0.32	15.080	588.92	0.29	15.080	419.45	0.26	15.081	328.62	0.24
15.080	762.77	0.32	15.100	589.66	0.29	15.100	420.24	0.26	15.101	329.25	0.24
15.100	763.08	0.32	15.120	590.42	0.29	15.120	421.13	0.26	15.121	329.84	0.24
15.120	763.47	0.32	15.140	591.14	0.29	15.140	421.97	0.26	15.141	330.44	0.24

15.140	763.80	0.32	15.160	591.92	0.29	15.160	422.76	0.26	15.161	331.06	0.24
15.159	764.06	0.32	15.180	592.64	0.29	15.180	423.61	0.26	15.181	331.67	0.24
15.179	764.45	0.32	15.200	593.35	0.29	15.200	424.45	0.26	15.201	332.28	0.24
15.199	764.75	0.32	15.220	594.15	0.29	15.220	425.32	0.26	15.221	332.93	0.24
15.219	765.08	0.32	15.239	594.83	0.29	15.239	426.10	0.26	15.241	333.57	0.24
15.239	765.39	0.32	15.259	595.54	0.29	15.259	426.92	0.26	15.261	334.18	0.24
15.259	765.71	0.32	15.279	596.25	0.29	15.279	427.77	0.26	15.281	334.78	0.24
15.279	766.04	0.32	15.299	597.03	0.29	15.299	428.60	0.26	15.301	335.37	0.24
15.299	766.36	0.32	15.319	597.72	0.29	15.319	429.51	0.26	15.321	336.00	0.24
15.319	766.63	0.32	15.339	598.41	0.29	15.339	430.32	0.26	15.341	336.63	0.24
15.339	766.96	0.32	15.359	599.11	0.29	15.359	431.14	0.26	15.361	337.26	0.24
15.359	767.23	0.32	15.379	599.81	0.29	15.379	431.97	0.26	15.381	337.89	0.24
15.379	767.57	0.32	15.399	600.48	0.29	15.399	432.79	0.26	15.401	338.52	0.24
15.399	767.90	0.32	15.419	601.20	0.29	15.419	433.59	0.26	15.421	339.14	0.24
15.418	768.19	0.32	15.439	601.87	0.29	15.439	434.43	0.26	15.440	339.74	0.24
15.438	768.48	0.32	15.459	602.54	0.29	15.459	435.30	0.26	15.460	340.35	0.24
15.458	768.80	0.32	15.479	603.24	0.29	15.479	436.11	0.26	15.480	340.96	0.24
15.478	769.11	0.32	15.499	603.88	0.29	15.499	436.93	0.26	15.500	341.56	0.24
15.498	769.41	0.32	15.519	604.55	0.29	15.519	437.72	0.26	15.520	342.17	0.24
15.518	769.76	0.32	15.539	605.22	0.29	15.539	438.52	0.26	15.540	342.82	0.24
15.538	770.02	0.32	15.559	605.92	0.29	15.559	439.35	0.26	15.560	343.44	0.24
15.558	770.33	0.32	15.579	606.53	0.29	15.579	440.19	0.26	15.580	344.03	0.24
15.578	770.63	0.32	15.599	607.22	0.29	15.599	440.99	0.26	15.600	344.65	0.25
15.598	770.92	0.33	15.618	607.88	0.29	15.618	441.79	0.26	15.620	345.28	0.25
15.618	771.26	0.33	15.638	608.49	0.29	15.638	442.63	0.26	15.640	345.91	0.25
15.638	771.52	0.33	15.658	609.09	0.29	15.658	443.41	0.26	15.660	346.53	0.25
15.657	771.86	0.33	15.678	609.72	0.29	15.678	444.20	0.26	15.680	347.14	0.25
15.677	772.12	0.33	15.698	610.33	0.29	15.698	445.01	0.26	15.700	347.73	0.25
15.697	772.40	0.33	15.718	610.93	0.29	15.718	445.84	0.26	15.720	348.39	0.25
15.717	772.77	0.33	15.738	611.59	0.29	15.738	446.65	0.26	15.740	349.05	0.25
15.737	773.03	0.33	15.758	612.16	0.29	15.758	447.48	0.26	15.760	349.64	0.25
15.757	773.37	0.33	15.778	612.80	0.29	15.778	448.27	0.26	15.780	350.22	0.25
15.777	773.64	0.33	15.798	613.36	0.29	15.798	449.09	0.26	15.799	350.86	0.25
15.797	773.92	0.33	15.818	613.96	0.29	15.818	449.85	0.26	15.819	351.49	0.25
15.817	774.20	0.33	15.838	614.57	0.29	15.838	450.71	0.26	15.839	352.08	0.25
15.837	774.55	0.33	15.858	615.16	0.29	15.858	451.44	0.26	15.859	352.67	0.25
15.857	774.86	0.33	15.878	615.73	0.29	15.878	452.31	0.26	15.879	353.29	0.25
15.877	775.15	0.33	15.898	616.30	0.29	15.898	453.10	0.26	15.899	353.92	0.25
15.897	775.44	0.33	15.918	616.91	0.29	15.918	453.89	0.26	15.919	354.52	0.25
15.916	775.71	0.33	15.938	617.48	0.29	15.938	454.67	0.26	15.939	355.13	0.25
15.936	775.98	0.33	15.958	618.07	0.29	15.958	455.48	0.26	15.959	355.77	0.25
15.956	776.34	0.33	15.978	618.59	0.29	15.978	456.21	0.26	15.979	356.41	0.25
15.976	776.61	0.33	15.997	619.14	0.29	15.997	457.04	0.26	15.999	357.02	0.25
15.996	776.88	0.33	16.017	619.70	0.29	16.017	457.80	0.26	16.019	357.61	0.25
16.016	777.18	0.33	16.037	620.23	0.29	16.037	458.62	0.26	16.039	358.23	0.25



16.036	777.45	0.33	16.057	620.78	0.29	16.057	459.39	0.26	16.059	358.88	0.25
16.056	777.73	0.33	16.077	621.33	0.29	16.077	460.18	0.26	16.079	359.50	0.25
16.076	778.00	0.33	16.097	621.85	0.29	16.097	460.93	0.26	16.099	360.12	0.25
16.096	778.32	0.33	16.117	622.32	0.29	16.117	461.72	0.26	16.119	360.73	0.25
16.116	778.62	0.33	16.137	622.79	0.29	16.137	462.52	0.26	16.139	361.34	0.25
16.136	778.89	0.33	16.157	623.36	0.29	16.157	463.29	0.26	16.158	361.95	0.25
16.155	779.24	0.33	16.177	623.96	0.29	16.177	464.06	0.26	16.178	362.56	0.25
16.175	779.49	0.33	16.197	624.59	0.29	16.197	464.82	0.26	16.198	363.16	0.25
16.195	779.72	0.33	16.217	625.20	0.29	16.217	465.57	0.26	16.218	363.79	0.25
16.215	780.03	0.33	16.237	625.76	0.29	16.237	466.31	0.26	16.238	364.41	0.25
16.235	780.34	0.33	16.257	626.32	0.29	16.257	467.06	0.26	16.258	365.03	0.25
16.255	780.61	0.33	16.277	626.91	0.29	16.277	467.85	0.26	16.278	365.64	0.25
16.275	780.91	0.33	16.297	627.50	0.29	16.297	468.62	0.26	16.298	366.24	0.25
16.295	781.13	0.33	16.317	628.08	0.29	16.317	469.34	0.26	16.318	366.86	0.25
16.315	781.44	0.33	16.337	628.66	0.29	16.337	470.11	0.26	16.338	367.47	0.25
16.335	781.74	0.33	16.357	629.28	0.29	16.357	470.84	0.26	16.358	368.07	0.25
16.355	781.96	0.33	16.376	629.88	0.29	16.376	471.61	0.26	16.378	368.67	0.25
16.375	782.27	0.33	16.396	630.42	0.29	16.396	472.37	0.27	16.398	369.28	0.25
16.394	782.51	0.33	16.416	631.02	0.29	16.416	473.12	0.27	16.418	369.91	0.25
16.414	782.84	0.33	16.436	631.63	0.29	16.436	473.86	0.27	16.438	370.53	0.25
16.434	783.09	0.33	16.456	632.19	0.29	16.456	474.59	0.27	16.458	371.12	0.25
16.454	783.43	0.33	16.476	632.78	0.29	16.476	475.31	0.27	16.478	371.71	0.25
16.474	783.63	0.33	16.496	633.29	0.30	16.496	476.03	0.27	16.498	372.31	0.25
16.494	783.95	0.33	16.516	633.87	0.30	16.516	476.78	0.27	16.517	372.92	0.25
16.514	784.24	0.33	16.536	634.39	0.30	16.536	477.51	0.27	16.537	373.52	0.25
16.534	784.49	0.33	16.556	634.97	0.30	16.556	478.24	0.27	16.557	374.12	0.25
16.554	784.73	0.33	16.576	635.50	0.30	16.576	478.97	0.27	16.577	374.73	0.25
16.574	785.03	0.33	16.596	636.07	0.30	16.596	479.67	0.27	16.597	375.33	0.25
16.594	785.27	0.33	16.616	636.64	0.30	16.616	480.40	0.27	16.617	375.94	0.25
16.614	785.55	0.33	16.636	637.16	0.30	16.636	481.11	0.27	16.637	376.55	0.25
16.634	785.79	0.33	16.656	637.71	0.30	16.656	481.79	0.27	16.657	377.16	0.25
16.653	786.03	0.33	16.676	638.24	0.30	16.676	482.50	0.27	16.677	377.77	0.25
16.673	786.26	0.33	16.696	638.81	0.30	16.696	483.23	0.27	16.697	378.37	0.25
16.693	786.52	0.33	16.716	639.33	0.30	16.716	483.95	0.27	16.717	378.96	0.25
16.713	786.78	0.33	16.735	639.89	0.30	16.735	484.62	0.27	16.737	379.55	0.25
16.733	787.04	0.33	16.755	640.44	0.30	16.755	485.33	0.27	16.757	380.15	0.25
16.753	787.28	0.33	16.775	640.95	0.30	16.775	486.04	0.27	16.777	380.76	0.25
16.773	787.60	0.33	16.795	641.45	0.30	16.795	486.74	0.27	16.797	381.36	0.25
16.793	787.79	0.33	16.815	642.05	0.30	16.815	487.45	0.27	16.817	381.99	0.25
16.813	788.05	0.33	16.835	642.59	0.30	16.835	488.14	0.27	16.837	382.61	0.25
16.833	788.30	0.33	16.855	643.08	0.30	16.855	488.82	0.27	16.857	383.21	0.25
16.853	788.57	0.33	16.875	643.61	0.30	16.875	489.51	0.27	16.876	383.79	0.25
16.873	788.83	0.33	16.895	644.15	0.30	16.895	490.19	0.27	16.896	384.36	0.25
16.892	789.08	0.33	16.915	644.66	0.30	16.915	490.87	0.27	16.916	384.95	0.25
16.912	789.34	0.33	16.935	645.22	0.30	16.935	491.54	0.27	16.936	385.54	0.25

16.932	789.59	0.33	16.955	645.74	0.30	16.955	492.21	0.27	16.956	386.14	0.25
16.952	789.84	0.33	16.975	646.26	0.30	16.975	492.92	0.27	16.976	386.73	0.25
16.972	790.08	0.33	16.995	646.77	0.30	16.995	493.57	0.27	16.996	387.32	0.25
16.992	790.33	0.33	17.015	647.22	0.30	17.015	494.20	0.27	17.016	387.91	0.25
17.012	790.58	0.33	17.035	647.76	0.30	17.035	494.90	0.27	17.036	388.50	0.25
17.032	790.81	0.33	17.055	648.27	0.30	17.055	495.57	0.27	17.056	389.08	0.25
17.052	791.05	0.33	17.075	648.84	0.30	17.075	496.22	0.27	17.076	389.67	0.25
17.072	791.27	0.33	17.095	649.29	0.30	17.095	496.86	0.27	17.096	390.26	0.25
17.092	791.59	0.33	17.114	649.82	0.30	17.114	497.49	0.27	17.116	390.84	0.25
17.112	791.82	0.33	17.134	650.32	0.30	17.134	498.14	0.27	17.136	391.43	0.25
17.132	792.06	0.33	17.154	650.83	0.30	17.154	498.78	0.27	17.156	392.02	0.25
17.151	792.30	0.33	17.174	651.32	0.30	17.174	499.41	0.27	17.176	392.61	0.25
17.171	792.55	0.33	17.194	651.81	0.30	17.194	500.04	0.27	17.196	393.21	0.25
17.191	792.76	0.33	17.214	652.33	0.30	17.214	500.67	0.27	17.216	393.80	0.25
17.211	793.00	0.33	17.234	652.80	0.30	17.234	501.31	0.27	17.235	394.38	0.25
17.231	793.23	0.33	17.254	653.27	0.30	17.254	501.97	0.27	17.255	394.95	0.25
17.251	793.45	0.33	17.274	653.80	0.30	17.274	502.62	0.27	17.275	395.52	0.25
17.271	793.65	0.33	17.294	654.26	0.30	17.294	503.26	0.27	17.295	396.10	0.25
17.291	793.90	0.33	17.314	654.75	0.30	17.314	503.85	0.27	17.315	396.68	0.25
17.311	794.08	0.33	17.334	655.24	0.30	17.334	504.44	0.27	17.335	397.26	0.25
17.331	794.35	0.33	17.354	655.72	0.30	17.354	505.09	0.27	17.355	397.83	0.25
17.351	794.55	0.33	17.374	656.17	0.30	17.374	505.73	0.27	17.375	398.40	0.25
17.371	794.78	0.33	17.394	656.68	0.30	17.394	506.35	0.27	17.395	398.97	0.25
17.390	795.10	0.33	17.414	657.12	0.30	17.414	506.96	0.27	17.415	399.54	0.25
17.410	795.32	0.33	17.434	657.68	0.30	17.434	507.54	0.27	17.435	400.11	0.25
17.430	795.54	0.33	17.454	658.12	0.30	17.454	508.12	0.27	17.455	400.67	0.25
17.450	795.78	0.33	17.474	658.61	0.30	17.474	508.72	0.27	17.475	401.24	0.25
17.470	796.01	0.33	17.493	659.05	0.30	17.493	509.32	0.27	17.495	401.82	0.25
17.490	796.27	0.33	17.513	659.55	0.30	17.513	509.85	0.27	17.515	402.41	0.25
17.510	796.49	0.33	17.533	659.97	0.30	17.533	510.35	0.27	17.535	403.00	0.25
17.530	796.78	0.33	17.553	660.43	0.30	17.553	510.85	0.27	17.555	403.59	0.25
17.550	797.02	0.33	17.573	660.93	0.30	17.573	511.43	0.27	17.575	404.16	0.25
17.570	797.26	0.33	17.593	661.39	0.30	17.593	512.10	0.27	17.594	404.71	0.25
17.590	797.49	0.33	17.613	661.83	0.30	17.613	512.77	0.27	17.614	405.26	0.25
17.610	797.68	0.33	17.633	662.28	0.30	17.633	513.37	0.27	17.634	405.82	0.25
17.630	797.98	0.33	17.653	662.74	0.30	17.653	514.05	0.27	17.654	406.38	0.25
17.649	798.17	0.33	17.673	663.18	0.30	17.673	514.71	0.27	17.674	406.96	0.25
17.669	798.42	0.33	17.693	663.61	0.30	17.693	515.35	0.27	17.694	407.53	0.25
17.689	798.64	0.33	17.713	664.07	0.30	17.713	516.03	0.27	17.714	408.11	0.25
17.709	798.84	0.33	17.733	664.49	0.30	17.733	516.64	0.27	17.734	408.66	0.25
17.729	799.06	0.33	17.753	664.98	0.30	17.753	517.31	0.27	17.754	409.22	0.25
17.749	799.26	0.33	17.773	665.40	0.30	17.773	517.98	0.27	17.774	409.77	0.25
17.769	799.52	0.33	17.793	665.91	0.30	17.793	518.61	0.27	17.794	410.32	0.25
17.789	799.73	0.33	17.813	666.32	0.30	17.813	519.25	0.27	17.814	410.88	0.25
17.809	799.99	0.33	17.833	666.72	0.30	17.833	519.91	0.27	17.834	411.44	0.25

17.829	800.20	0.33	17.853	667.16	0.30	17.853	520.53	0.27	17.854	412.00	0.25
17.849	800.44	0.33	17.872	667.63	0.30	17.872	521.21	0.27	17.874	412.56	0.25
17.869	800.68	0.33	17.892	668.03	0.30	17.892	521.80	0.27	17.894	413.12	0.25
17.888	800.90	0.33	17.912	668.52	0.30	17.912	522.40	0.27	17.914	413.67	0.25
17.908	801.10	0.33	17.932	668.92	0.30	17.932	523.08	0.27	17.934	414.22	0.26
17.928	801.34	0.33	17.952	669.39	0.30	17.952	523.65	0.27	17.953	414.77	0.26
17.948	801.59	0.33	17.972	669.81	0.30	17.972	524.33	0.27	17.973	415.32	0.26
17.968	801.83	0.33	17.992	670.24	0.30	17.992	524.90	0.27	17.993	415.87	0.26
17.988	802.04	0.33	18.012	670.69	0.30	18.012	525.61	0.27	18.013	416.42	0.26
18.008	802.31	0.33	18.032	671.17	0.30	18.032	526.22	0.27	18.033	416.97	0.26
18.028	802.50	0.33	18.052	671.53	0.30	18.052	526.82	0.27	18.053	417.51	0.26
18.048	802.78	0.33	18.072	671.97	0.30	18.072	527.47	0.27	18.073	418.06	0.26
18.068	802.96	0.33	18.092	672.42	0.30	18.092	528.06	0.27	18.093	418.61	0.26
18.088	803.20	0.33	18.112	672.83	0.30	18.112	528.67	0.27	18.113	419.15	0.26
18.108	803.47	0.33	18.132	673.24	0.30	18.132	529.31	0.27	18.133	419.68	0.26
18.128	803.69	0.33	18.152	673.68	0.30	18.152	529.91	0.28	18.153	420.22	0.26
18.147	803.94	0.33	18.172	674.11	0.30	18.172	530.49	0.28	18.173	420.75	0.26
18.167	804.16	0.33	18.192	674.49	0.30	18.192	531.18	0.28	18.193	421.29	0.26
18.187	804.37	0.33	18.212	674.91	0.30	18.212	531.78	0.28	18.213	421.80	0.26
18.207	804.60	0.33	18.231	675.32	0.30	18.231	532.36	0.28	18.233	422.24	0.26
18.227	804.83	0.33	18.251	675.76	0.30	18.251	533.00	0.28	18.253	422.68	0.26
18.247	805.08	0.33	18.271	676.19	0.30	18.271	533.58	0.28	18.273	423.11	0.26
18.267	805.32	0.33	18.291	676.56	0.30	18.291	534.17	0.28	18.293	423.55	0.26
18.287	805.52	0.33	18.311	676.99	0.30	18.311	534.84	0.28	18.312	424.02	0.26
18.307	805.73	0.33	18.331	677.37	0.30	18.331	535.39	0.28	18.332	424.59	0.26
18.327	805.91	0.33	18.351	677.80	0.30	18.351	535.99	0.28	18.352	425.23	0.26
18.347	806.18	0.33	18.371	678.21	0.30	18.371	536.59	0.28	18.372	425.78	0.26
18.367	806.38	0.33	18.391	678.61	0.30	18.391	537.17	0.28	18.392	426.33	0.26
18.386	806.57	0.33	18.411	679.03	0.30	18.411	537.77	0.28	18.412	426.85	0.26
18.406	806.84	0.33	18.431	679.40	0.30	18.431	538.38	0.28	18.432	427.46	0.26
18.426	807.02	0.33	18.451	679.78	0.30	18.451	538.96	0.28	18.452	428.00	0.26
18.446	807.26	0.33	18.471	680.25	0.31	18.471	539.56	0.28	18.472	428.62	0.26
18.466	807.46	0.33	18.491	680.61	0.31	18.491	540.16	0.28	18.492	429.14	0.26
18.486	807.69	0.33	18.511	680.98	0.31	18.511	540.77	0.28	18.512	429.69	0.26
18.506	807.89	0.33	18.531	681.40	0.31	18.531	541.31	0.28	18.532	430.25	0.26
18.526	808.12	0.33	18.551	681.80	0.31	18.551	541.91	0.28	18.552	430.78	0.26
18.546	808.36	0.33	18.571	682.20	0.31	18.571	542.54	0.28	18.572	431.34	0.26
18.566	808.57	0.33	18.591	682.60	0.31	18.591	543.12	0.28	18.592	431.93	0.26
18.586	808.79	0.33	18.610	682.96	0.31	18.610	543.71	0.28	18.612	432.52	0.26
18.606	808.97	0.33	18.630	683.33	0.31	18.630	544.29	0.28	18.632	433.06	0.26
18.626	809.21	0.33	18.650	683.75	0.31	18.650	544.85	0.28	18.652	433.59	0.26
18.645	809.40	0.33	18.670	684.16	0.31	18.670	545.47	0.28	18.671	434.20	0.26
18.665	809.66	0.33	18.690	684.54	0.31	18.690	545.99	0.28	18.691	434.72	0.26
18.685	809.87	0.33	18.710	684.93	0.31	18.710	546.55	0.28	18.711	435.30	0.26
18.705	810.06	0.33	18.730	685.29	0.31	18.730	547.13	0.28	18.731	435.90	0.26

18.725	810.32	0.33	18.750	685.66	0.31	18.750	547.75	0.28	18.751	436.43	0.26
18.745	810.51	0.33	18.770	686.07	0.31	18.770	548.32	0.28	18.771	436.97	0.26
18.765	810.71	0.33	18.790	686.44	0.31	18.790	548.89	0.28	18.791	437.54	0.26
18.785	810.94	0.33	18.810	686.82	0.31	18.810	549.43	0.28	18.811	438.05	0.26
18.805	811.17	0.33	18.830	687.16	0.31	18.830	550.02	0.28	18.831	438.62	0.26
18.825	811.36	0.33	18.850	687.55	0.31	18.850	550.54	0.28	18.851	439.17	0.26
18.845	811.55	0.33	18.870	687.91	0.31	18.870	551.14	0.28	18.871	439.77	0.26
18.865	811.74	0.33	18.890	688.26	0.31	18.890	551.67	0.28	18.891	440.30	0.26
18.884	811.98	0.33	18.910	688.64	0.31	18.910	552.25	0.28	18.911	440.86	0.26
18.904	812.22	0.33	18.930	688.99	0.31	18.930	552.80	0.28	18.931	441.40	0.26
18.924	812.41	0.33	18.950	689.36	0.31	18.950	553.34	0.28	18.951	441.91	0.26
18.944	812.68	0.33	18.970	689.74	0.31	18.970	553.91	0.28	18.971	442.49	0.26
18.964	812.88	0.33	18.989	690.08	0.31	18.989	554.49	0.28	18.991	443.06	0.26
18.984	813.07	0.33	19.009	690.46	0.31	19.009	555.05	0.28	19.011	443.57	0.26
19.004	813.28	0.33	19.029	690.81	0.31	19.029	555.63	0.28	19.030	444.12	0.26
19.024	813.50	0.33	19.049	691.16	0.31	19.049	556.17	0.28	19.050	444.69	0.26
19.044	813.69	0.33	19.069	691.49	0.31	19.069	556.68	0.28	19.070	445.23	0.26
19.064	813.89	0.33	19.089	691.83	0.31	19.089	557.21	0.28	19.090	445.79	0.26
19.084	814.10	0.33	19.109	692.20	0.31	19.109	557.75	0.28	19.110	446.33	0.26
19.104	814.31	0.33	19.129	692.52	0.31	19.129	558.30	0.28	19.130	446.88	0.26
19.124	814.53	0.33	19.149	692.85	0.31	19.149	558.86	0.28	19.150	447.41	0.26
19.143	814.71	0.34	19.169	693.22	0.31	19.169	559.40	0.28	19.170	447.96	0.26
19.163	814.99	0.34	19.189	693.59	0.31	19.189	559.95	0.28	19.190	448.48	0.26
19.183	815.17	0.34	19.209	693.92	0.31	19.209	560.50	0.28	19.210	449.02	0.26
19.203	815.34	0.34	19.229	694.25	0.31	19.229	561.00	0.28	19.230	449.53	0.26
19.223	815.57	0.34	19.249	694.58	0.31	19.249	561.55	0.28	19.250	450.06	0.26
19.243	815.80	0.34	19.269	694.91	0.31	19.269	562.08	0.28	19.270	450.64	0.26
19.263	815.95	0.34	19.289	695.22	0.31	19.289	562.57	0.28	19.290	451.16	0.26
19.283	816.15	0.34	19.309	695.53	0.31	19.309	563.15	0.28	19.310	451.70	0.26
19.303	816.41	0.34	19.329	695.85	0.31	19.329	563.69	0.28	19.330	452.25	0.26
19.323	816.56	0.34	19.349	696.18	0.31	19.349	564.21	0.28	19.350	452.74	0.26
19.343	816.81	0.34	19.368	696.53	0.31	19.368	564.74	0.28	19.370	453.32	0.26
19.363	817.00	0.34	19.388	696.88	0.31	19.388	565.27	0.28	19.389	453.85	0.26
19.382	817.24	0.34	19.408	697.21	0.31	19.408	565.78	0.28	19.409	454.37	0.26
19.402	817.41	0.34	19.428	697.50	0.31	19.428	566.32	0.28	19.429	454.91	0.26
19.422	817.61	0.34	19.448	697.76	0.31	19.448	566.88	0.28	19.449	455.47	0.26
19.442	817.84	0.34	19.468	698.06	0.31	19.468	567.38	0.28	19.469	455.96	0.26
19.462	818.00	0.34	19.488	698.41	0.31	19.488	567.92	0.28	19.489	456.50	0.26
19.482	818.22	0.34	19.508	698.79	0.31	19.508	568.43	0.28	19.509	457.03	0.26
19.502	818.40	0.34	19.528	699.16	0.31	19.528	568.98	0.28	19.529	457.55	0.26
19.522	818.63	0.34	19.548	699.48	0.31	19.548	569.47	0.28	19.549	458.11	0.26
19.542	818.83	0.34	19.568	699.84	0.31	19.568	570.02	0.28	19.569	458.64	0.26
19.562	819.04	0.34	19.588	700.20	0.31	19.588	570.54	0.28	19.589	459.17	0.26
19.582	819.22	0.34	19.608	700.52	0.31	19.608	570.99	0.28	19.609	459.71	0.26
19.602	819.43	0.34	19.628	700.92	0.31	19.628	571.55	0.28	19.629	460.20	0.26

19.622	819.65	0.34	19.648	701.24	0.31	19.648	572.06	0.28	19.649	460.74	0.26
19.641	819.84	0.34	19.668	701.58	0.31	19.668	572.58	0.28	19.669	461.30	0.26
19.661	820.00	0.34	19.688	701.89	0.31	19.688	573.09	0.28	19.689	461.83	0.26
19.681	820.19	0.34	19.708	702.26	0.31	19.708	573.62	0.28	19.709	462.33	0.26
19.701	820.42	0.34	19.727	702.60	0.31	19.727	574.12	0.28	19.729	462.86	0.26
19.721	820.60	0.34	19.747	702.95	0.31	19.747	574.63	0.28	19.748	463.41	0.26
19.741	820.82	0.34	19.767	703.25	0.31	19.767	575.14	0.28	19.768	463.91	0.26
19.761	821.00	0.34	19.787	703.57	0.31	19.787	575.63	0.28	19.788	464.37	0.26
19.781	821.17	0.34	19.807	703.90	0.31	19.807	576.12	0.28	19.808	464.89	0.26
19.801	821.35	0.34	19.827	704.26	0.31	19.827	576.61	0.28	19.828	465.43	0.26
19.821	821.56	0.34	19.847	704.59	0.31	19.847	577.09	0.28	19.848	465.96	0.26
19.841	821.74	0.34	19.867	704.92	0.31	19.867	577.62	0.28	19.868	466.50	0.26
19.861	821.94	0.34	19.887	705.27	0.31	19.887	578.10	0.28	19.888	467.02	0.26
19.880	822.14	0.34	19.907	705.58	0.31	19.907	578.57	0.28	19.908	467.53	0.26
19.900	822.32	0.34	19.927	705.94	0.31	19.927	579.07	0.28	19.928	468.05	0.26
19.920	822.53	0.34	19.947	706.27	0.31	19.947	579.58	0.28	19.948	468.62	0.26
19.940	822.75	0.34	19.967	706.59	0.31	19.967	580.06	0.28	19.968	469.15	0.26
19.960	822.94	0.34	19.987	706.87	0.31	19.987	580.55	0.28	19.988	469.64	0.26
19.980	823.09	0.34	20.007	707.24	0.31	20.007	581.05	0.28	20.008	470.16	0.26
20.000	823.28	0.34	20.027	707.55	0.31	20.027	581.54	0.29	20.028	470.65	0.26
			20.047	707.91	0.31	20.047	582.00	0.29	20.048	471.16	0.26
			20.067	708.25	0.31	20.067	582.46	0.29	20.068	471.72	0.26
			20.087	708.54	0.31	20.087	582.99	0.29	20.088	472.24	0.26
			20.106	708.87	0.31	20.106	583.50	0.29	20.107	472.73	0.26
			20.126	709.22	0.31	20.126	583.96	0.29	20.127	473.22	0.26
			20.146	709.56	0.31	20.146	584.40	0.29	20.147	473.72	0.26
			20.166	709.87	0.31	20.166	584.89	0.29	20.167	474.23	0.26
			20.186	710.16	0.31	20.186	585.37	0.29	20.187	474.77	0.26
			20.206	710.50	0.31	20.206	585.86	0.29	20.207	475.28	0.26
			20.226	710.80	0.31	20.226	586.35	0.29	20.227	475.78	0.26
			20.246	711.15	0.31	20.246	586.85	0.29	20.247	476.27	0.26
			20.266	711.41	0.31	20.266	587.31	0.29	20.267	476.79	0.27
			20.286	711.75	0.31	20.286	587.78	0.29	20.287	477.33	0.27
			20.306	712.10	0.31	20.306	588.25	0.29	20.307	477.83	0.27
			20.326	712.42	0.31	20.326	588.71	0.29	20.327	478.32	0.27
			20.346	712.72	0.31	20.346	589.16	0.29	20.347	478.83	0.27
			20.366	713.03	0.31	20.366	589.60	0.29	20.367	479.37	0.27
			20.386	713.32	0.31	20.386	590.05	0.29	20.387	479.85	0.27
			20.406	713.64	0.31	20.406	590.54	0.29	20.407	480.34	0.27
			20.426	713.94	0.31	20.426	591.01	0.29	20.427	480.87	0.27
			20.446	714.22	0.31	20.446	591.44	0.29	20.447	481.37	0.27
			20.466	714.56	0.31	20.466	591.92	0.29	20.466	481.84	0.27
			20.485	714.86	0.31	20.485	592.39	0.29	20.486	482.39	0.27
			20.505	715.21	0.31	20.505	592.86	0.29	20.506	482.85	0.27
			20.525	715.51	0.31	20.525	593.31	0.29	20.526	483.38	0.27

			20.545	715.81	0.31	20.545	593.77	0.29	20.546	483.87	0.27
			20.565	716.15	0.31	20.565	594.23	0.29	20.566	484.36	0.27
			20.585	716.44	0.31	20.585	594.65	0.29	20.586	484.85	0.27
			20.605	716.74	0.31	20.605	595.07	0.29	20.606	485.35	0.27
			20.625	717.05	0.31	20.625	595.53	0.29	20.626	485.87	0.27
			20.645	717.32	0.31	20.645	595.98	0.29	20.646	486.36	0.27
			20.665	717.64	0.31	20.665	596.43	0.29	20.666	486.84	0.27
			20.685	718.00	0.31	20.685	596.84	0.29	20.686	487.32	0.27
			20.705	718.32	0.31	20.705	597.27	0.29	20.706	487.79	0.27
			20.725	718.54	0.31	20.725	597.71	0.29	20.726	488.34	0.27
			20.745	718.88	0.31	20.745	598.15	0.29	20.746	488.83	0.27
			20.765	719.19	0.31	20.765	598.60	0.29	20.766	489.29	0.27
			20.785	719.50	0.31	20.785	599.05	0.29	20.786	489.76	0.27
			20.805	719.79	0.31	20.805	599.49	0.29	20.806	490.29	0.27
			20.825	720.12	0.31	20.825	599.93	0.29	20.825	490.74	0.27
			20.845	720.43	0.31	20.845	600.36	0.29	20.845	491.25	0.27
			20.864	720.69	0.31	20.864	600.79	0.29	20.865	491.75	0.27
			20.884	720.99	0.31	20.884	601.22	0.29	20.885	492.22	0.27
			20.904	721.28	0.31	20.904	601.65	0.29	20.905	492.66	0.27
			20.924	721.59	0.31	20.924	602.07	0.29	20.925	493.19	0.27
			20.944	721.88	0.31	20.944	602.48	0.29	20.945	493.68	0.27
			20.964	722.18	0.31	20.964	602.89	0.29	20.965	494.17	0.27
			20.984	722.47	0.31	20.984	603.35	0.29	20.985	494.65	0.27
			21.004	722.80	0.31	21.004	603.80	0.29	21.005	495.12	0.27
			21.024	723.03	0.31	21.024	604.20	0.29	21.025	495.65	0.27
			21.044	723.36	0.31	21.044	604.63	0.29	21.045	496.13	0.27
			21.064	723.66	0.31	21.064	605.07	0.29	21.065	496.59	0.27
			21.084	723.92	0.31	21.084	605.46	0.29	21.085	497.06	0.27
			21.104	724.21	0.31	21.104	605.83	0.29	21.105	497.59	0.27
			21.124	724.50	0.31	21.124	606.24	0.29	21.125	498.07	0.27
			21.144	724.81	0.31	21.144	606.66	0.29	21.145	498.54	0.27
			21.164	725.12	0.31	21.164	607.09	0.29	21.165	499.01	0.27
			21.184	725.40	0.31	21.184	607.52	0.29	21.184	499.47	0.27
			21.204	725.70	0.31	21.204	607.93	0.29	21.204	499.92	0.27
			21.223	725.97	0.31	21.223	608.33	0.29	21.224	500.41	0.27
			21.243	726.25	0.32	21.243	608.70	0.29	21.244	500.93	0.27
			21.263	726.53	0.32	21.263	609.06	0.29	21.264	501.38	0.27
			21.283	726.81	0.32	21.283	609.47	0.29	21.284	501.84	0.27
			21.303	727.08	0.32	21.303	609.88	0.29	21.304	502.31	0.27
			21.323	727.41	0.32	21.323	610.26	0.29	21.324	502.80	0.27
			21.343	727.68	0.32	21.343	610.65	0.29	21.344	503.24	0.27
			21.363	727.94	0.32	21.363	611.04	0.29	21.364	503.70	0.27
			21.383	728.21	0.32	21.383	611.43	0.29	21.384	504.18	0.27
			21.403	728.52	0.32	21.403	611.82	0.29	21.404	504.65	0.27
			21.423	728.78	0.32	21.423	612.21	0.29	21.424	505.13	0.27

			21.443	729.03	0.32	21.443	612.63	0.29	21.444	505.60	0.27
			21.463	729.33	0.32	21.463	613.06	0.29	21.464	506.06	0.27
			21.483	729.66	0.32	21.483	613.44	0.29	21.484	506.49	0.27
			21.503	729.92	0.32	21.503	613.82	0.29	21.504	506.90	0.27
			21.523	730.19	0.32	21.523	614.19	0.29	21.524	507.40	0.27
			21.543	730.46	0.32	21.543	614.57	0.29	21.543	507.90	0.27
			21.563	730.71	0.32	21.563	614.96	0.29	21.563	508.37	0.27
			21.583	731.04	0.32	21.583	615.35	0.29	21.583	508.82	0.27
			21.602	731.30	0.32	21.602	615.74	0.29	21.603	509.27	0.27
			21.622	731.56	0.32	21.622	616.13	0.29	21.623	509.72	0.27
			21.642	731.81	0.32	21.642	616.51	0.29	21.643	510.18	0.27
			21.662	732.14	0.32	21.662	616.89	0.29	21.663	510.64	0.27
			21.682	732.38	0.32	21.682	617.27	0.29	21.683	511.08	0.27
			21.702	732.64	0.32	21.702	617.61	0.29	21.703	511.54	0.27
			21.722	732.95	0.32	21.722	617.95	0.29	21.723	512.02	0.27
			21.742	733.19	0.32	21.742	618.30	0.29	21.743	512.45	0.27
			21.762	733.46	0.32	21.762	618.68	0.29	21.763	512.88	0.27
			21.782	733.77	0.32	21.782	619.07	0.29	21.783	513.34	0.27
			21.802	733.99	0.32	21.802	619.44	0.29	21.803	513.79	0.27
			21.822	734.31	0.32	21.822	619.82	0.29	21.823	514.22	0.27
			21.842	734.56	0.32	21.842	620.19	0.29	21.843	514.67	0.27
			21.862	734.82	0.32	21.862	620.52	0.29	21.863	515.12	0.27
			21.882	735.07	0.32	21.882	620.86	0.29	21.883	515.57	0.27
			21.902	735.38	0.32	21.902	621.21	0.29	21.902	516.01	0.27
			21.922	735.62	0.32	21.922	621.58	0.29	21.922	516.45	0.27
			21.942	735.94	0.32	21.942	621.95	0.29	21.942	516.88	0.27
			21.962	736.17	0.32	21.962	622.30	0.29	21.962	517.33	0.27
			21.981	736.40	0.32	21.981	622.65	0.29	21.982	517.79	0.27
			22.001	736.69	0.32	22.001	623.00	0.29	22.002	518.26	0.27
			22.021	737.00	0.32	22.021	623.34	0.29	22.022	518.70	0.27
			22.041	737.26	0.32	22.041	623.69	0.29	22.042	519.13	0.27
			22.061	737.48	0.32	22.061	624.04	0.29	22.062	519.54	0.27
			22.081	737.78	0.32	22.081	624.40	0.29	22.082	519.95	0.27
			22.101	738.03	0.32	22.101	624.76	0.29	22.102	520.39	0.27
			22.121	738.27	0.32	22.121	625.11	0.29	22.122	520.84	0.27
			22.141	738.54	0.32	22.141	625.45	0.29	22.142	521.28	0.27
			22.161	738.82	0.32	22.161	625.78	0.29	22.162	521.71	0.27
			22.181	739.08	0.32	22.181	626.10	0.29	22.182	522.14	0.27
			22.201	739.33	0.32	22.201	626.38	0.29	22.202	522.57	0.27
			22.221	739.61	0.32	22.221	626.67	0.29	22.222	522.98	0.27
			22.241	739.83	0.32	22.241	626.95	0.29	22.242	523.40	0.27
			22.261	740.13	0.32	22.261	627.36	0.29	22.261	523.84	0.27
			22.281	740.36	0.32	22.281	627.77	0.29	22.281	524.30	0.27
			22.301	740.62	0.32	22.301	628.12	0.29	22.301	524.72	0.27
			22.321	740.88	0.32	22.321	628.48	0.29	22.321	525.13	0.27

			22.340	741.14	0.32	22.340	628.87	0.29	22.341	525.54	0.27
			22.360	741.40	0.32	22.360	629.26	0.29	22.361	525.95	0.27
			22.380	741.67	0.32	22.380	629.55	0.29	22.381	526.37	0.27
			22.400	741.95	0.32	22.400	629.95	0.29	22.401	526.81	0.27
			22.420	742.16	0.32	22.420	630.32	0.29	22.421	527.25	0.27
			22.440	742.41	0.32	22.440	630.69	0.29	22.441	527.64	0.27
			22.460	742.69	0.32	22.460	631.07	0.29	22.461	528.03	0.27
			22.480	742.93	0.32	22.480	631.45	0.29	22.481	528.45	0.27
			22.500	743.13	0.32	22.500	631.79	0.29	22.501	528.88	0.27
			22.520	743.42	0.32	22.520	632.17	0.30	22.521	529.29	0.27
			22.540	743.64	0.32	22.540	632.56	0.30	22.541	529.70	0.27
			22.560	743.92	0.32	22.560	632.93	0.30	22.561	530.11	0.27
			22.580	744.20	0.32	22.580	633.24	0.30	22.581	530.51	0.27
			22.600	744.44	0.32	22.600	633.61	0.30	22.601	530.92	0.27
			22.620	744.67	0.32	22.620	633.99	0.30	22.621	531.34	0.27
			22.640	744.93	0.32	22.640	634.36	0.30	22.640	531.76	0.27
			22.660	745.18	0.32	22.660	634.68	0.30	22.660	532.17	0.28
			22.680	745.43	0.32	22.680	635.03	0.30	22.680	532.57	0.28
			22.700	745.68	0.32	22.700	635.45	0.30	22.700	532.98	0.28
			22.719	745.94	0.32	22.719	635.75	0.30	22.720	533.35	0.28
			22.739	746.19	0.32	22.739	636.12	0.30	22.740	533.72	0.28
			22.759	746.39	0.32	22.759	636.51	0.30	22.760	534.11	0.28
			22.779	746.64	0.32	22.779	636.85	0.30	22.780	534.53	0.28
			22.799	746.90	0.32	22.799	637.22	0.30	22.800	534.94	0.28
			22.819	747.15	0.32	22.819	637.58	0.30	22.820	535.33	0.28
			22.839	747.42	0.32	22.839	637.94	0.30	22.840	535.71	0.28
			22.859	747.67	0.32	22.859	638.28	0.30	22.860	536.09	0.28
			22.879	747.89	0.32	22.879	638.65	0.30	22.880	536.48	0.28
			22.899	748.14	0.32	22.899	638.97	0.30	22.900	536.87	0.28
			22.919	748.39	0.32	22.919	639.37	0.30	22.920	537.26	0.28
			22.939	748.64	0.32	22.939	639.69	0.30	22.940	537.66	0.28
			22.959	748.88	0.32	22.959	640.01	0.30	22.960	538.06	0.28
			22.979	749.14	0.32	22.979	640.41	0.30	22.980	538.46	0.28
			22.999	749.38	0.32	22.999	640.72	0.30	22.999	538.85	0.28
			23.019	749.62	0.32	23.019	641.10	0.30	23.019	539.25	0.28
			23.039	749.88	0.32	23.039	641.41	0.30	23.039	539.64	0.28
			23.059	750.14	0.32	23.059	641.77	0.30	23.059	540.01	0.28
			23.079	750.38	0.32	23.079	642.14	0.30	23.079	540.38	0.28
			23.098	750.60	0.32	23.098	642.47	0.30	23.099	540.75	0.28
			23.118	750.80	0.32	23.118	642.80	0.30	23.119	541.14	0.28
			23.138	751.04	0.32	23.138	643.16	0.30	23.139	541.53	0.28
			23.158	751.32	0.32	23.158	643.53	0.30	23.159	541.93	0.28
			23.178	751.59	0.32	23.178	643.81	0.30	23.179	542.31	0.28
			23.198	751.83	0.32	23.198	644.19	0.30	23.199	542.67	0.28
			23.218	752.05	0.32	23.218	644.51	0.30	23.219	543.03	0.28



			23.238	752.28	0.32	23.238	644.90	0.30	23.239	543.39	0.28
			23.258	752.50	0.32	23.258	645.19	0.30	23.259	543.73	0.28
			23.278	752.74	0.32	23.278	645.55	0.30	23.279	544.04	0.28
			23.298	752.96	0.32	23.298	645.89	0.30	23.299	544.36	0.28
			23.318	753.20	0.32	23.318	646.22	0.30	23.319	544.68	0.28
			23.338	753.47	0.32	23.338	646.58	0.30	23.339	545.06	0.28
			23.358	753.69	0.32	23.358	646.88	0.30	23.358	545.50	0.28
			23.378	753.90	0.32	23.378	647.26	0.30	23.378	545.85	0.28
			23.398	754.12	0.32	23.398	647.57	0.30	23.398	546.28	0.28
			23.418	754.35	0.32	23.418	647.86	0.30	23.418	546.62	0.28
			23.438	754.58	0.32	23.438	648.27	0.30	23.438	547.07	0.28
			23.458	754.81	0.32	23.458	648.60	0.30	23.458	547.44	0.28
			23.477	755.02	0.32	23.477	648.92	0.30	23.478	547.84	0.28
			23.497	755.25	0.32	23.497	649.23	0.30	23.498	548.26	0.28
			23.517	755.52	0.32	23.517	649.56	0.30	23.518	548.62	0.28
			23.537	755.75	0.32	23.537	649.89	0.30	23.538	548.98	0.28
			23.557	755.98	0.32	23.557	650.21	0.30	23.558	549.39	0.28
			23.577	756.21	0.32	23.577	650.53	0.30	23.578	549.79	0.28
			23.597	756.43	0.32	23.597	650.93	0.30	23.598	550.18	0.28
			23.617	756.66	0.32	23.617	651.25	0.30	23.618	550.55	0.28
			23.637	756.88	0.32	23.637	651.57	0.30	23.638	550.98	0.28
			23.657	757.09	0.32	23.657	651.89	0.30	23.658	551.39	0.28
			23.677	757.33	0.32	23.677	652.20	0.30	23.678	551.71	0.28
			23.697	757.58	0.32	23.697	652.52	0.30	23.698	552.12	0.28
			23.717	757.79	0.32	23.717	652.84	0.30	23.717	552.52	0.28
			23.737	758.01	0.32	23.737	653.22	0.30	23.737	552.85	0.28
			23.757	758.23	0.32	23.757	653.53	0.30	23.757	553.25	0.28
			23.777	758.44	0.32	23.777	653.82	0.30	23.777	553.66	0.28
			23.797	758.68	0.32	23.797	654.19	0.30	23.797	554.05	0.28
			23.817	758.93	0.32	23.817	654.49	0.30	23.817	554.38	0.28
			23.836	759.15	0.32	23.836	654.78	0.30	23.837	554.79	0.28
			23.856	759.36	0.32	23.856	655.13	0.30	23.857	555.19	0.28
			23.876	759.58	0.32	23.876	655.44	0.30	23.877	555.58	0.28
			23.896	759.78	0.32	23.896	655.73	0.30	23.897	555.92	0.28
			23.916	760.00	0.32	23.916	656.10	0.30	23.917	556.31	0.28
			23.936	760.23	0.32	23.936	656.42	0.30	23.937	556.71	0.28
			23.956	760.44	0.32	23.956	656.75	0.30	23.957	557.10	0.28
			23.976	760.65	0.32	23.976	657.03	0.30	23.977	557.45	0.28
			23.996	760.85	0.32	23.996	657.39	0.30	23.997	557.81	0.28
			24.016	761.07	0.32	24.016	657.67	0.30	24.017	558.20	0.28
			24.036	761.31	0.32	24.036	657.97	0.30	24.037	558.57	0.28
			24.056	761.57	0.32	24.056	658.31	0.30	24.057	558.97	0.28
			24.076	761.77	0.32	24.076	658.59	0.30	24.076	559.35	0.28
			24.096	761.98	0.32	24.096	658.92	0.30	24.096	559.73	0.28
			24.116	762.21	0.32	24.116	659.22	0.30	24.116	560.11	0.28

			24.136	762.43	0.32	24.136	659.56	0.30	24.136	560.46	0.28
			24.156	762.63	0.32	24.156	659.89	0.30	24.156	560.88	0.28
			24.176	762.83	0.32	24.176	660.16	0.30	24.176	561.19	0.28
			24.196	763.03	0.32	24.196	660.46	0.30	24.196	561.61	0.28
			24.215	763.25	0.32	24.215	660.83	0.30	24.216	561.93	0.28
			24.235	763.45	0.32	24.235	661.14	0.30	24.236	562.31	0.28
			24.255	763.65	0.32	24.255	661.43	0.30	24.256	562.69	0.28
			24.275	763.89	0.32	24.275	661.74	0.30	24.276	563.07	0.28
			24.295	764.11	0.32	24.295	662.01	0.30	24.296	563.42	0.28
			24.315	764.31	0.32	24.315	662.35	0.30	24.316	563.79	0.28
			24.335	764.52	0.32	24.335	662.70	0.30	24.336	564.16	0.28
			24.355	764.72	0.32	24.355	662.96	0.30	24.356	564.53	0.28
			24.375	764.92	0.32	24.375	663.28	0.30	24.376	564.90	0.28
			24.395	765.12	0.32	24.395	663.60	0.30	24.396	565.26	0.28
			24.415	765.33	0.32	24.415	663.85	0.30	24.416	565.63	0.28
			24.435	765.57	0.32	24.435	664.19	0.30	24.435	565.99	0.28
			24.455	765.79	0.32	24.455	664.45	0.30	24.455	566.42	0.28
			24.475	765.98	0.32	24.475	664.79	0.30	24.475	566.77	0.28
			24.495	766.17	0.32	24.495	665.11	0.30	24.495	567.11	0.28
			24.515	766.36	0.32	24.515	665.43	0.30	24.515	567.45	0.28
			24.535	766.61	0.32	24.535	665.70	0.30	24.535	567.88	0.28
			24.555	766.83	0.32	24.555	666.01	0.30	24.555	568.18	0.28
			24.575	767.01	0.32	24.575	666.30	0.30	24.575	568.57	0.28
			24.594	767.20	0.32	24.594	666.64	0.30	24.595	568.92	0.28
			24.614	767.39	0.32	24.614	666.93	0.30	24.615	569.34	0.28
			24.634	767.61	0.32	24.634	667.20	0.30	24.635	569.66	0.28
			24.654	767.83	0.32	24.654	667.51	0.30	24.655	570.00	0.28
			24.674	768.02	0.32	24.674	667.82	0.30	24.675	570.41	0.28
			24.694	768.20	0.32	24.694	668.14	0.30	24.695	570.74	0.28
			24.714	768.38	0.32	24.714	668.43	0.30	24.715	571.10	0.28
			24.734	768.59	0.32	24.734	668.72	0.30	24.735	571.44	0.28
			24.754	768.81	0.32	24.754	669.03	0.30	24.755	571.78	0.28
			24.774	769.02	0.32	24.774	669.34	0.30	24.775	572.17	0.28
			24.794	769.24	0.32	24.794	669.63	0.30	24.794	572.50	0.28
			24.814	769.41	0.32	24.814	669.93	0.30	24.814	572.87	0.28
			24.834	769.58	0.32	24.834	670.20	0.30	24.834	573.26	0.28
			24.854	769.78	0.32	24.854	670.50	0.30	24.854	573.58	0.28
			24.874	769.99	0.32	24.874	670.80	0.30	24.874	573.93	0.28
			24.894	770.21	0.32	24.894	671.09	0.30	24.894	574.28	0.28
			24.914	770.42	0.32	24.914	671.38	0.30	24.914	574.68	0.28
			24.934	770.62	0.32	24.934	671.67	0.30	24.934	574.97	0.28
			24.954	770.82	0.32	24.954	671.96	0.30	24.954	575.34	0.28
			24.973	771.01	0.32	24.973	672.22	0.30	24.974	575.67	0.28
			24.993	771.20	0.32	24.993	672.51	0.30	24.994	576.06	0.28
			25.013	771.39	0.33	25.013	672.80	0.30	25.014	576.38	0.28

			25.033	771.58	0.33	25.033	673.08	0.30	25.034	576.73	0.28
			25.053	771.77	0.33	25.053	673.36	0.30	25.054	577.11	0.28
			25.073	771.97	0.33	25.073	673.68	0.30	25.074	577.44	0.28
			25.093	772.16	0.33	25.093	673.99	0.30	25.094	577.84	0.28
			25.113	772.36	0.33	25.113	674.26	0.30	25.114	578.18	0.28
			25.133	772.54	0.33	25.133	674.55	0.30	25.134	578.48	0.28
			25.153	772.70	0.33	25.153	674.83	0.30	25.153	578.87	0.28
			25.173	772.88	0.33	25.173	675.10	0.30	25.173	579.22	0.28
			25.193	773.08	0.33	25.193	675.38	0.30	25.193	579.56	0.28
			25.213	773.27	0.33	25.213	675.69	0.30	25.213	579.89	0.28
			25.233	773.46	0.33	25.233	675.99	0.30	25.233	580.26	0.28
			25.253	773.65	0.33	25.253	676.26	0.30	25.253	580.56	0.28
			25.273	773.83	0.33	25.273	676.51	0.30	25.273	580.95	0.28
			25.293	774.02	0.33	25.293	676.84	0.30	25.293	581.29	0.28
			25.313	774.22	0.33	25.313	677.11	0.30	25.313	581.63	0.28
			25.332	774.36	0.33	25.332	677.39	0.30	25.333	581.94	0.28
			25.352	774.56	0.33	25.352	677.69	0.30	25.353	582.31	0.28
			25.372	774.78	0.33	25.372	677.95	0.30	25.373	582.68	0.28
			25.392	774.96	0.33	25.392	678.27	0.30	25.393	583.01	0.28
			25.412	775.19	0.33	25.412	678.53	0.30	25.413	583.34	0.28
			25.432	775.40	0.33	25.432	678.78	0.30	25.433	583.70	0.28
			25.452	775.60	0.33	25.452	679.05	0.30	25.453	583.99	0.28
			25.472	775.76	0.33	25.472	679.35	0.30	25.473	584.36	0.28
			25.492	775.97	0.33	25.492	679.62	0.30	25.493	584.72	0.28
			25.512	776.18	0.33	25.512	679.90	0.31	25.512	585.05	0.28
			25.532	776.35	0.33	25.532	680.19	0.31	25.532	585.37	0.29
			25.552	776.61	0.33	25.552	680.45	0.31	25.552	585.74	0.29
			25.572	776.76	0.33	25.572	680.76	0.31	25.572	586.03	0.29
			25.592	776.99	0.33	25.592	681.03	0.31	25.592	586.36	0.29
			25.612	777.15	0.33	25.612	681.30	0.31	25.612	586.71	0.29
			25.632	777.38	0.33	25.632	681.60	0.31	25.632	587.06	0.29
			25.652	777.56	0.33	25.652	681.86	0.31	25.652	587.42	0.29
			25.672	777.73	0.33	25.672	682.15	0.31	25.672	587.75	0.29
			25.692	777.95	0.33	25.692	682.42	0.31	25.692	588.08	0.29
			25.711	778.16	0.33	25.711	682.67	0.31	25.712	588.43	0.29
			25.731	778.35	0.33	25.731	682.96	0.31	25.732	588.78	0.29
			25.751	778.52	0.33	25.751	683.22	0.31	25.752	589.07	0.29
			25.771	778.77	0.33	25.771	683.48	0.31	25.772	589.38	0.29
			25.791	778.92	0.33	25.791	683.77	0.31	25.792	589.72	0.29
			25.811	779.14	0.33	25.811	684.00	0.31	25.812	590.09	0.29
			25.831	779.33	0.33	25.831	684.27	0.31	25.832	590.44	0.29
			25.851	779.54	0.33	25.851	684.57	0.31	25.852	590.77	0.29
			25.871	779.72	0.33	25.871	684.86	0.31	25.871	591.09	0.29
			25.891	779.89	0.33	25.891	685.09	0.31	25.891	591.42	0.29
			25.911	780.07	0.33	25.911	685.34	0.31	25.911	591.78	0.29

			25.931	780.28	0.33	25.931	685.62	0.31	25.931	592.06	0.29
			25.951	780.49	0.33	25.951	685.88	0.31	25.951	592.38	0.29
			25.971	780.68	0.33	25.971	686.15	0.31	25.971	592.69	0.29
			25.991	780.85	0.33	25.991	686.43	0.31	25.991	593.02	0.29
			26.011	781.08	0.33	26.011	686.69	0.31	26.011	593.42	0.29
			26.031	781.30	0.33	26.031	686.96	0.31	26.031	593.73	0.29
			26.051	781.44	0.33	26.051	687.22	0.31	26.051	594.00	0.29
			26.071	781.61	0.33	26.071	687.49	0.31	26.071	594.33	0.29
			26.090	781.82	0.33	26.090	687.76	0.31	26.091	594.69	0.29
			26.110	782.02	0.33	26.110	688.02	0.31	26.111	595.03	0.29
			26.130	782.22	0.33	26.130	688.29	0.31	26.131	595.32	0.29
			26.150	782.42	0.33	26.150	688.56	0.31	26.151	595.64	0.29
			26.170	782.60	0.33	26.170	688.81	0.31	26.171	596.01	0.29
			26.190	782.83	0.33	26.190	689.08	0.31	26.191	596.32	0.29
			26.210	782.99	0.33	26.210	689.31	0.31	26.211	596.62	0.29
			26.230	783.14	0.33	26.230	689.53	0.31	26.230	596.92	0.29
			26.250	783.37	0.33	26.250	689.78	0.31	26.250	597.22	0.29
			26.270	783.54	0.33	26.270	690.06	0.31	26.270	597.58	0.29
			26.290	783.75	0.33	26.290	690.37	0.31	26.290	597.91	0.29
			26.310	783.93	0.33	26.310	690.63	0.31	26.310	598.21	0.29
			26.330	784.15	0.33	26.330	690.87	0.31	26.330	598.50	0.29
			26.350	784.33	0.33	26.350	691.08	0.31	26.350	598.83	0.29
			26.370	784.53	0.33	26.370	691.34	0.31	26.370	599.18	0.29
			26.390	784.71	0.33	26.390	691.63	0.31	26.390	599.50	0.29
			26.410	784.87	0.33	26.410	691.86	0.31	26.410	599.85	0.29
			26.430	785.08	0.33	26.430	692.10	0.31	26.430	600.13	0.29
			26.450	785.28	0.33	26.450	692.34	0.31	26.450	600.43	0.29
			26.469	785.45	0.33	26.469	692.61	0.31	26.470	600.73	0.29
			26.489	785.61	0.33	26.489	692.90	0.31	26.490	601.09	0.29
			26.509	785.82	0.33	26.509	693.13	0.31	26.510	601.39	0.29
			26.529	786.00	0.33	26.529	693.36	0.31	26.530	601.72	0.29
			26.549	786.17	0.33	26.549	693.60	0.31	26.550	602.05	0.29
			26.569	786.39	0.33	26.569	693.85	0.31	26.570	602.33	0.29
			26.589	786.57	0.33	26.589	694.12	0.31	26.589	602.64	0.29
			26.609	786.74	0.33	26.609	694.36	0.31	26.609	602.99	0.29
			26.629	786.95	0.33	26.629	694.60	0.31	26.629	603.31	0.29
			26.649	787.11	0.33	26.649	694.82	0.31	26.649	603.60	0.29
			26.669	787.34	0.33	26.669	695.06	0.31	26.669	603.93	0.29
			26.689	787.47	0.33	26.689	695.31	0.31	26.689	604.22	0.29
			26.709	787.69	0.33	26.709	695.56	0.31	26.709	604.52	0.29
			26.729	787.82	0.33	26.729	695.78	0.31	26.729	604.85	0.29
			26.749	788.03	0.33	26.749	696.02	0.31	26.749	605.16	0.29
			26.769	788.23	0.33	26.769	696.27	0.31	26.769	605.45	0.29
			26.789	788.38	0.33	26.789	696.53	0.31	26.789	605.73	0.29
			26.809	788.57	0.33	26.809	696.78	0.31	26.809	606.03	0.29

			26.828	788.79	0.33	26.828	697.01	0.31	26.829	606.36	0.29
			26.848	788.93	0.33	26.848	697.22	0.31	26.849	606.68	0.29
			26.868	789.10	0.33	26.868	697.46	0.31	26.869	606.98	0.29
			26.888	789.32	0.33	26.888	697.71	0.31	26.889	607.29	0.29
			26.908	789.51	0.33	26.908	697.95	0.31	26.909	607.63	0.29
			26.928	789.70	0.33	26.928	698.20	0.31	26.929	607.91	0.29
			26.948	789.83	0.33	26.948	698.41	0.31	26.948	608.20	0.29
			26.968	790.02	0.33	26.968	698.62	0.31	26.968	608.52	0.29
			26.988	790.21	0.33	26.988	698.86	0.31	26.988	608.84	0.29
			27.008	790.41	0.33	27.008	699.09	0.31	27.008	609.10	0.29
			27.028	790.61	0.33	27.028	699.32	0.31	27.028	609.42	0.29
			27.048	790.73	0.33	27.048	699.55	0.31	27.048	609.73	0.29
			27.068	790.94	0.33	27.068	699.78	0.31	27.068	610.05	0.29
			27.088	791.15	0.33	27.088	700.01	0.31	27.088	610.38	0.29
			27.108	791.28	0.33	27.108	700.24	0.31	27.108	610.68	0.29
			27.128	791.45	0.33	27.128	700.46	0.31	27.128	610.94	0.29
			27.148	791.65	0.33	27.148	700.71	0.31	27.148	611.22	0.29
			27.168	791.83	0.33	27.168	700.97	0.31	27.168	611.51	0.29
			27.188	792.02	0.33	27.188	701.21	0.31	27.188	611.82	0.29
			27.207	792.21	0.33	27.207	701.42	0.31	27.208	612.14	0.29
			27.227	792.41	0.33	27.227	701.63	0.31	27.228	612.44	0.29
			27.247	792.53	0.33	27.247	701.83	0.31	27.248	612.75	0.29
			27.267	792.72	0.33	27.267	702.04	0.31	27.268	613.05	0.29
			27.287	792.92	0.33	27.287	702.23	0.31	27.288	613.35	0.29
			27.307	793.10	0.33	27.307	702.42	0.31	27.307	613.64	0.29
			27.327	793.28	0.33	27.327	702.69	0.31	27.327	613.94	0.29
			27.347	793.46	0.33	27.347	702.90	0.31	27.347	614.23	0.29
			27.367	793.64	0.33	27.367	703.18	0.31	27.367	614.52	0.29
			27.387	793.82	0.33	27.387	703.44	0.31	27.387	614.81	0.29
			27.407	793.99	0.33	27.407	703.63	0.31	27.407	615.11	0.29
			27.427	794.17	0.33	27.427	703.89	0.31	27.427	615.40	0.29
			27.447	794.34	0.33	27.447	704.15	0.31	27.447	615.72	0.29
			27.467	794.51	0.33	27.467	704.33	0.31	27.467	616.00	0.29
			27.487	794.65	0.33	27.487	704.62	0.31	27.487	616.23	0.29
			27.507	794.80	0.33	27.507	704.87	0.31	27.507	616.57	0.29
			27.527	794.99	0.33	27.527	705.08	0.31	27.527	616.87	0.29
			27.547	795.16	0.33	27.547	705.31	0.31	27.547	617.14	0.29
			27.567	795.34	0.33	27.567	705.56	0.31	27.567	617.42	0.29
			27.586	795.53	0.33	27.586	705.80	0.31	27.587	617.72	0.29
			27.606	795.71	0.33	27.606	705.99	0.31	27.607	618.03	0.29
			27.626	795.89	0.33	27.626	706.25	0.31	27.627	618.29	0.29
			27.646	796.08	0.33	27.646	706.50	0.31	27.647	618.56	0.29
			27.666	796.25	0.33	27.666	706.77	0.31	27.666	618.84	0.29
			27.686	796.43	0.33	27.686	706.95	0.31	27.686	619.17	0.29
			27.706	796.60	0.33	27.706	707.19	0.31	27.706	619.47	0.29

			27.726	796.77	0.33	27.726	707.46	0.31	27.726	619.75	0.29
			27.746	796.94	0.33	27.746	707.72	0.31	27.746	620.01	0.29
			27.766	797.10	0.33	27.766	707.92	0.31	27.766	620.32	0.29
			27.786	797.28	0.33	27.786	708.16	0.31	27.786	620.62	0.29
			27.806	797.45	0.33	27.806	708.40	0.31	27.806	620.88	0.29
			27.826	797.63	0.33	27.826	708.63	0.31	27.826	621.16	0.29
			27.846	797.80	0.33	27.846	708.84	0.31	27.846	621.42	0.29
			27.866	797.98	0.33	27.866	709.08	0.31	27.866	621.68	0.29
			27.886	798.15	0.33	27.886	709.34	0.31	27.886	622.00	0.29
			27.906	798.32	0.33	27.906	709.55	0.31	27.906	622.30	0.29
			27.926	798.49	0.33	27.926	709.80	0.31	27.926	622.55	0.29
			27.946	798.66	0.33	27.946	710.03	0.31	27.946	622.84	0.29
			27.965	798.84	0.33	27.965	710.28	0.31	27.966	623.15	0.29
			27.985	799.01	0.33	27.985	710.49	0.31	27.986	623.41	0.29
			28.005	799.18	0.33	28.005	710.72	0.31	28.006	623.68	0.29
			28.025	799.35	0.33	28.025	710.93	0.31	28.025	623.96	0.29
			28.045	799.52	0.33	28.045	711.18	0.31	28.045	624.21	0.29
			28.065	799.67	0.33	28.065	711.42	0.31	28.065	624.47	0.29
			28.085	799.82	0.33	28.085	711.63	0.31	28.085	624.77	0.29
			28.105	799.98	0.33	28.105	711.85	0.31	28.105	625.07	0.29
			28.125	800.20	0.33	28.125	712.09	0.31	28.125	625.38	0.29
			28.145	800.38	0.33	28.145	712.35	0.31	28.145	625.62	0.29
			28.165	800.54	0.33	28.165	712.52	0.31	28.165	625.87	0.29
			28.185	800.69	0.33	28.185	712.82	0.31	28.185	626.15	0.29
			28.205	800.84	0.33	28.205	712.98	0.31	28.205	626.44	0.29
			28.225	800.99	0.33	28.225	713.22	0.31	28.225	626.72	0.29
			28.245	801.19	0.33	28.245	713.45	0.31	28.245	626.95	0.29
			28.265	801.38	0.33	28.265	713.68	0.31	28.265	627.19	0.29
			28.285	801.53	0.33	28.285	713.91	0.31	28.285	627.47	0.29
			28.305	801.69	0.33	28.305	714.15	0.31	28.305	627.74	0.29
			28.324	801.84	0.33	28.324	714.37	0.31	28.325	628.01	0.29
			28.344	801.99	0.33	28.344	714.61	0.31	28.345	628.29	0.29
			28.364	802.15	0.33	28.364	714.78	0.31	28.365	628.56	0.29
			28.384	802.32	0.33	28.384	715.07	0.31	28.384	628.83	0.29
			28.404	802.54	0.33	28.404	715.30	0.31	28.404	629.10	0.29
			28.424	802.68	0.33	28.424	715.51	0.31	28.424	629.39	0.29
			28.444	802.84	0.33	28.444	715.73	0.31	28.444	629.67	0.29
			28.464	803.00	0.33	28.464	715.96	0.31	28.464	629.93	0.29
			28.484	803.15	0.33	28.484	716.17	0.31	28.484	630.19	0.29
			28.504	803.30	0.33	28.504	716.37	0.31	28.504	630.44	0.29
			28.524	803.46	0.33	28.524	716.58	0.31	28.524	630.69	0.29
			28.544	803.66	0.33	28.544	716.80	0.31	28.544	630.93	0.29
			28.564	803.83	0.33	28.564	717.03	0.31	28.564	631.21	0.29
			28.584	803.98	0.33	28.584	717.25	0.31	28.584	631.49	0.29
			28.604	804.12	0.33	28.604	717.52	0.31	28.604	631.74	0.29

			28.624	804.29	0.33	28.624	717.71	0.31	28.624	631.99	0.29
			28.644	804.49	0.33	28.644	717.92	0.31	28.644	632.24	0.29
			28.664	804.64	0.33	28.664	718.18	0.31	28.664	632.49	0.29
			28.684	804.79	0.33	28.684	718.39	0.31	28.684	632.76	0.29
			28.703	804.93	0.33	28.703	718.59	0.31	28.704	633.04	0.29
			28.723	805.08	0.33	28.723	718.76	0.31	28.724	633.30	0.29
			28.743	805.28	0.33	28.743	719.03	0.31	28.743	633.56	0.29
			28.763	805.45	0.33	28.763	719.22	0.31	28.763	633.80	0.29
			28.783	805.59	0.33	28.783	719.47	0.31	28.783	634.04	0.29
			28.803	805.73	0.33	28.803	719.65	0.31	28.803	634.29	0.29
			28.823	805.90	0.33	28.823	719.90	0.31	28.823	634.55	0.29
			28.843	806.10	0.33	28.843	720.10	0.31	28.843	634.80	0.29
			28.863	806.23	0.33	28.863	720.34	0.31	28.863	635.05	0.29
			28.883	806.37	0.33	28.883	720.53	0.31	28.883	635.31	0.30
			28.903	806.57	0.33	28.903	720.74	0.31	28.903	635.57	0.30
			28.923	806.72	0.33	28.923	720.96	0.31	28.923	635.84	0.30
			28.943	806.86	0.33	28.943	721.16	0.31	28.943	636.06	0.30
			28.963	807.02	0.33	28.963	721.40	0.31	28.963	636.27	0.30
			28.983	807.22	0.33	28.983	721.59	0.31	28.983	636.46	0.30
			29.003	807.35	0.33	29.003	721.84	0.31	29.003	636.75	0.30
			29.023	807.49	0.33	29.023	722.02	0.31	29.023	637.01	0.30
			29.043	807.67	0.33	29.043	722.28	0.31	29.043	637.31	0.30
			29.063	807.83	0.33	29.063	722.49	0.31	29.063	637.55	0.30
			29.082	807.99	0.33	29.082	722.68	0.31	29.083	637.78	0.30
			29.102	808.18	0.33	29.102	722.91	0.31	29.102	638.09	0.30
			29.122	808.31	0.33	29.122	723.13	0.31	29.122	638.29	0.30
			29.142	808.44	0.33	29.142	723.28	0.31	29.142	638.62	0.30
			29.162	808.63	0.33	29.162	723.49	0.31	29.162	638.84	0.30
			29.182	808.79	0.33	29.182	723.72	0.31	29.182	639.13	0.30
			29.202	808.93	0.33	29.202	723.96	0.31	29.202	639.33	0.30
			29.222	809.13	0.33	29.222	724.13	0.31	29.222	639.59	0.30
			29.242	809.26	0.33	29.242	724.36	0.31	29.242	639.89	0.30
			29.262	809.43	0.33	29.262	724.59	0.31	29.262	640.11	0.30
			29.282	809.59	0.33	29.282	724.74	0.31	29.282	640.40	0.30
			29.302	809.73	0.33	29.302	724.98	0.31	29.302	640.67	0.30
			29.322	809.92	0.33	29.322	725.22	0.31	29.322	640.86	0.30
			29.342	810.05	0.33	29.342	725.40	0.31	29.342	641.15	0.30
			29.362	810.17	0.33	29.362	725.58	0.31	29.362	641.40	0.30
			29.382	810.33	0.33	29.382	725.81	0.31	29.382	641.59	0.30
			29.402	810.52	0.33	29.402	726.03	0.31	29.402	641.86	0.30
			29.422	810.65	0.33	29.422	726.24	0.31	29.422	642.13	0.30
			29.441	810.83	0.33	29.441	726.40	0.31	29.442	642.38	0.30
			29.461	810.99	0.33	29.461	726.63	0.32	29.462	642.62	0.30
			29.481	811.12	0.33	29.481	726.83	0.32	29.481	642.85	0.30
			29.501	811.27	0.33	29.501	727.04	0.32	29.501	643.09	0.30

			29.521	811.47	0.33	29.521	727.24	0.32	29.521	643.39	0.30
			29.541	811.59	0.33	29.541	727.43	0.32	29.541	643.58	0.30
			29.561	811.72	0.33	29.561	727.62	0.32	29.561	643.80	0.30
			29.581	811.87	0.33	29.581	727.79	0.32	29.581	644.07	0.30
			29.601	812.05	0.33	29.601	727.99	0.32	29.601	644.33	0.30
			29.621	812.17	0.33	29.621	728.21	0.32	29.621	644.57	0.30
			29.641	812.33	0.33	29.641	728.41	0.32	29.641	644.81	0.30
			29.661	812.51	0.33	29.661	728.61	0.32	29.661	645.10	0.30
			29.681	812.69	0.33	29.681	728.80	0.32	29.681	645.33	0.30
			29.701	812.80	0.33	29.701	729.03	0.32	29.701	645.59	0.30
			29.721	812.96	0.33	29.721	729.29	0.32	29.721	645.87	0.30
			29.741	813.12	0.33	29.741	729.49	0.32	29.741	646.09	0.30
			29.761	813.23	0.33	29.761	729.68	0.32	29.761	646.33	0.30
			29.781	813.40	0.33	29.781	729.86	0.32	29.781	646.57	0.30
			29.801	813.54	0.33	29.801	730.03	0.32	29.801	646.83	0.30
			29.820	813.66	0.33	29.820	730.27	0.32	29.821	647.08	0.30
			29.840	813.83	0.33	29.840	730.45	0.32	29.840	647.36	0.30
			29.860	813.99	0.33	29.860	730.69	0.32	29.860	647.61	0.30
			29.880	814.16	0.33	29.880	730.86	0.32	29.880	647.85	0.30
			29.900	814.32	0.33	29.900	731.04	0.32	29.900	648.09	0.30
			29.920	814.45	0.33	29.920	731.29	0.32	29.920	648.33	0.30
			29.940	814.57	0.33	29.940	731.45	0.32	29.940	648.58	0.30
			29.960	814.73	0.33	29.960	731.72	0.32	29.960	648.81	0.30
			29.980	814.89	0.33	29.980	731.90	0.32	29.980	649.05	0.30
			30.000	815.04	0.33	30.000	732.06	0.32	30.000	649.29	0.30

Combined standard uncertainties:

$$u(T) = 0.006 \text{ K}; u(p) = 0.0020 \text{ MPa for } p < 6 \text{ MPa}; u(p) = 0.024 \text{ MPa for } 6 \text{ MPa} \leq p \leq 70 \text{ MPa}$$

$$u(x_{\text{CO}_2}) = 0.0003; u(x_{\text{SO}_2}) = 0.0002; u(x_{\text{CH}_4}) = 0.0002$$



**Table S2.** Reduced  $p\rho T$  experimental data for the  $\text{CO}_2+\text{SO}_2+\text{CH}_4$  mixtures. ( $u(\rho)$ : Combined standard uncertainty)

$x_{\text{CO}_2} = 0.9343; x_{\text{SO}_2} = 0.0472; x_{\text{CH}_4} = 0.0185$											
$T= 263.13\pm 0.03 \text{ K}$			$T= 273.16\pm 0.02 \text{ K}$			$T= 293.15\pm 0.02 \text{ K}$			$T= 304.21\pm 0.04 \text{ K}$		
$p$ (MPa)	$\rho$ ( $\text{kg}\cdot\text{m}^{-3}$ )	$u(\rho)$ ( $\text{kg}\cdot\text{m}^{-3}$ )	$p$ (MPa)	$\rho$ ( $\text{kg}\cdot\text{m}^{-3}$ )	$u(\rho)$ ( $\text{kg}\cdot\text{m}^{-3}$ )	$p$ (MPa)	$\rho$ ( $\text{kg}\cdot\text{m}^{-3}$ )	$u(\rho)$ ( $\text{kg}\cdot\text{m}^{-3}$ )	$p$ (MPa)	$\rho$ ( $\text{kg}\cdot\text{m}^{-3}$ )	$u(\rho)$ ( $\text{kg}\cdot\text{m}^{-3}$ )
0.100	2.06	0.23	0.100	2.02	0.23	0.100	1.91	0.23	0.100	1.89	0.23
0.306	6.37	0.23	0.364	7.40	0.23	0.487	9.26	0.23	0.520	9.55	0.23
0.512	10.85	0.23	0.628	12.98	0.23	0.875	16.88	0.23	0.939	17.56	0.23
0.717	15.45	0.23	0.892	18.83	0.23	1.262	24.99	0.23	1.389	26.50	0.23
0.923	20.27	0.23	1.180	25.44	0.23	1.650	33.59	0.23	1.809	35.30	0.23
1.129	25.53	0.23	1.445	31.88	0.23	2.037	42.72	0.23	2.228	44.61	0.23
1.335	30.84	0.23	1.709	38.70	0.23	2.425	52.49	0.23	2.648	54.49	0.23
1.540	36.51	0.23	1.973	45.99	0.23	2.812	62.98	0.23	3.097	65.86	0.23
2.984	991.93	0.38	2.237	53.91	0.23	3.200	74.11	0.23	3.517	77.36	0.23
3.357	994.26	0.38	3.814	942.74	0.37	3.587	86.52	0.23	3.937	89.85	0.23
3.785	996.42	0.38	4.210	946.11	0.37	3.975	100.35	0.23	4.356	103.55	0.23
4.196	998.67	0.38	4.624	949.70	0.37	4.362	116.60	0.23	4.806	120.07	0.23
4.606	1001.05	0.38	5.020	952.78	0.37	5.743	811.46	0.34	5.226	137.98	0.23
5.034	1003.35	0.38	5.434	955.84	0.37	6.124	818.76	0.34	5.645	159.04	0.24
5.444	1005.50	0.38	5.831	958.45	0.37	6.505	825.49	0.34	6.065	185.82	0.24
5.854	1007.53	0.38	6.245	961.02	0.37	6.902	832.95	0.34	7.190	691.38	0.52
6.283	1009.64	0.38	6.641	963.64	0.37	7.283	839.53	0.35	7.559	720.98	0.33
6.693	1011.66	0.38	7.055	966.37	0.37	7.664	845.65	0.35	7.944	738.41	0.33
7.103	1013.56	0.38	7.451	968.80	0.37	8.045	851.17	0.35	8.312	750.15	0.33
7.532	1015.60	0.39	7.865	971.39	0.38	8.442	856.58	0.35	8.697	759.83	0.33
7.942	1017.48	0.39	8.261	973.75	0.38	8.823	861.35	0.35	9.066	769.81	0.33
8.352	1019.34	0.39	8.675	976.17	0.38	9.204	865.87	0.35	9.451	778.55	0.33
8.780	1021.26	0.39	9.071	978.47	0.38	9.585	870.14	0.35	9.819	785.63	0.33
9.190	1023.03	0.39	9.485	980.70	0.38	9.982	874.20	0.35	10.204	793.34	0.34
9.600	1024.78	0.39	9.882	982.77	0.38	10.363	877.91	0.35	10.573	800.31	0.34
10.029	1026.53	0.39	10.296	984.79	0.38	10.744	881.39	0.35	10.958	806.94	0.34
10.439	1028.20	0.39	10.692	986.91	0.38	11.141	884.86	0.35	11.326	812.91	0.34
10.849	1029.86	0.39	11.106	988.97	0.38	11.522	888.00	0.36	11.711	818.69	0.34
11.278	1031.58	0.39	11.502	991.00	0.38	11.903	891.30	0.36	12.080	823.91	0.34
11.688	1033.12	0.39	11.916	993.11	0.38	12.284	894.68	0.36	12.465	829.02	0.34
12.098	1034.66	0.39	12.312	995.00	0.38	12.681	898.15	0.36	12.833	833.72	0.34
12.526	1036.19	0.39	12.726	997.01	0.38	13.062	901.31	0.36	13.218	838.29	0.34
12.936	1037.70	0.39	13.122	998.90	0.38	13.443	904.37	0.36	13.587	842.46	0.35
13.346	1039.26	0.39	13.536	1000.87	0.38	13.824	907.40	0.36	13.972	846.44	0.35
13.775	1040.87	0.39	13.933	1002.65	0.38	14.221	910.39	0.36	14.341	850.14	0.35

14.185	1042.37	0.39	14.347	1004.41	0.38	14.602	913.18	0.36	14.725	853.98	0.35
14.595	1043.84	0.39	14.743	1006.12	0.38	14.983	915.93	0.36	15.094	857.48	0.35
15.024	1045.38	0.39	15.157	1007.76	0.38	15.364	918.57	0.36	15.479	861.18	0.35
15.434	1046.85	0.39	15.553	1009.45	0.38	15.761	921.16	0.36	15.848	864.58	0.35
15.844	1048.26	0.39	15.967	1011.21	0.38	16.142	923.59	0.36	16.232	867.96	0.35
16.273	1049.78	0.39	16.363	1012.86	0.38	16.523	925.94	0.36	16.601	871.12	0.35
16.683	1051.13	0.39	16.777	1014.55	0.39	16.920	928.33	0.36	16.986	874.36	0.35
17.093	1052.56	0.39	17.173	1016.14	0.39	17.301	930.46	0.36	17.355	877.48	0.35
17.521	1054.02	0.39	17.587	1017.82	0.39	17.682	932.78	0.37	17.739	880.65	0.35
17.931	1055.33	0.39	17.984	1019.42	0.39	18.063	935.14	0.37	18.108	883.50	0.35
18.341	1056.64	0.40	18.398	1020.99	0.39	18.460	937.44	0.37	18.493	886.41	0.35
18.770	1058.04	0.40	18.794	1022.56	0.39	18.841	939.64	0.37	18.862	889.14	0.36
19.180	1059.39	0.40	19.208	1024.10	0.39	19.222	941.82	0.37	19.246	891.96	0.36
19.590	1060.70	0.40	19.604	1025.60	0.39	19.603	943.89	0.37	19.615	894.57	0.36
20.000	1061.95	0.40	20.000	1027.01	0.39	20.000	946.06	0.37	20.000	897.25	0.36

$u(T) = 0.006$  K;  $u(p) = 0.0020$  MPa for  $p < 6$  MPa;  $u(p) = 0.024$  MPa for  $6 \text{ MPa} \leq p \leq 70$  MPa

$u(x_{\text{CO}_2}) = 0.0003$ ;  $u(x_{\text{SO}_2}) = 0.0002$ ;  $u(x_{\text{CH}_4}) = 0.0002$

**Table S2 (Continued).** Reduced  $p\rho T$  experimental data for the  $\text{CO}_2+\text{SO}_2+\text{CH}_4$  mixtures. ( $u(\rho)$ ):

Combined standard uncertainty)

$x_{\text{CO}_2} = 0.9343; x_{\text{SO}_2} = 0.0472; x_{\text{CH}_4} = 0.0185$											
$T = 313.16 \pm 0.02 \text{ K}$			$T = 333.16 \pm 0.02 \text{ K}$			$T = 353.15 \pm 0.01 \text{ K}$			$T = 373.14 \pm 0.04 \text{ K}$		
$p$ (MPa)	$\rho$ ( $\text{kg}\cdot\text{m}^{-3}$ )	$u(\rho)$ ( $\text{kg}\cdot\text{m}^{-3}$ )	$p$ (MPa)	$\rho$ ( $\text{kg}\cdot\text{m}^{-3}$ )	$u(\rho)$ ( $\text{kg}\cdot\text{m}^{-3}$ )	$p$ (MPa)	$\rho$ ( $\text{kg}\cdot\text{m}^{-3}$ )	$u(\rho)$ ( $\text{kg}\cdot\text{m}^{-3}$ )	$p$ (MPa)	$\rho$ ( $\text{kg}\cdot\text{m}^{-3}$ )	$u(\rho)$ ( $\text{kg}\cdot\text{m}^{-3}$ )
0.102	1.88	0.23	0.101	1.80	0.24	0.100	1.56	0.23	0.100	1.47	0.22
0.501	8.87	0.23	0.720	11.88	0.22	0.718	11.02	0.22	0.718	10.41	0.22
0.920	16.46	0.22	1.318	22.32	0.22	1.317	20.71	0.22	1.317	19.47	0.22
1.319	24.02	0.22	1.936	33.58	0.22	1.935	30.99	0.22	1.935	29.10	0.22
1.718	31.95	0.23	2.555	45.45	0.22	2.553	41.92	0.22	2.553	39.03	0.22
2.136	40.76	0.23	3.153	57.63	0.23	3.152	52.80	0.22	3.152	48.99	0.22
2.535	49.65	0.23	3.771	71.04	0.23	3.770	64.59	0.22	3.770	59.60	0.22
2.954	59.59	0.23	4.370	84.99	0.23	4.369	76.66	0.23	4.369	70.28	0.22
3.353	69.66	0.23	4.988	100.48	0.23	4.987	89.65	0.23	4.987	81.84	0.22
3.752	80.40	0.23	5.606	117.25	0.23	5.605	103.39	0.23	5.605	93.74	0.23
4.171	92.05	0.23	6.205	135.05	0.23	6.204	117.47	0.23	6.204	105.75	0.23
4.570	103.71	0.23	6.823	155.42	0.23	6.822	132.90	0.23	6.822	118.62	0.23
4.989	116.85	0.23	7.421	177.52	0.24	7.420	148.86	0.23	7.420	131.60	0.23
5.388	130.58	0.23	8.040	203.63	0.24	8.039	166.40	0.23	8.039	145.60	0.23
5.786	145.91	0.23	8.658	233.99	0.24	8.657	185.31	0.23	8.657	160.29	0.23
6.205	165.02	0.24	9.256	269.10	0.25	9.256	204.98	0.24	9.256	175.14	0.23
6.604	188.26	0.24	9.875	311.72	0.26	9.874	226.85	0.24	9.874	191.11	0.23
7.023	220.86	0.25	10.473	359.93	0.26	10.472	249.73	0.24	10.472	207.34	0.23
7.422	264.43	0.26	11.091	417.34	0.27	11.091	275.09	0.25	11.091	224.68	0.24
7.821	336.91	0.28	11.710	472.20	0.28	11.709	302.33	0.25	11.709	242.83	0.24
8.240	480.01	0.34	12.308	516.48	0.29	12.307	330.29	0.25	12.307	261.03	0.24
8.639	572.04	0.34	12.926	554.80	0.29	12.926	360.13	0.26	12.926	280.53	0.24
9.057	626.94	0.32	13.525	584.51	0.30	13.524	388.36	0.26	13.524	299.91	0.25
9.456	657.63	0.32	14.143	612.26	0.30	14.142	417.74	0.27	14.142	320.43	0.25
9.855	680.32	0.32	14.761	634.70	0.30	14.761	446.97	0.27	14.761	341.34	0.25
10.274	698.92	0.32	15.360	652.39	0.31	15.359	473.69	0.27	15.359	361.34	0.25
10.673	713.63	0.32	15.978	668.80	0.31	15.978	498.66	0.28	15.978	381.52	0.26
11.092	726.72	0.32	16.577	683.55	0.31	16.576	519.81	0.28	16.576	401.28	0.26
11.491	737.81	0.32	17.195	697.02	0.31	17.194	541.54	0.28	17.194	420.78	0.26
11.890	747.80	0.33	17.813	709.14	0.32	17.813	561.54	0.29	17.813	439.56	0.27
12.309	757.27	0.33	18.412	719.51	0.32	18.411	579.18	0.29	18.411	457.95	0.27
12.707	765.44	0.33	19.030	729.38	0.32	19.029	595.47	0.29	19.029	475.80	0.27
13.126	773.33	0.33	19.628	738.85	0.32	19.628	609.37	0.30	19.628	492.10	0.27
13.525	780.16	0.33	20.247	747.94	0.32	20.246	623.54	0.30	20.246	508.36	0.28
13.924	786.43	0.33	20.865	756.42	0.33	20.864	636.63	0.30	20.864	523.78	0.28

14.343	792.31	0.33	21.463	764.09	0.33	21.463	647.99	0.30	21.463	537.82	0.28
14.742	797.98	0.34	22.082	771.51	0.33	22.081	659.16	0.31	22.081	551.76	0.28
15.161	803.79	0.34	22.680	778.18	0.33	22.680	669.47	0.31	22.680	564.50	0.29
15.560	809.01	0.34	23.298	784.51	0.33	23.298	679.19	0.31	23.298	577.01	0.29
15.959	814.03	0.34	23.917	790.96	0.33	23.916	688.63	0.31	23.916	588.75	0.29
16.377	819.04	0.34	24.515	797.05	0.33	24.515	696.96	0.31	24.515	599.45	0.29
16.776	823.55	0.34	25.133	802.94	0.34	25.133	705.38	0.31	25.133	609.66	0.29
17.195	828.03	0.34	25.732	808.44	0.34	25.731	713.15	0.32	25.731	619.95	0.30
17.594	832.00	0.34	26.350	813.92	0.34	26.350	720.86	0.32	26.350	629.97	0.30
17.993	835.81	0.34	26.968	819.04	0.34	26.968	728.18	0.32	26.968	639.18	0.30
18.412	839.88	0.34	27.567	823.74	0.34	27.567	734.95	0.32	27.567	647.47	0.30
18.811	843.69	0.34	28.185	828.46	0.34	28.185	741.67	0.32	28.185	655.63	0.30
19.230	847.65	0.35	28.783	833.02	0.34	28.783	747.93	0.32	28.783	663.43	0.30
19.628	851.21	0.35	29.402	837.61	0.34	29.402	754.12	0.32	29.402	671.44	0.31
20.027	854.70	0.35	30.000	841.98	0.34	30.000	759.92	0.33	30.000	678.57	0.31

Combined standard uncertainties:

$u(T) = 0.006$  K;  $u(p) = 0.0020$  MPa for  $p < 6$  MPa;  $u(p) = 0.024$  MPa for  $6 \text{ MPa} \leq p \leq 70$  MPa

$u(x_{\text{CO}_2}) = 0.0003$ ;  $u(x_{\text{SO}_2}) = 0.0002$ ;  $u(x_{\text{CH}_4}) = 0.0002$

**Table S2 (Continued).** Reduced  $p\rho T$  experimental data for the CO<sub>2</sub>+SO<sub>2</sub>+CH<sub>4</sub> mixtures ( $u(\rho)$ ):  
Combined standard uncertainty).

$x_{\text{CO}_2} = 0.9837; x_{\text{SO}_2} = 0.0009; x_{\text{CH}_4} = 0.0154$											
$T = 263.16 \pm 0.03 \text{ K}$			$T = 273.15 \pm 0.03 \text{ K}$			$T = 293.15 \pm 0.03 \text{ K}$			$T = 304.21 \pm 0.04 \text{ K}$		
$p$ (MPa)	$\rho$ (kg.m <sup>-3</sup> )	$u(\rho)$ (kg.m <sup>-3</sup> )	$p$ (MPa)	$\rho$ (kg.m <sup>-3</sup> )	$u(\rho)$ (kg.m <sup>-3</sup> )	$p$ (MPa)	$\rho$ (kg.m <sup>-3</sup> )	$u(\rho)$ (kg.m <sup>-3</sup> )	$p$ (MPa)	$\rho$ (kg.m <sup>-3</sup> )	$u(\rho)$ (kg.m <sup>-3</sup> )
0.100	1.96	0.22	0.100	2.02	0.23	0.100	1.73	0.22	0.100	1.73	0.22
0.462	9.54	0.22	0.535	10.70	0.22	0.639	11.83	0.22	0.558	9.84	0.22
0.824	17.59	0.22	0.948	19.54	0.22	1.150	21.97	0.22	1.016	18.37	0.22
1.186	26.15	0.22	1.383	29.43	0.22	1.690	33.32	0.22	1.474	27.28	0.22
1.574	36.08	0.22	1.795	39.70	0.22	2.201	45.03	0.22	1.933	36.67	0.22
1.936	46.22	0.22	2.230	51.61	0.22	2.740	58.41	0.22	2.391	46.68	0.22
2.298	57.54	0.22	2.665	64.77	0.22	3.251	72.38	0.22	2.849	57.26	0.22
2.660	70.95	0.22	3.078	79.18	0.22	3.790	88.89	0.22	3.307	68.69	0.22
3.521	968.24	0.37	3.513	97.54	0.22	4.301	106.93	0.22	3.765	80.98	0.22
3.924	970.61	0.37	4.050	912.78	0.36	4.841	129.60	0.23	4.223	94.44	0.22
4.327	973.34	0.37	4.445	916.23	0.36	5.352	157.33	0.23	4.682	109.31	0.22
4.730	975.78	0.37	4.839	919.66	0.36	5.789	191.49	0.21	5.140	126.09	0.23
5.134	978.11	0.37	5.253	923.33	0.36	6.409	766.23	0.32	5.598	145.29	0.23
5.519	980.24	0.37	5.647	926.62	0.36	6.783	779.13	0.33	6.056	168.00	0.23
5.922	982.46	0.38	6.042	929.76	0.36	7.140	788.61	0.33	6.514	196.64	0.23
6.325	984.70	0.38	6.436	932.71	0.36	7.514	797.24	0.33	6.978	240.92	0.23
6.729	986.89	0.38	6.849	935.83	0.36	7.889	804.58	0.33	7.122	258.52	0.23
7.132	989.03	0.38	7.244	938.68	0.37	8.246	810.68	0.33	7.286	290.79	0.24
7.535	991.16	0.38	7.638	941.34	0.37	8.620	816.45	0.34	7.429	336.82	0.22
7.938	993.13	0.38	8.033	944.03	0.37	8.994	822.62	0.34	7.590	487.96	0.25
8.342	995.04	0.38	8.446	946.79	0.37	9.351	828.13	0.34	7.729	588.30	0.28
8.745	996.94	0.38	8.841	949.38	0.37	9.726	833.35	0.34	7.889	624.32	0.29
9.148	998.88	0.38	9.235	951.95	0.37	10.083	838.16	0.34	8.028	644.01	0.30
9.551	1000.72	0.38	9.630	954.39	0.37	10.457	842.89	0.34	8.466	679.39	0.30
9.955	1002.63	0.38	10.043	956.81	0.37	10.831	847.48	0.34	8.925	701.51	0.31
10.340	1004.36	0.38	10.438	959.07	0.37	11.189	851.59	0.34	9.363	718.43	0.31
10.743	1006.13	0.38	10.832	961.26	0.37	11.563	855.72	0.34	9.801	732.31	0.32
11.146	1007.80	0.38	11.227	963.53	0.37	11.920	859.41	0.35	10.259	745.65	0.32
11.550	1009.46	0.38	11.640	965.85	0.37	12.294	863.01	0.35	10.697	756.47	0.32
11.953	1011.24	0.38	12.035	968.03	0.37	12.668	866.31	0.35	11.156	766.22	0.32
12.356	1012.96	0.38	12.429	970.11	0.37	13.026	869.75	0.35	11.594	774.09	0.33
12.759	1014.66	0.38	12.824	972.15	0.37	13.400	873.22	0.35	12.032	781.18	0.33
13.163	1016.32	0.38	13.237	974.24	0.37	13.757	876.42	0.35	12.470	788.67	0.33
13.566	1017.97	0.38	13.631	976.11	0.37	14.131	879.60	0.35	12.928	795.68	0.33
13.969	1019.60	0.38	14.026	978.07	0.37	14.506	882.74	0.35	13.367	802.07	0.33

14.372	1021.20	0.39	14.420	980.03	0.38	14.863	885.64	0.35	13.805	808.14	0.33
14.776	1022.67	0.39	14.834	981.97	0.38	15.237	888.62	0.35	14.243	813.84	0.34
15.179	1024.19	0.39	15.228	983.89	0.38	15.594	891.33	0.35	14.681	819.30	0.34
15.582	1025.65	0.39	15.623	985.69	0.38	15.969	894.04	0.35	15.140	824.71	0.34
15.986	1027.16	0.39	16.017	987.48	0.38	16.343	896.70	0.35	15.578	829.30	0.34
16.389	1028.66	0.39	16.431	989.30	0.38	16.700	899.26	0.36	16.016	833.65	0.34
16.792	1030.03	0.39	16.825	990.93	0.38	17.074	901.89	0.36	16.454	838.20	0.34
17.195	1031.45	0.39	17.220	992.58	0.38	17.431	904.40	0.36	16.892	842.51	0.34
17.599	1032.84	0.39	17.614	994.28	0.38	17.806	906.92	0.36	17.351	846.82	0.34
18.002	1034.22	0.39	18.027	996.07	0.38	18.180	909.40	0.36	17.789	850.90	0.34
18.405	1035.62	0.39	18.422	997.74	0.38	18.537	911.66	0.36	18.227	854.79	0.34
18.790	1036.92	0.39	18.816	999.38	0.38	18.911	914.00	0.36	18.665	858.54	0.35
19.193	1038.31	0.39	19.211	1000.96	0.38	19.269	916.19	0.36	19.124	862.40	0.35
19.597	1039.70	0.39	19.605	1002.56	0.38	19.643	918.39	0.36	19.562	865.89	0.35
20.000	1041.09	0.39	20.000	1004.14	0.38	20.000	920.46	0.36	20.000	869.23	0.35

Combined standard uncertainties:

$u(T) = 0.006$  K;  $u(p) = 0.0020$  MPa for  $p < 6$  MPa;  $u(p) = 0.024$  MPa for  $6 \text{ MPa} \leq p \leq 70$  MPa

$u(x_{\text{CO}_2}) = 0.0003$ ;  $u(x_{\text{SO}_2}) = 0.0002$ ;  $u(x_{\text{CH}_4}) = 0.0002$

**Table S2 (Continued).** Reduced  $p\rho T$  experimental data for the CO<sub>2</sub>+SO<sub>2</sub>+CH<sub>4</sub> mixtures. ( $u(\rho)$ ):  
Combined standard uncertainty).

$x_{\text{CO}_2} = 0.9837; x_{\text{SO}_2} = 0.0009; x_{\text{CH}_4} = 0.0154$											
$T = 313.16 \pm 0.02 \text{ K}$			$T = 333.16 \pm 0.03 \text{ K}$			$T = 353.15 \pm 0.03 \text{ K}$			$T = 373.16 \pm 0.04 \text{ K}$		
$p$ (MPa)	$\rho$ (kg.m <sup>-3</sup> )	$u(\rho)$ (kg.m <sup>-3</sup> )	$p$ (MPa)	$\rho$ (kg.m <sup>-3</sup> )	$u(\rho)$ (kg.m <sup>-3</sup> )	$p$ (MPa)	$\rho$ (kg.m <sup>-3</sup> )	$u(\rho)$ (kg.m <sup>-3</sup> )	$p$ (MPa)	$\rho$ (kg.m <sup>-3</sup> )	$u(\rho)$ (kg.m <sup>-3</sup> )
0.100	1.68	0.22	0.100	1.64	0.23	0.100	1.48	0.22	0.103	1.32	0.21
0.498	8.49	0.22	0.718	11.41	0.22	0.718	10.81	0.22	0.721	10.15	0.22
0.917	16.04	0.22	1.317	21.43	0.22	1.317	20.15	0.22	1.320	18.87	0.22
1.315	23.55	0.22	1.935	32.42	0.22	1.935	30.26	0.22	1.938	28.39	0.22
1.714	31.18	0.22	2.553	43.96	0.22	2.553	40.77	0.22	2.556	38.11	0.22
2.132	39.48	0.22	3.152	55.64	0.22	3.152	51.34	0.22	3.155	47.83	0.22
2.530	47.81	0.22	3.770	68.50	0.22	3.770	62.75	0.22	3.773	58.14	0.22
2.949	56.99	0.22	4.369	81.64	0.22	4.369	74.27	0.22	4.371	68.49	0.22
3.347	66.22	0.22	4.987	96.27	0.22	4.987	86.76	0.22	4.989	79.54	0.22
3.745	75.99	0.22	5.605	111.94	0.22	5.605	99.88	0.22	5.608	90.95	0.22
4.164	86.94	0.22	6.204	128.29	0.22	6.204	113.19	0.22	6.206	102.57	0.22
4.562	98.05	0.22	6.822	146.82	0.23	6.822	127.74	0.22	6.824	114.79	0.22
4.980	110.66	0.22	7.420	166.49	0.23	7.420	142.65	0.23	7.423	127.13	0.22
5.379	123.74	0.23	8.039	189.02	0.23	8.039	158.92	0.23	8.041	140.29	0.22
5.777	138.04	0.23	8.657	214.40	0.23	8.657	176.19	0.23	8.659	154.05	0.23
6.196	154.77	0.23	9.256	242.12	0.23	9.256	193.89	0.23	9.258	167.81	0.23
6.594	172.71	0.23	9.874	274.95	0.24	9.874	213.44	0.23	9.876	182.66	0.23
7.012	194.51	0.23	10.472	311.61	0.24	10.472	233.56	0.23	10.474	197.47	0.23
7.411	219.31	0.23	11.091	354.41	0.25	11.091	255.64	0.24	11.093	213.42	0.23
7.809	249.45	0.23	11.709	398.41	0.25	11.709	279.15	0.24	11.711	229.93	0.23
8.227	291.88	0.24	12.307	439.96	0.26	12.307	303.20	0.24	12.309	246.47	0.23
8.626	350.70	0.24	12.926	483.03	0.27	12.926	329.18	0.24	12.927	264.03	0.24
9.044	446.62	0.26	13.524	520.11	0.27	13.524	354.95	0.25	13.526	281.54	0.24
9.442	530.65	0.27	14.142	551.18	0.28	14.142	381.01	0.25	14.144	299.93	0.24
9.841	580.42	0.28	14.761	576.19	0.28	14.761	405.94	0.25	14.762	318.78	0.24
10.259	617.90	0.29	15.359	599.11	0.29	15.359	431.14	0.26	15.361	337.26	0.24
10.658	643.98	0.30	15.978	618.59	0.29	15.978	456.21	0.26	15.979	356.41	0.25
11.076	664.88	0.30	16.576	635.50	0.30	16.576	478.97	0.27	16.577	374.73	0.25
11.474	679.95	0.30	17.194	651.81	0.30	17.194	500.04	0.27	17.196	393.21	0.25
11.873	691.92	0.31	17.813	666.32	0.30	17.813	519.25	0.27	17.814	410.88	0.25
12.291	704.84	0.31	18.411	679.03	0.30	18.411	537.77	0.28	18.412	426.85	0.26
12.689	715.52	0.31	19.029	690.81	0.31	19.029	555.63	0.28	19.030	444.12	0.26
13.108	725.08	0.31	19.628	700.92	0.31	19.628	571.55	0.28	19.629	460.20	0.26
13.506	733.80	0.32	20.246	711.15	0.31	20.246	586.85	0.29	20.247	476.27	0.26
13.905	741.88	0.32	20.864	720.69	0.31	20.864	600.79	0.29	20.865	491.75	0.27

14.323	749.69	0.32	21.463	729.33	0.32	21.463	613.06	0.29	21.464	506.06	0.27
14.721	756.76	0.32	22.081	737.78	0.32	22.081	624.40	0.29	22.082	519.95	0.27
15.140	763.80	0.32	22.680	745.43	0.32	22.680	635.03	0.30	22.680	532.57	0.28
15.538	770.02	0.32	23.298	752.96	0.32	23.298	645.89	0.30	23.299	544.36	0.28
15.936	775.98	0.33	23.916	760.00	0.32	23.916	656.10	0.30	23.917	556.31	0.28
16.355	781.96	0.33	24.515	766.36	0.32	24.515	665.43	0.30	24.515	567.45	0.28
16.753	787.28	0.33	25.133	772.54	0.33	25.133	674.55	0.30	25.134	578.48	0.28
17.171	792.55	0.33	25.731	778.35	0.33	25.731	682.96	0.31	25.732	588.78	0.29
17.570	797.26	0.33	26.350	784.33	0.33	26.350	691.08	0.31	26.350	598.83	0.29
17.968	801.83	0.33	26.968	790.02	0.33	26.968	698.62	0.31	26.968	608.52	0.29
18.386	806.57	0.33	27.567	795.34	0.33	27.567	705.56	0.31	27.567	617.42	0.29
18.785	810.94	0.33	28.185	800.69	0.33	28.185	712.82	0.31	28.185	626.15	0.29
19.203	815.34	0.34	28.783	805.59	0.33	28.783	719.47	0.31	28.783	634.04	0.29
19.602	819.43	0.34	29.402	810.52	0.33	29.402	726.03	0.31	29.402	641.86	0.30
20.000	823.28	0.34	30.000	815.04	0.33	30.000	732.06	0.32	30.000	649.29	0.30

Combined standard uncertainties:

$u(T) = 0.006$  K;  $u(p) = 0.0020$  MPa for  $p < 6$  MPa;  $u(p) = 0.024$  MPa for  $6 \text{ MPa} \leq p \leq 70$  MPa

$u(x_{\text{CO}_2}) = 0.0003$ ;  $u(x_{\text{SO}_2}) = 0.0002$ ;  $u(x_{\text{CH}_4}) = 0.0002$



**Table S3.** Experimental dew and bubble pressures,  $p_{\text{dew}}$  and  $p_{\text{bubble}}$ , respectively, and densities of the vapor,  $\rho_V$ , and liquid,  $\rho_L$ , phases in the VLE for the  $\text{CO}_2+\text{SO}_2+\text{CH}_4$  mixtures and the correspondingly combined standard uncertainties.

$T$ (K)	$p_{\text{dew}}$ (MPa)	$u(p_{\text{dew}})$ (MPa)	$p_{\text{bubble}}$ (MPa)	$u(p_{\text{bubble}})$ (MPa)	$\rho_V$ ( $\text{kg}\cdot\text{m}^{-3}$ )	$u(\rho_V)$ ( $\text{kg}\cdot\text{m}^{-3}$ )	$\rho_L$ ( $\text{kg}\cdot\text{m}^{-3}$ )	$u(\rho_L)$ ( $\text{kg}\cdot\text{m}^{-3}$ )
$x_{\text{CO}_2} = 0.9343; x_{\text{SO}_2} = 0.0472; x_{\text{CH}_4} = 0.0185$								
<b>263.13</b>	1.557	0.031	2.928	0.014	36.86	1.2	991.71	0.98
<b>273.16</b>	2.256	0.023	3.750	0.0095	54.39	0.92	942.34	1.2
<b>293.15</b>	4.393	0.022	5.726	0.044	117.62	1.2	810.98	1.8
<b>304.21</b>	6.077	0.039	7.185	0.0041	186.34	1.9	690.43	1.0
$x_{\text{CO}_2} = 0.9837; x_{\text{SO}_2} = 0.0009; x_{\text{CH}_4} = 0.0154$								
<b>263.16</b>	2.678	0.014	2.863	0.0049	71.12	0.78	963.81	0.94
<b>273.15</b>	3.536	0.0055	3.740	0.034	98.33	0.58	910.10	1.0
<b>293.15</b>	5.830	0.0025	5.909	0.017	195.16	0.48	748.00	0.96

**Table S4.** Mole fraction composition,  $x_i$ , and the standard uncertainty of the mole fraction composition,  $u(x_i)$ , of the mixtures prepared for the uncertainty study and for quantifying the effect of CH<sub>3</sub>OH on the experimental  $c$  values.

Component	“Co-capture” CO <sub>2</sub> +SO <sub>2</sub> +CH <sub>4</sub> mixtures				“Co-capture” CO <sub>2</sub> +CH <sub>3</sub> OH+SO <sub>2</sub> +CH <sub>4</sub> mixtures			
	$x_i$	$u(x_i)$	$x_i$	$u(x_i)$	$x_i$	$u(x_i)$	$x_i$	$u(x_i)$
<b>CO<sub>2</sub></b>	0.9342	0.0003	0.9346	0.0003	0.9272	0.0005	0.9276	0.0005
<b>SO<sub>2</sub></b>	0.0473	0.0002	0.0470	0.0002	0.0467	0.0003	0.0465	0.0003
<b>CH<sub>4</sub></b>	0.0185	0.0002	0.0184	0.0002	0.0182	0.0002	0.0180	0.0002
<b>CH<sub>3</sub>OH</b>					0.0079	0.0004	0.0079	0.0004

**Table S5.**  $pcT$  experimental data for the  $\text{CO}_2+\text{SO}_2+\text{CH}_4$  and  $\text{CO}_2+\text{CH}_3\text{OH}+\text{SO}_2+\text{CH}_4$  mixtures used for the uncertainty study and for quantifying the effect of  $\text{CH}_3\text{OH}$  on the experimental  $c$  values.

$p$ (MPa)	$c$ ( $\text{m}\cdot\text{s}^{-1}$ )	$p$ (MPa)	$c$ ( $\text{m}\cdot\text{s}^{-1}$ )	$p$ (MPa)	$c$ ( $\text{m}\cdot\text{s}^{-1}$ )
$x_{\text{CO}_2} = 0.9342; x_{\text{SO}_2} = 0.0473; x_{\text{CH}_4} = 0.0185$					
$T = 263.14 \pm 0.005 \text{ K}$		$T = 293.12 \pm 0.005 \text{ K}$		$T = 313.14 \pm 0.005 \text{ K}$	
190.08	1414.43	189.86	1332.96	190.15	1285.72
180.01	1392.24	184.92	1321.37	187.51	1279.39
170.07	1369.57	180.049	1309.77	184.98	1273.28
160.14	1345.83	175.09	1297.74	182.52	1267.33
150.05	1321.05	169.93	1284.98	179.97	1260.95
140.10	1295.52	164.89	1272.43	177.46	1254.69
130.08	1268.68	160.01	1259.79	175.04	1248.62
119.63	1239.20	154.92	1246.47	172.64	1242.51
110.56	1212.56	150.17	1233.77	170.04	1235.89
105.10	1195.72	144.95	1219.49	167.26	1228.71
99.95	1179.67			165.12	1223.08
95.21	1164.13				
90.06	1146.81				
85.08	1129.52				
$T = 263.14 \pm 0.004 \text{ K}$		$T = 293.13 \pm 0.007 \text{ K}$		$T = 313.14 \pm 0.005 \text{ K}$	
190.03	1414.19	189.91	1333.48	190.25	1286.09
180.00	1392.12	185.00	1322.00	187.17	1278.69
170.11	1369.48	180.04	1310.23	184.32	1271.72
160.12	1345.70	175.00	1298.11	182.27	1266.72
150.13	1321.10	170.07	1285.91	179.60	1260.24
140.09	1295.30	165.09	1273.43	177.52	1254.96
129.98	1268.26	159.92	1260.21	174.82	1248.20
120.31	1241.02	154.95	1247.20	172.36	1241.91
109.95	1210.56	150.03	1234.05	170.05	1235.98
105.13	1195.64	145.17	1220.87	167.42	1229.21
99.96	1179.30				

95.09	1163.52				
90.07	1146.53				
85.05	1129.21				
<b><math>x_{\text{CO}_2} = 0.9346</math>; <math>x_{\text{SO}_2} = 0.0470</math>; <math>x_{\text{CH}_4} = 0.0184</math></b>					
<b><math>T = 263.14 \pm 0.005 \text{ K}</math></b>		<b><math>T = 293.13 \pm 0.003 \text{ K}</math></b>		<b><math>T = 313.14 \pm 0.003 \text{ K}</math></b>	
190.11	1413.72	190.17	1333.84	189.71	1284.42
179.96	1391.21	184.84	1321.40	187.36	1278.81
170.16	1368.67	180.04	1309.90	184.90	1272.90
160.02	1344.70	175.05	1297.97	182.38	1266.66
150.14	1320.14	169.78	1284.93	179.78	1260.19
140.09	1294.27	164.94	1272.69	177.46	1254.44
129.97	1267.12	160.04	1260.20	174.93	1248.08
120.32	1240.04	155.23	1247.65	172.33	1241.45
110.33	1210.34	149.95	1233.52	169.79	1234.92
105.10	1194.23	144.98	1219.82	167.60	1229.19
99.91	1177.80			164.95	1222.27
95.15	1162.25				
90.03	1144.90				
84.91	1127.08				
<b><math>T = 263.14 \pm 0.008 \text{ K}</math></b>		<b><math>T = 293.13 \pm 0.004 \text{ K}</math></b>		<b><math>T = 313.14 \pm 0.000 \text{ K}</math></b>	
190.08	1414.06	190.15	1334.10	190.13	1285.65
179.77	1391.30	185.00	1322.10	187.44	1279.16
170.13	1369.28	180.01	1310.21	184.77	1272.76
160.25	1345.68	174.89	1297.80	182.39	1266.87
150.08	1320.52	169.91	1285.55	179.80	1260.44
140.04	1294.82	165.07	1273.46	177.45	1254.64
129.97	1268.00	160.00	1260.40	174.96	1248.35
120.07	1239.95	155.13	1247.53	172.47	1242.07
110.08	1210.41	149.87	1233.65	169.79	1235.20
105.10	1195.12	144.94	1220.10	167.23	1228.52
100.13	1179.39				
95.25	1163.47				
90.19	1146.41				

85.06	1128.77				
<b><i>T</i> = 263.14±0.004 K</b>					
190.29	1414.75				
180.00	1392.06				
169.88	1368.97				
160.10	1345.68				
149.71	1320.12				
139.95	1294.95				
130.30	1269.17				
120.06	1240.37				
109.90	1210.44				
105.16	1195.93				
100.13	1180.02				
95.18	1163.90				
89.96	1146.31				
85.35	1130.38				

Combined standard uncertainties:

$$u(T) = 0.015 \text{ K}, u(p) = 0.02 \text{ MPa}, u^*(c) = 2.0 \times 10^{-4}c, u(c) = 2.0 \times 10^{-4}c.$$

$$u(x_{\text{CO}_2}) = 0.0003; u(x_{\text{SO}_2}) = 0.0002; u(x_{\text{CH}_4}) = 0.0002$$

**Table S5 (Continued).**  $ppcT$  experimental data for the  $\text{CO}_2+\text{SO}_2+\text{CH}_4$  and  $\text{CO}_2+\text{CH}_3\text{OH}+\text{SO}_2+\text{CH}_4$  mixtures used for the uncertainty study and for quantifying the effect of  $\text{CH}_3\text{OH}$  on the experimental  $c$  values.

$p$ (MPa)	$c$ ( $\text{m}\cdot\text{s}^{-1}$ )	$p$ (MPa)	$c$ ( $\text{m}\cdot\text{s}^{-1}$ )	$p$ (MPa)	$c$ ( $\text{m}\cdot\text{s}^{-1}$ )
$x_{\text{CO}_2} = 0.9272; x_{\text{CH}_3\text{OH}} = 0.0079; x_{\text{SO}_2} = 0.0467; x_{\text{CH}_4} = 0.0182$					
$T = 263.14 \pm 0.005 \text{ K}$		$T = 293.13 \pm 0.005 \text{ K}$		$T = 313.14 \pm 0.004 \text{ K}$	
189.86	1415.00	190.11	1336.22	190.51	1289.20
180.06	1393.41	179.75	1312.26	180.48	1264.92
170.34	1371.19	170.33	1289.16	170.19	1238.97
160.35	1347.40	160.27	1263.75	160.20	1212.78
150.08	1322.16	150.31	1237.55	150.18	1185.32
140.44	1297.32	140.52	1210.57	140.01	1156.07
130.39	1270.41	129.93	1179.94	130.31	1126.87
120.35	1242.28	120.30	1150.68	120.31	1095.16
110.27	1212.55	110.36	1118.73	110.21	1061.26
100.41	1181.89	100.31	1084.51	100.51	1026.46
90.36	1148.72	90.68	1049.55	95.23	1006.59
79.92	1111.89	80.38	1009.22	89.91	985.68
70.46	1076.08	70.17	965.72	84.72	964.46
65.39	1055.23	65.12	942.44	80.24	945.46
60.32	1034.35	60.00	917.93	75.07	922.39
55.08	1011.38	55.21	893.53	69.77	897.69
49.94	987.55	50.12	865.97	64.98	873.52
45.00	963.23	45.14	837.18	60.31	849.84
40.50	939.92	40.69	809.15		
35.62	913.00				
29.93	879.24				
24.92	846.14				
20.46	814.61				
15.49	775.04				
$T = 263.14 \pm 0.004 \text{ K}$		$T = 293.13 \pm 0.004 \text{ K}$		$T = 313.14 \pm 0.000 \text{ K}$	
190.24	1415.74	189.97	1336.09	189.74	1287.28

180.21	1393.66	179.73	1312.02	179.93	1263.65
170.38	1371.15	170.36	1289.40	169.93	1238.32
160.05	1346.63	160.14	1263.34	159.89	1211.80
150.67	1323.50	150.20	1237.31	150.14	1185.14
140.54	1297.55	140.23	1209.73	140.27	1156.87
130.49	1270.65	129.79	1179.50	130.22	1126.57
120.80	1243.48	120.16	1150.14	120.34	1095.37
110.61	1213.49	110.34	1118.65	110.24	1061.21
100.07	1180.71	100.19	1085.01	99.97	1024.41
90.34	1148.70	90.41	1048.45	95.10	1005.99
80.70	1114.66	80.26	1008.63	90.10	986.38
70.50	1076.19	70.27	965.99	85.30	966.74
65.25	1054.66	65.64	944.74	80.36	945.82
60.05	1033.19	60.43	919.88	75.27	923.18
54.95	1010.81	55.41	894.38	70.19	899.59
49.90	987.27	50.11	865.73	65.11	874.60
45.19	964.28	43.94	829.55	60.45	850.53
39.96	937.06	40.15	805.83		
35.16	910.50				
30.26	881.05				
25.18	848.29				
20.53	815.06				
15.20	772.44				
<b><math>x_{\text{CO}_2} = 0.9276</math>; <math>x_{\text{CH}_3\text{OH}} = 0.0079</math>; <math>x_{\text{SO}_2} = 0.0465</math>; <math>x_{\text{CH}_4} = 0.0180</math></b>					
<b><math>T = 263.13 \pm 0.002 \text{ K}</math></b>		<b><math>T = 293.13 \pm 0.000 \text{ K}</math></b>		<b><math>T = 313.14 \pm 0.000 \text{ K}</math></b>	
190.71	1416.30	190.59	1337.11	190.84	1289.34
180.05	1392.94	180.32	1313.01	180.34	1263.83
170.16	1370.36	170.36	1288.63	170.07	1237.87
160.35	1346.91	160.48	1263.55	160.18	1211.80
150.23	1321.82	150.64	1237.58	150.28	1184.61
140.19	1295.94	140.19	1208.82	140.16	1155.56
129.83	1268.14	130.10	1179.55	129.68	1123.90
120.02	1240.59	119.59	1147.45	119.92	1092.78

110.48	1212.30	110.44	1118.05	110.03	1059.48
100.26	1180.41	100.13	1082.92	100.27	1024.32
90.77	1149.00	90.34	1047.04	90.42	986.36
80.50	1112.80	80.60	1008.92	80.42	944.75
70.64	1075.60	70.25	964.62	70.53	899.53
65.27	1053.67	64.88	940.04	65.23	873.35
59.82	1030.84	59.90	915.88		
54.90	1009.05	55.12	891.42		
49.48	983.65	50.13	864.34		
49.76	984.93	45.47	837.24		
45.12	962.11	40.38	805.39		
39.95	935.11				
35.28	909.08				
30.18	878.53				
24.98	844.31				
20.11	809.35				
<b><math>T = 263.13 \pm 0.005 \text{ K}</math></b>		<b><math>T = 293.13 \pm 0.005 \text{ K}</math></b>		<b><math>T = 313.14 \pm 0.005 \text{ K}</math></b>	
191.12	1417.52	190.40	1336.75	190.93	1289.81
180.44	1394.17	180.40	1313.24	180.34	1264.07
169.53	1369.16	170.46	1289.00	170.28	1238.75
159.94	1346.31	159.93	1262.32	160.02	1211.69
150.06	1321.90	150.26	1236.76	150.02	1184.17
140.14	1296.40	140.19	1208.97	139.94	1155.18
130.34	1270.03	129.73	1178.64	130.16	1125.87
120.16	1241.49	119.94	1148.83	120.44	1094.91
109.83	1211.09	109.90	1116.49	110.22	1060.40
100.40	1181.31	99.98	1082.52	100.36	1025.01
90.17	1147.57	90.63	1048.39	90.64	987.70
79.89	1111.39	80.24	1007.69	80.75	946.49
70.56	1075.98	70.35	965.40	70.12	897.98
65.60	1055.75	65.41	942.85	64.95	872.48
59.82	1031.64	59.98	916.65		
54.88	1009.72	59.80	915.46		



50.25	988.28	55.50	893.82		
44.55	960.39	50.03	864.29		
40.25	937.71	44.95	834.61		
35.45	910.77	40.14	804.45		
30.18	879.64				
25.79	851.30				
20.23	811.81				

Combined standard uncertainties:

$$u(T) = 0.015 \text{ K}, u(p) = 0.02 \text{ MPa}, u^*(c) = 7.4 \times 10^{-4} c, u(c) = 7.4 \times 10^{-4} c.$$

$$u(x_{\text{CO}_2}) = 0.0005; u(x_{\text{CH}_3\text{OH}}) = 0.0004; u(x_{\text{SO}_2}) = 0.0003; u(x_{\text{CH}_4}) = 0.0002$$

**Table S6.**  $p$  $c$  $T$  experimental data for the CO<sub>2</sub>+ CH<sub>3</sub>OH+SO<sub>2</sub>+CH<sub>4</sub> mixtures

$x_{\text{CO}_2} = 0.9272$ ; $x_{\text{CH}_3\text{OH}} = 0.0079$ ; $x_{\text{SO}_2} = 0.0467$ ; $x_{\text{CH}_4} = 0.0182$							
$T = 263.14 \pm 0.008$ K		$T = 273.14 \pm 0.000$ K		$T = 293.13 \pm 0.008$ K		$T = 304.16 \pm 0.010$ K	
$p$ (MPa)	$c$ (m.s <sup>-1</sup> )	$p$ (MPa)	$c$ (m.s <sup>-1</sup> )	$p$ (MPa)	$c$ (m.s <sup>-1</sup> )	$p$ (MPa)	$c$ (m.s <sup>-1</sup> )
190.24	1415.74	190.10	1388.23	190.11	1336.22	189.99	1308.73
180.21	1393.66	179.78	1365.07	179.75	1312.26	179.01	1282.73
170.38	1371.15	170.24	1342.75	170.33	1289.16	169.81	1259.92
160.05	1346.63	160.09	1318.07	160.27	1263.75	160.31	1235.29
150.67	1323.5	150.29	1293.31	150.31	1237.55	150.34	1208.52
140.54	1297.55	140.63	1267.86	140.52	1210.57	140.42	1180.48
130.49	1270.65	130.21	1239.16	129.93	1179.94	130.71	1151.81
120.80	1243.48	119.38	1207.90	120.30	1150.68	120.77	1120.93
110.61	1213.49	110.24	1180.09	110.36	1118.73	110.39	1086.83
100.07	1180.71	100.43	1148.50	100.31	1084.51	100.52	1052.26
90.34	1148.70	90.21	1113.59	90.68	1049.55	90.37	1014.14
80.70	1114.66	80.09	1076.90	80.38	1009.22	80.47	973.99
70.50	1076.19	70.13	1037.10	70.17	965.72	70.41	929.52
65.25	1054.66	64.81	1014.58	65.12	942.44	65.30	905.05
60.05	1033.19	64.46	1012.83	60.00	917.93	60.73	882.08
54.95	1010.81	60.08	993.74	55.21	893.53	54.94	851.39
49.90	987.27	59.03	989.00	50.12	865.97	52.53	837.80
45.19	964.28	55.13	970.89	45.14	837.18		
39.96	937.06	50.22	946.81	40.69	809.15		
35.16	910.5	44.62	917.56				
30.26	881.05	40.11	892.59				
25.18	848.29	35.41	864.69				
20.53	815.06	30.43	832.46				
15.20	772.44	25.15	795.06				

Standard uncertainties:

$$u(T) = 0.015 \text{ K}, u(p) = 0.02 \text{ MPa}, u(c) = 7.4 \times 10^{-4} c.$$

$$u(x_{\text{CO}_2}) = 0.0005; u(x_{\text{CH}_3\text{OH}}) = 0.0004; u(x_{\text{SO}_2}) = 0.0003; u(x_{\text{CH}_4}) = 0.0002$$

**Table S6 (Continued).**  $p$  $c$  $T$  experimental data for the CO<sub>2</sub>+ CH<sub>3</sub>OH+SO<sub>2</sub>+CH<sub>4</sub> mixtures

$x_{\text{CO}_2} = 0.9272$ ; $x_{\text{CH}_3\text{OH}} = 0.0079$ ; $x_{\text{SO}_2} = 0.0467$ ; $x_{\text{CH}_4} = 0.0182$							
$T = 313.14 \pm 0.000$ K		$T = 333.14 \pm 0.006$ K		$T = 353.13 \pm 0.007$ K		$T = 373.19 \pm 0.007$ K	
$p$ (MPa)	$c$ (m.s <sup>-1</sup> )	$p$ (MPa)	$c$ (m.s <sup>-1</sup> )	$p$ (MPa)	$c$ (m.s <sup>-1</sup> )	$p$ (MPa)	$c$ (m.s <sup>-1</sup> )
189.74	1287.28	189.90	1243.27	189.90	1201.32	189.60	1164.2
179.93	1263.65	180.08	1218.81	185.00	1188.84	184.71	1151.56
169.93	1238.32	170.22	1193.33	180.41	1176.92	179.94	1139.07
159.89	1211.8	160.33	1166.48	175.26	1163.27	175.25	1126.45
150.14	1185.14	150.41	1138.42	170.20	1149.7	169.95	1111.99
140.27	1156.87	140.16	1108.07	165.20	1135.9	165.02	1098.19
130.22	1126.57	130.09	1076.66	160.24	1121.94	159.84	1083.36
120.34	1095.37	119.91	1043.22	155.21	1107.48	155.02	1069.21
110.24	1061.21	110.39	1009.84	149.95	1091.97	149.72	1053.34
99.97	1024.41	100.64	973.38	144.76	1076.28	145.13	1039.21
95.10	1005.99	95.17	951.83	139.71	1060.64	140.13	1023.63
90.10	986.38	90.47	932.68	135.20	1046.36	134.96	1006.85
85.30	966.74	85.40	910.96	130.12	1029.74	129.82	989.67
80.36	945.82	80.18	887.62	125.02	1012.72	124.99	973.17
75.27	923.18			119.94	995.17	120.15	956.06
70.19	899.59			115.22	978.22		
65.11	874.6			110.29	960.06		
60.45	850.53			105.23	940.95		

Standard uncertainties:

$$u(T) = 0.015 \text{ K}, u(p) = 0.02 \text{ MPa}, u(c) = 7.4 \times 10^{-4} c.$$

$$u(x_{\text{CO}_2}) = 0.0005; u(x_{\text{CH}_3\text{OH}}) = 0.0004; u(x_{\text{SO}_2}) = 0.0003; u(x_{\text{CH}_4}) = 0.0002$$

**Table S6 (Continued).**  $pcT$  experimental data for the CO<sub>2</sub>+ CH<sub>3</sub>OH+SO<sub>2</sub>+CH<sub>4</sub> mixtures

$x_{\text{CO}_2} = 0.9763; x_{\text{CH}_3\text{OH}} = 0.0076; x_{\text{SO}_2} = 0.0008; x_{\text{CH}_4} = 0.0153$							
$T = 263.14 \pm 0.007 \text{ K}$		$T = 273.14 \pm 0.001 \text{ K}$		$T = 293.12 \pm 0.004 \text{ K}$		$T = 304.16 \pm 0.010 \text{ K}$	
$p$ (MPa)	$c$ (m.s <sup>-1</sup> )	$p$ (MPa)	$c$ (m.s <sup>-1</sup> )	$p$ (MPa)	$c$ (m.s <sup>-1</sup> )	$p$ (MPa)	$c$ (m.s <sup>-1</sup> )
190.12	1412.42	190.99	1387.09	189.95	1332.69	190.95	1307.67
180.35	1390.38	180.55	1363.27	180.13	1309.30	180.18	1281.74
170.60	1367.71	170.27	1338.86	170.55	1285.79	169.51	1254.93
160.10	1342.47	159.91	1313.27	160.19	1259.14	160.26	1230.58
150.46	1318.31	150.61	1289.36	150.54	1233.33	150.30	1203.36
140.33	1291.94	140.43	1262.25	140.59	1205.55	140.44	1175.23
130.09	1264.05	130.34	1234.02	130.15	1174.91	130.46	1145.34
119.89	1234.91	120.43	1204.97	120.49	1145.2	120.33	1113.29
110.21	1205.77	110.15	1173.19	110.29	1111.88	110.09	1079.02
100.57	1175.15	100.13	1140.4	100.46	1077.89	100.41	1044.48
90.30	1140.68	90.44	1106.61	90.57	1041.17	95.35	1025.45
80.19	1104.26	80.38	1069.08	80.70	1001.8	89.94	1004.37
69.90	1064.29	71.07	1031.52	70.58	958.09	84.96	984.27
65.44	1045.33	65.58	1007.74	65.61	934.72	80.21	964.09
59.99	1022.35	60.51	985.27	60.12	907.81	75.43	943.02
55.51	1002.17	55.34	960.89	55.01	881.13	69.65	916.46
50.72	979.60	50.25	935.22	50.37	855.36	65.14	894.12
45.08	951.23	45.33	909.03			60.10	868.53
40.19	925.07	40.24	879.95				
35.34	897.32	35.26	849.37				
30.17	865.40	30.66	818.85				
25.03	830.56						
21.27	802.59						

Standard uncertainties:

$$u(T) = 0.015 \text{ K}, u(p) = 0.02 \text{ MPa}, u(c) = 7.4 \times 10^{-4} c.$$

$$u(x_{\text{CO}_2}) = 0.0005; u(x_{\text{CH}_3\text{OH}}) = 0.0003; u(x_{\text{SO}_2}) = 0.0003; u(x_{\text{CH}_4}) = 0.0002$$

**Table S6 (Continued).**  $p$  $c$  $T$  experimental data for the CO<sub>2</sub>+ CH<sub>3</sub>OH+SO<sub>2</sub>+CH<sub>4</sub> mixtures

$x_{\text{CO}_2} = 0.9763$ ; $x_{\text{CH}_3\text{OH}} = 0.0076$ ; $x_{\text{SO}_2} = 0.0008$ ; $x_{\text{CH}_4} = 0.0153$							
$T = 313.14 \pm 0.003$ K		$T = 333.14 \pm 0.004$ K		$T = 353.14 \pm 0.003$ K		$T = 373.20 \pm 0.005$ K	
$p$ (MPa)	$c$ (m.s <sup>-1</sup> )	$p$ (MPa)	$c$ (m.s <sup>-1</sup> )	$p$ (MPa)	$c$ (m.s <sup>-1</sup> )	$p$ (MPa)	$c$ (m.s <sup>-1</sup> )
189.86	1283.62	189.86	1239.34	190.49	1199.83	190.40	1162.35
180.05	1259.76	180.21	1214.96	185.07	1185.94	184.59	1147.26
170.09	1234.30	170.42	1189.27	180.21	1173.18	180.08	1135.29
160.17	1207.88	160.60	1162.41	174.86	1158.98	175.24	1122.17
150.51	1181.11	150.65	1133.96	169.63	1144.78	170.03	1107.81
140.48	1152.06	140.58	1103.93	164.44	1130.33	164.93	1093.40
130.07	1120.24	130.19	1071.08	159.78	1117.18	160.17	1079.64
120.42	1089.14	120.62	1039.07	154.68	1102.34	154.73	1063.57
110.29	1054.61	115.31	1020.58	149.94	1088.29	150.09	1049.55
100.56	1019.24	110.07	1001.74	144.59	1071.92	145.15	1034.18
94.95	997.63	104.88	982.34	139.85	1057.10	139.93	1017.64
90.32	979.27	99.95	963.27	134.78	1040.87		
85.49	959.14	95.32	944.73	129.83	1024.56		
79.79	934.59						
75.24	914.01						

Standard uncertainties:

$$u(T) = 0.015 \text{ K}, u(p) = 0.02 \text{ MPa}, u(c) = 7.4 \times 10^{-4} c.$$

$$u(x_{\text{CO}_2}) = 0.0005; u(x_{\text{CH}_3\text{OH}}) = 0.0003; u(x_{\text{SO}_2}) = 0.0003; u(x_{\text{CH}_4}) = 0.0002$$

**Table S7.** Values of  $p^\#$  and the  $a_i$  coefficients in equation (3) in the correlation of the experimental speed of sound,  $c$ , as a function of pressure,  $p$ , in the mixtures  $\text{CO}_2+\text{CH}_3\text{OH}+\text{SO}_2+\text{CH}_4$  (doped) with composition  $x$  at temperatures  $T$ , as well as the mean relative deviations.

<b>mixture</b> $x_{\text{CO}_2}$ $x_{\text{CH}_3\text{OH}}$ $x_{\text{SO}_2}$ $x_{\text{CH}_4}$	$T/\text{K}$	$p^\#$ (MPa)	$10 \times a_1$ (MPa·m <sup>-1</sup> ·s)	$10^4 \times a_2$ (MPa·m <sup>-2</sup> ·s <sup>2</sup> )	$10^8 \times a_3$ (MPa·m <sup>-3</sup> ·s <sup>3</sup> )	$MRD_c$ (%)
co-capture  0.9272 0.0079 0.0467 0.0182	263.14	40	1.86217	2.2951	7.815	0.006
	273.14	45	1.86289	2.2617	7.890	0.007
	293.13	60	2.01713	2.2881	7.717	0.009
	304.16	70	2.14721	2.3263	7.798	0.010
	313.14	80	2.29877	2.3661	7.542	0.006
	333.14	100	2.57784	2.4450	7.677	0.005
	353.13	130	3.02217	2.5526	7.294	0.003
	373.19	140	3.13305	2.5952	7.998	0.003
emissions  0.9763 0.0076 0.0008 0.0153	263.14	40	1.80390	2.2228	7.715	0.007
	273.14	45	1.81213	2.2164	7.322	0.015
	293.12	65	2.08105	2.2869	7.490	0.005
	304.16	75	2.21365	2.3217	7.409	0.007
	313.14	90	2.45833	2.4153	7.500	0.007
	333.14	110	2.72493	2.4788	7.529	0.003
	353.14	145	3.24699	2.6347	7.370	0.003
	373.20	155	3.345374	2.6600	7.782	0.001
Overall mean relative deviation $\overline{MRD}_c = 0.007\%$						

$$MRD_c = \frac{100}{N} \sum_i^N \left| \frac{c_i - c_{i,fit}}{c_i} \right|; N: \text{number of experimental points at each composition and temperature.}$$

$$\overline{MRD}_c = \frac{100}{N'} \sum_i^{N'} \left| \frac{c_i - c_{i,fit}}{c_i} \right|; N': \text{total number of experimental points.}$$

**Table S8.**  $p$  $cT$  extrapolated values for CO<sub>2</sub>+CH<sub>3</sub>OH+SO<sub>2</sub>+CH<sub>4</sub> mixtures, using  $p^\#$  and the coefficients from Table S7.

$p$ (MPa)	$c$ (m·s <sup>-1</sup> )	$p$ (MPa)	$c$ (m·s <sup>-1</sup> )	$p$ (MPa)	$c$ (m·s <sup>-1</sup> )	$p$ (MPa)	$c$ (m·s <sup>-1</sup> )
$x_{\text{CO}_2} = 0.9272$ ; $x_{\text{CH}_3\text{OH}} = 0.0079$ ; $x_{\text{SO}_2} = 0.0467$ ; $x_{\text{CH}_4} = 0.0182$							
$T = 263.14 \text{ K}$		$T = 273.14 \text{ K}$		$T = 293.13 \text{ K}$		$T = 304.16 \text{ K}$	
14.00	762.06	24.00	786.37	39.00	798.29	49.00	817.14
13.00	753.07	23.00	778.60	38.00	791.58	48.00	811.07
12.00	743.81	22.00	770.64	37.00	784.74	47.00	804.92
11.00	734.23	21.00	762.49	36.00	777.77	46.00	798.66
10.00	724.32	20.00	754.12	35.00	770.66	45.00	792.30
9.00	714.04	19.00	745.52	34.00	763.41	44.00	785.84
8.00	703.35	18.00	736.67	33.00	756.01	43.00	779.27
7.00	692.21	17.00	727.56	32.00	748.44	42.00	772.58
6.00	680.55	16.00	718.17	31.00	740.71	41.00	765.77
5.00	668.33	15.00	708.46	30.00	732.80	40.00	758.83
4.00	655.44	14.00	698.42	29.00	724.69	39.00	751.76
3.00	641.79	13.00	688.00	28.00	716.39	38.00	744.55
		12.00	677.17	27.00	707.86	37.00	737.20
		11.00	665.89	26.00	699.10	36.00	729.69
		10.00	654.09	25.00	690.10	35.00	722.02
		9.00	641.72	24.00	680.82	34.00	714.17
		8.00	628.70	23.00	671.26	33.00	706.15
		7.00	614.91	22.00	661.38	32.00	697.93
		6.00	600.25	21.00	651.15	31.00	689.50
		5.00	584.52	20.00	640.55	30.00	680.85
		4.00	567.52	19.00	629.53	29.00	671.97
		3.90	565.73	18.00	618.05	28.00	662.84
		3.80	563.93	17.00	606.06	27.00	653.43
				16.00	593.49	26.00	643.73
				15.00	580.26	25.00	633.71
				14.00	566.26	24.00	623.35
				13.00	551.39	23.00	612.60

				12.00	535.46	22.00	601.44
				11.00	518.26	21.00	589.81
				10.00	499.48	20.00	577.68
				9.00	478.66	19.00	564.96
				8.00	455.08	18.00	551.58
				7.00	427.44	17.00	537.46
				6.00	393.03	16.00	522.46
				5.90	389.01	15.00	506.44
				5.80	384.84	14.00	489.19
						13.00	470.42
						12.00	449.72
						11.00	426.48
						10.00	399.64
						9.00	367.19
						8.00	324.11
						7.90	318.75
						7.80	313.08
						7.70	307.06
						7.60	300.62
						7.50	293.66
						7.40	286.05
						7.30	277.59



**Table S8 (continued).**  $pcT$  extrapolated values for CO<sub>2</sub>+CH<sub>3</sub>OH+SO<sub>2</sub>+CH<sub>4</sub> mixtures, using  $p^\#$  and the coefficients from Table S7.

$p$ (MPa)	$c$ (m·s <sup>-1</sup> )	$p$ (MPa)	$c$ (m·s <sup>-1</sup> )	$p$ (MPa)	$c$ (m·s <sup>-1</sup> )	$p$ (MPa)	$c$ (m·s <sup>-1</sup> )
<b><math>x_{\text{CO}_2} = 0.9272</math>; <math>x_{\text{CH}_3\text{OH}} = 0.0079</math>; <math>x_{\text{SO}_2} = 0.0467</math>; <math>x_{\text{CH}_4} = 0.0182</math></b>							
<b><math>T = 313.14 \text{ K}</math></b>		<b><math>T = 333.14 \text{ K}</math></b>		<b><math>T = 353.13 \text{ K}</math></b>		<b><math>T = 373.19 \text{ K}</math></b>	
59.00	842.69	79.00	882.23	104.00	936.15	119.00	951.97
58.00	837.22	78.00	877.58	103.00	932.24	118.00	948.35
57.00	831.69	77.00	872.89	102.00	928.30	117.00	944.72
56.00	826.08	76.00	868.15	101.00	924.33	116.00	941.06
55.00	820.39	75.00	863.36	100.00	920.33	115.00	937.37
54.00	814.63	74.00	858.52	99.00	916.30	114.00	933.67
53.00	808.78	73.00	853.64	98.00	912.24	113.00	929.93
52.00	802.85	72.00	848.70	97.00	908.15	112.00	926.18
51.00	796.84	71.00	843.71	96.00	904.03	111.00	922.39
50.00	790.73	70.00	838.66	95.00	899.88	110.00	918.58
49.00	784.53	69.00	833.56	94.00	895.69	109.00	914.75
48.00	778.23	68.00	828.40	93.00	891.47	108.00	910.89
47.00	771.83	67.00	823.19	92.00	887.22	107.00	907.00
46.00	765.33	66.00	817.91	91.00	882.93	106.00	903.08
45.00	758.71	65.00	812.57	90.00	878.60	105.00	899.14
44.00	751.98	64.00	807.16	89.00	874.24	104.00	895.17
43.00	745.12	63.00	801.69	88.00	869.84	103.00	891.17
42.00	738.14	62.00	796.15	87.00	865.40	102.00	887.14
41.00	731.03	61.00	790.54	86.00	860.93	101.00	883.08
40.00	723.78	60.00	784.85	85.00	856.41	100.00	878.98
39.00	716.38	59.00	779.09	84.00	851.86	99.00	874.86
38.00	708.82	58.00	773.25	83.00	847.26	98.00	870.71
37.00	701.10	57.00	767.33	82.00	842.62	97.00	866.52
36.00	693.21	56.00	761.33	81.00	837.94	96.00	862.30
35.00	685.14	55.00	755.24	80.00	833.21	95.00	858.05
34.00	676.87	54.00	749.06	79.00	828.44	94.00	853.76
33.00	668.40	53.00	742.79	78.00	823.62	93.00	849.44

32.00	659.70	52.00	736.42	77.00	818.75	92.00	845.08
31.00	650.77	51.00	729.95	76.00	813.83	91.00	840.68
30.00	641.59	50.00	723.37	75.00	808.87	90.00	836.25
29.00	632.14	49.00	716.68	74.00	803.85	89.00	831.78
28.00	622.39	48.00	709.88	73.00	798.78	88.00	827.28
27.00	612.32	47.00	702.97	72.00	793.65	87.00	822.73
26.00	601.91	46.00	695.92	71.00	788.47	86.00	818.14
25.00	591.11	45.00	688.75	70.00	783.23	85.00	813.51
24.00	579.90	44.00	681.44	69.00	777.93	84.00	808.84
23.00	568.23	43.00	673.99	68.00	772.58	83.00	804.13
22.00	556.05	42.00	666.39	67.00	767.16	82.00	799.37
21.00	543.29	41.00	658.63	66.00	761.67	81.00	794.57
20.00	529.87	40.00	650.70	65.00	756.12	80.00	789.72
19.00	515.71	39.00	642.60	64.00	750.50	79.00	784.82
18.00	500.68	38.00	634.31	63.00	744.81	78.00	779.88
17.00	484.62	37.00	625.83	62.00	739.05	77.00	774.88
16.00	467.35	36.00	617.13	61.00	733.22	76.00	769.84
15.00	448.57	35.00	608.21	60.00	727.30	75.00	764.74
14.00	427.88	34.00	599.06	59.00	721.31	74.00	759.59
13.00	404.67	33.00	589.65	58.00	715.23	73.00	754.39
12.00	377.92	32.00	579.97	57.00	709.07	72.00	749.13
11.00	345.67	31.00	570.00	56.00	702.82	71.00	743.81
		30.00	559.71	55.00	696.48	70.00	738.44
		29.00	549.08	54.00	690.04	69.00	733.00
		28.00	538.07	53.00	683.51	68.00	727.51
		27.00	526.66	52.00	676.87	67.00	721.94
		26.00	514.79	51.00	670.13	66.00	716.32
		25.00	502.44	50.00	663.27	65.00	710.62
		24.00	489.53	49.00	656.30	64.00	704.86
		23.00	476.01	48.00	649.21	63.00	699.02
		22.00	461.79	47.00	641.99	62.00	693.11
		21.00	446.78	46.00	634.64	61.00	687.13
		20.00	430.85	45.00	627.15	60.00	681.06
		19.00	413.85	44.00	619.52	59.00	674.92

		18.00	395.58	43.00	611.74	58.00	668.69
		17.00	375.77	42.00	603.79	57.00	662.38
		16.00	354.04	41.00	595.68	56.00	655.98
		15.00	329.85	40.00	587.39	55.00	649.48
		14.00	302.32	39.00	578.92	54.00	642.89
		13.00	269.99	38.00	570.25	53.00	636.21
				37.00	561.37	52.00	629.42
				36.00	552.26	51.00	622.52
				35.00	542.92	50.00	615.52
				34.00	533.33	49.00	608.40
				33.00	523.47	48.00	601.16
				32.00	513.31	47.00	593.80
				31.00	502.85	46.00	586.31
				30.00	492.05	45.00	578.69
				29.00	480.89	44.00	570.93
				28.00	469.32	43.00	563.02
				27.00	457.33	42.00	554.96
				26.00	444.86	41.00	546.75
				25.00	431.86	40.00	538.36
				24.00	418.28	39.00	529.81
				23.00	404.05	38.00	521.07
				22.00	389.07	37.00	512.14
				21.00	373.27	36.00	503.00
				20.00	356.49	35.00	493.66
				19.00	338.59	34.00	484.09
				18.00	319.37	33.00	474.28
				17.00	298.54	32.00	464.23
						31.00	453.91
						30.00	443.30
						29.00	432.40
						28.00	421.18
						27.00	409.62
						26.00	397.70
						25.00	385.38

						24.00	372.65
						23.00	359.47
						22.00	345.80
						21.00	331.61
						20.00	316.85
						19.00	301.48

**Table S8 (continued).**  $pcT$  extrapolated values for CO<sub>2</sub>+CH<sub>3</sub>OH+SO<sub>2</sub>+CH<sub>4</sub> mixtures, using  $p^\#$  and the coefficients from Table S7.

$p$ (MPa)	$c$ (m·s <sup>-1</sup> )	$p$ (MPa)	$c$ (m·s <sup>-1</sup> )	$p$ (MPa)	$c$ (m·s <sup>-1</sup> )	$p$ (MPa)	$c$ (m·s <sup>-1</sup> )
$x_{\text{CO}_2} = 0.9763$ ; $x_{\text{CH}_3\text{OH}} = 0.0076$ ; $x_{\text{SO}_2} = 0.0008$ ; $x_{\text{CH}_4} = 0.0153$							
$T = 263.14 \text{ K}$		$T = 273.14 \text{ K}$		$T = 293.12 \text{ K}$		$T = 304.16 \text{ K}$	
19.00	784.83	29.00	807.35	49.00	847.44	59.00	862.70
18.00	776.59	28.00	800.08	48.00	841.55	58.00	857.29
17.00	768.14	27.00	792.66	47.00	835.57	57.00	851.82
16.00	759.46	26.00	785.06	46.00	829.51	56.00	846.28
15.00	750.52	25.00	777.29	45.00	823.35	55.00	840.66
14.00	741.31	24.00	769.34	44.00	817.09	54.00	834.97
13.00	731.81	23.00	761.18	43.00	810.73	53.00	829.20
12.00	721.98	22.00	752.81	42.00	804.26	52.00	823.35
11.00	711.81	21.00	744.21	41.00	797.69	51.00	817.41
10.00	701.25	20.00	735.37	40.00	790.99	50.00	811.39
9.00	690.26	19.00	726.25	39.00	784.18	49.00	805.28
8.00	678.79	18.00	716.85	38.00	777.24	48.00	799.07
7.00	666.79	17.00	707.14	37.00	770.16	47.00	792.76
6.00	654.19	16.00	697.08	36.00	762.95	46.00	786.35
5.00	640.89	15.00	686.65	35.00	755.59	45.00	779.84
4.00	626.79	14.00	675.80	34.00	748.07	44.00	773.21
3.90	625.33	13.00	664.48	33.00	740.39	43.00	766.47
3.80	623.86	12.00	652.64	32.00	732.53	42.00	759.60
3.70	622.38	11.00	640.21	31.00	724.49	41.00	752.61
3.60	620.89	10.00	627.11	30.00	716.25	40.00	745.48
3.50	619.39	9.00	613.21	29.00	707.80	39.00	738.21
3.40	617.88	8.00	598.39	28.00	699.13	38.00	730.80
3.30	616.36	7.00	582.46	27.00	690.22	37.00	723.23
3.20	614.83	6.00	565.14	26.00	681.06	36.00	715.49
3.10	613.29	5.00	546.07	25.00	671.61	35.00	707.58
		4.90	544.04	24.00	661.87	34.00	699.48
		4.80	541.99	23.00	651.79	33.00	691.19

		4.70	539.92	22.00	641.36	32.00	682.69
		4.60	537.82	21.00	630.54	31.00	673.97
		4.50	535.70	20.00	619.29	30.00	665.01
		4.40	533.55	19.00	607.55	29.00	655.79
		4.30	531.37	18.00	595.28	28.00	646.29
		4.20	529.16	17.00	582.40	27.00	636.50
		4.10	526.91	16.00	568.82	26.00	626.38
		4.00	524.64	15.00	554.44	25.00	615.91
		3.90	522.34	14.00	539.12	24.00	605.05
				13.00	522.68	23.00	593.76
				12.00	504.87	22.00	582.00
				11.00	485.33	21.00	569.71
				10.00	463.54	20.00	556.82
				9.00	438.62	19.00	543.26
				8.00	408.97	18.00	528.92
				7.00	370.85	17.00	513.66
				6.90	366.25	16.00	497.33
				6.80	361.43	15.00	479.69
				6.70	356.38	14.00	460.43
				6.60	351.05	13.00	439.08
				6.50	345.40	12.00	414.90
				6.40	339.35	11.00	386.60
				6.30	332.84	10.00	351.46
				6.20	325.73	9.00	301.28

**Table S8 (continued).**  $pcT$  extrapolated values for CO<sub>2</sub>+CH<sub>3</sub>OH+SO<sub>2</sub>+CH<sub>4</sub> mixtures, using  $p^\#$  and the coefficients from Table S7.

$p$ (MPa)	$c$ (m·s <sup>-1</sup> )	$p$ (MPa)	$c$ (m·s <sup>-1</sup> )	$p$ (MPa)	$c$ (m·s <sup>-1</sup> )	$p$ (MPa)	$c$ (m·s <sup>-1</sup> )
<b><math>x_{\text{CO}_2} = 0.9763</math>; <math>x_{\text{CH}_3\text{OH}} = 0.0076</math>; <math>x_{\text{SO}_2} = 0.0008</math>; <math>x_{\text{CH}_4} = 0.0153</math></b>							
<b><math>T = 313.14 \text{ K}</math></b>		<b><math>T = 333.14 \text{ K}</math></b>		<b><math>T = 353.14 \text{ K}</math></b>		<b><math>T = 373.20 \text{ K}</math></b>	
74.00	908.28	94.00	939.28	129.00	1021.78	139.00	1014.62
73.00	903.57	93.00	935.15	128.00	1018.41	138.00	1011.38
72.00	898.81	92.00	930.97	127.00	1015.03	137.00	1008.11
71.00	894.00	91.00	926.77	126.00	1011.63	136.00	1004.83
70.00	889.14	90.00	922.52	125.00	1008.21	135.00	1001.52
69.00	884.23	89.00	918.25	124.00	1004.77	134.00	998.20
68.00	879.26	88.00	913.93	123.00	1001.30	133.00	994.86
67.00	874.24	87.00	909.58	122.00	997.82	132.00	991.51
66.00	869.16	86.00	905.19	121.00	994.32	131.00	988.13
65.00	864.03	85.00	900.77	120.00	990.79	130.00	984.74
64.00	858.84	84.00	896.30	119.00	987.25	129.00	981.32
63.00	853.58	83.00	891.79	118.00	983.68	128.00	977.88
62.00	848.27	82.00	887.24	117.00	980.09	127.00	974.43
61.00	842.88	81.00	882.65	116.00	976.47	126.00	970.95
60.00	837.43	80.00	878.02	115.00	972.83	125.00	967.46
59.00	831.92	79.00	873.34	114.00	969.17	124.00	963.94
58.00	826.33	78.00	868.61	113.00	965.49	123.00	960.40
57.00	820.66	77.00	863.84	112.00	961.78	122.00	956.84
56.00	814.92	76.00	859.02	111.00	958.05	121.00	953.26
55.00	809.10	75.00	854.15	110.00	954.29	120.00	949.65
54.00	803.20	74.00	849.24	109.00	950.50	119.00	946.03
53.00	797.21	73.00	844.27	108.00	946.69	118.00	942.38
52.00	791.14	72.00	839.24	107.00	942.86	117.00	938.70
51.00	784.97	71.00	834.16	106.00	939.00	116.00	935.01
50.00	778.71	70.00	829.03	105.00	935.11	115.00	931.29
49.00	772.35	69.00	823.84	104.00	931.19	114.00	927.54
48.00	765.89	68.00	818.59	103.00	927.24	113.00	923.77

47.00	759.32	67.00	813.28	102.00	923.27	112.00	919.97
46.00	752.64	66.00	807.91	101.00	919.26	111.00	916.15
45.00	745.84	65.00	802.47	100.00	915.23	110.00	912.31
44.00	738.92	64.00	796.96	99.00	911.17	109.00	908.43
43.00	731.87	63.00	791.39	98.00	907.07	108.00	904.53
42.00	724.69	62.00	785.75	97.00	902.94	107.00	900.60
41.00	717.36	61.00	780.03	96.00	898.79	106.00	896.65
40.00	709.89	60.00	774.24	95.00	894.60	105.00	892.66
39.00	702.26	59.00	768.37	94.00	890.37	104.00	888.65
38.00	694.47	58.00	762.42	93.00	886.11	103.00	884.60
37.00	686.50	57.00	756.38	92.00	881.82	102.00	880.53
36.00	678.35	56.00	750.26	91.00	877.49	101.00	876.43
35.00	670.01	55.00	744.05	90.00	873.12	100.00	872.29
34.00	661.46	54.00	737.75	89.00	868.72	99.00	868.13
33.00	652.68	53.00	731.35	88.00	864.28	98.00	863.93
32.00	643.67	52.00	724.85	87.00	859.80	97.00	859.70
31.00	634.40	51.00	718.25	86.00	855.29	96.00	855.43
30.00	624.87	50.00	711.54	85.00	850.73	95.00	851.13
29.00	615.04	49.00	704.71	84.00	846.13	94.00	846.80
28.00	604.88	48.00	697.77	83.00	841.49	93.00	842.43
27.00	594.39	47.00	690.70	82.00	836.81	92.00	838.03
26.00	583.51	46.00	683.50	81.00	832.08	91.00	833.59
25.00	572.22	45.00	676.17	80.00	827.30	90.00	829.11
24.00	560.47	44.00	668.70	79.00	822.49	89.00	824.59
23.00	548.21	43.00	661.08	78.00	817.62	88.00	820.03
22.00	535.37	42.00	653.31	77.00	812.70	87.00	815.43
21.00	521.89	41.00	645.36	76.00	807.74	86.00	810.79
20.00	507.68	40.00	637.25	75.00	802.72	85.00	806.11
19.00	492.61	39.00	628.95	74.00	797.66	84.00	801.39
18.00	476.55	38.00	620.46	73.00	792.53	83.00	796.63
17.00	459.30	37.00	611.77	72.00	787.36	82.00	791.81
16.00	440.61	36.00	602.85	71.00	782.13	81.00	786.96
15.00	420.10	35.00	593.71	70.00	776.84	80.00	782.05
14.00	397.24	34.00	584.31	69.00	771.49	79.00	777.10



13.00	371.16	33.00	574.65	68.00	766.07	78.00	772.10
12.00	340.27	32.00	564.71	67.00	760.60	77.00	767.05
11.00	301.13	31.00	554.45	66.00	755.06	76.00	761.95
10.00	242.10	30.00	543.87	65.00	749.45	75.00	756.79
		29.00	532.92	64.00	743.78	74.00	751.58
		28.00	521.59	63.00	738.03	73.00	746.32
		27.00	509.82	62.00	732.21	72.00	741.00
		26.00	497.58	61.00	726.32	71.00	735.62
		25.00	484.81	60.00	720.34	70.00	730.18
		24.00	471.46	59.00	714.29	69.00	724.68
		23.00	457.46	58.00	708.15	68.00	719.11
		22.00	442.71	57.00	701.93	67.00	713.48
		21.00	427.12	56.00	695.62	66.00	707.79
		20.00	410.54	55.00	689.21	65.00	702.02
		19.00	392.81	54.00	682.71	64.00	696.19
		18.00	373.71	53.00	676.11	63.00	690.28
		17.00	352.93	52.00	669.40	62.00	684.29
		16.00	330.04	51.00	662.59	61.00	678.23
		15.00	304.42	50.00	655.67	60.00	672.09
		14.00	275.08	49.00	648.63	59.00	665.87
				48.00	641.46	58.00	659.56
				47.00	634.18	57.00	653.16
				46.00	626.75	56.00	646.67
				45.00	619.20	55.00	640.09
				44.00	611.49	54.00	633.41
				43.00	603.63	53.00	626.63
				42.00	595.62	52.00	619.75
				41.00	587.43	51.00	612.75
				40.00	579.07	50.00	605.65
				39.00	570.53	49.00	598.43
				38.00	561.78	48.00	591.08
				37.00	552.83	47.00	583.61
				36.00	543.66	46.00	576.01
				35.00	534.25	45.00	568.28

				34.00	524.59	44.00	560.39
				33.00	514.67	43.00	552.36
				32.00	504.46	42.00	544.18
				31.00	493.94	41.00	535.83
				30.00	483.09	40.00	527.30
				29.00	471.89	39.00	518.60
				28.00	460.30	38.00	509.71
				27.00	448.29	37.00	500.62
				26.00	435.82	36.00	491.33
				25.00	422.85	35.00	481.81
				24.00	409.32	34.00	472.06
				23.00	395.18	33.00	462.07
				22.00	380.34	32.00	451.81
				21.00	364.72	31.00	441.28
				20.00	348.22	30.00	430.46
				19.00	330.71	29.00	419.32
				18.00	312.02	28.00	407.85
				17.00	291.95	27.00	396.02
						26.00	383.81
						25.00	371.20
						24.00	358.14
						23.00	344.61

**Table S9.** Comparison between the experimental (exp)  $ppT$ , the experimental (exp)  $pcT$  and the extrapolated (ext)  $pcT$  data presented in this work for the  $\text{CO}_2+\text{SO}_2+\text{CH}_4$  system and those calculated using the extended EOS-CG and PC-SAFT EoSs. The doped mixtures for  $c$  measurements were modeled as pseudobinary mixtures in which the mole fraction of  $\text{CO}_2$  was  $x_{\text{CO}_2} = 1 - x_{\text{SO}_2} - x_{\text{CH}_4}$ .

nominal $T(\text{K})$	EoS	$MRD_{\rho,\text{exp}}(\%)$		$MRD_{c,\text{exp}}(\%)$		$MRD_{c,\text{ext}}(\%)$	
		Co-capture mixture	Emissions mixture	Co-capture mixture	Emissions mixture	Co-capture mixture	Emissions mixture
263.15	extended EOS-CG	0.16	0.11	0.44	0.45	0.26	0.24
	PC-SAFT	1.53	1.60	4.61	5.01	1.22	1.55
273.15	extended EOS-CG	0.15	0.28	0.40	0.43	0.23	0.46
	PC-SAFT	1.64	1.62	4.58	4.97	2.11	2.70
293.15	extended EOS-CG	0.23	0.36	0.38	0.33	0.31	0.68
	PC-SAFT	1.61	1.48	4.41	4.83	3.69	3.92
304.21	extended EOS-CG	0.38	1.02	0.34	0.25	0.25	0.73
	PC-SAFT	1.64	2.13	4.35	4.71	4.12	3.73
313.15	extended EOS-CG	0.76	0.86	0.30	0.21	0.34	0.62
	PC-SAFT	2.14	1.81	4.30	4.66	3.48	3.57
333.15	extended EOS-CG	0.75	0.60	0.29	0.15	0.32	0.45
	PC-SAFT	1.82	2.14	4.17	4.46	3.11	3.42
353.15	extended EOS-CG	0.34	0.41	0.43	0.15	0.36	0.56
	PC-SAFT	1.95	2.02	3.88	4.25	2.79	3.40
373.15	extended EOS-CG	0.28	0.29	0.19	0.06	0.39	0.22
	PC-SAFT	1.80	1.88	3.84	4.04	2.84	3.16
$\overline{MRD}_x$ (%)	extended EOS-CG	0.46		0.32		0.42	
	PC-SAFT	1.82		4.48		3.22	

$$MRD_{x,\text{exp}}(\%) = \frac{100}{N} \sum \left| \frac{X_{\text{EoS}} - X_{\text{exp}}}{X_{\text{exp}}} \right|$$

$$\overline{MRD}_{x,\text{exp}}(\%) = \frac{100}{N'} \sum \left| \frac{X_{\text{EoS}} - X_{\text{exp}}}{X_{\text{exp}}} \right|$$

$$MRD_{c,\text{ext}}(\%)[\text{ext-extended EOS-CG}] = \frac{100}{N} \sum \left| \frac{c_{\text{ext}} - c_{\text{EoS}}}{c_{\text{EoS}}} \right|$$

$$\overline{MRD}_{c,\text{ext}}(\%)[\text{ext-extended EOS-CG}] = \frac{100}{N'} \sum \left| \frac{c_{\text{ext}} - c_{\text{EoS}}}{c_{\text{EoS}}} \right|$$

$N$ : number of points for each composition and temperature.

$N'$ : total number of points for each property.

**Table S10.** Comparison between the experimental VLE data presented in this work for the CO<sub>2</sub>+SO<sub>2</sub>+CH<sub>4</sub> system and those calculated using the extended EOS-CG or PC-SAFT EoSs in terms of mean relative deviation,  $MRD(\%)$ , and overall mean relative deviation,  $\overline{MRD}(\%)$ .

Composition	EoS	$MRD_{p_{dew}}(\%)$	$MRD_{p_{bubble}}(\%)$	$MRD_{\rho_V}(\%)$	$MRD_{\rho_L}(\%)$
Mixture 1 (co-capture)	extended EOS-CG	0.27	1.88	0.58	0.20
	PC-SAFT	5.15	1.67	5.45	1.35
Mixture 3 (emissions)	extended EOS-CG	0.15	4.86	0.58	0.10
	PC-SAFT	1.14	4.57	4.93	1.17
$\overline{MRD}_X(\%)$	extended EOS-CG	0.22	3.16	0.58	0.16
	PC-SAFT	3.32	2.95	5.14	1.27

$$MRD_X(\%) = \frac{100}{N} \left| \frac{X_{EoS} - X_{exp}}{X_{exp}} \right|$$

$N$ : number of experimental points for each composition.

$$\overline{MRD}_X(\%) = \frac{100}{N'} \sum \left| \frac{X_{EoS} - X_{exp}}{X_{exp}} \right|$$

$N'$ : number of experimental points for each property.

**Table S11.** Parameters used in the modeling of the CO<sub>2</sub>+SO<sub>2</sub>+CH<sub>4</sub> system with the PC-SAFT EoS.

Pure Compound Parameter	CO <sub>2</sub>	SO <sub>2</sub>	CH <sub>4</sub>
$m/M$ (mol/g)	0.04710 <sup>a</sup>	0.04466 <sup>a</sup>	0,062335 <sup>a</sup>
$\sigma$ (Å)	2.7852 <sup>a</sup>	2.6826 <sup>a</sup>	3.7039 <sup>a</sup>
$\varepsilon$ (K)	169.21 <sup>a</sup>	205.35 <sup>a</sup>	150.03 <sup>a</sup>
$\Delta v_c$ (cm <sup>3</sup> /g)	0.02 <sup>b</sup>	0.01 <sup>c</sup>	----
<b>Binary interaction parameters:</b> CO <sub>2</sub> –SO <sub>2</sub> : $k_{ij} = 0.03^d$ ; CO <sub>2</sub> –CH <sub>4</sub> : $k_{ij} = 0.07^b$			

<sup>a</sup> Ref. [18]; <sup>b</sup> Ref. [20]; <sup>c</sup> Ref. [9]; <sup>d</sup> Ref. [50].

**Table S12.** Comparison between the experimental  $p\rho T$ ,  $p c T$  and VLE data presented in this work for the CO<sub>2</sub>+SO<sub>2</sub>+CH<sub>4</sub> system and those calculated using the PC-SAFT EoS with parameters from the literature [20,50-52] in terms of overall mean relative deviation,  $\overline{MRD}_X$  (%). The doped mixtures for  $c$  measurements were modeled as pseudobinary mixtures in which the mole fraction of CO<sub>2</sub> was  $x_{\text{CO}_2} = 1 - x_{\text{SO}_2} - x_{\text{CH}_4}$ .

PC-SAFT parameters	$\overline{MRD}_\rho$ (%)	$\overline{MRD}_{p_{\text{dew}}}$ (%)	$\overline{MRD}_{p_{\text{bubble}}}$ (%)	$\overline{MRD}_{\rho_V}$ (%)	$\overline{MRD}_{\rho_L}$ (%)	$\overline{MRD}_c$ (%)
CO <sub>2</sub> +CH <sub>4</sub> $k_{ij} = 0.07$ [20] (Table S11) CO <sub>2</sub> +SO <sub>2</sub> $k_{ij} = 0.03$ [50] (Table S11) SO <sub>2</sub> + CH <sub>4</sub> $k_{ij} = 0$ (Table S11) Original pure compound parameters (Table S11)	1.82	3.32	2.95	5.14	1.27	4.48
CO <sub>2</sub> +CH <sub>4</sub> $k_{ij} = 0.061$ [50] CO <sub>2</sub> +SO <sub>2</sub> $k_{ij} = 0.03$ [50] (Table S11) SO <sub>2</sub> + CH <sub>4</sub> $k_{ij} = 0$ (Table S11) Original pure compound parameters (Table S11)	1.81	3.32	2.48	5.15	1.27	4.47
CO <sub>2</sub> +CH <sub>4</sub> $k_{ij} = 0.0856$ [51] CO <sub>2</sub> +SO <sub>2</sub> $k_{ij} = 0.0424$ [51] SO <sub>2</sub> + CH <sub>4</sub> $k_{ij} = 0.0586$ [51] Original pure compound parameters (Table S11)	1.93	6.10	4.23	8.44	1.32	4.59
CO <sub>2</sub> +CH <sub>4</sub> $k_{ij} = 0.0625456$ [52] CO <sub>2</sub> +SO <sub>2</sub> $k_{ij} = 0.0170442$ [52] SO <sub>2</sub> + CH <sub>4</sub> $k_{ij} = 0.0481693$ [52] Pure compound parameters from Ref. [52]	2.39	6.95	5.28	8.86	0.55	2.71

$$\overline{MRD}_X(\%)[\text{exp-EoS}] = \frac{100}{N'} \sum \left| \frac{X_{\text{EoS}} - X_{\text{exp}}}{X_{\text{exp}}} \right|$$

$N'$ : total number of experimental points for each property.

**Table S13.** Equation overview for the calculation of transport parameters in pipeline design and operation and for the calculation of injection and storage parameters [21,53,54].

	Equations	Symbols
Mass flow	$m = \rho \times v \times A$	$m$ = mass flow (kg/s); $\rho$ = fluid density (kg/m <sup>3</sup> ); $v$ = fluid velocity (m/s); $A$ = pipeline inner section (m <sup>2</sup> ).
Pipeline inner diameter	$D = \left( \frac{4 \times m}{v \times \pi \times \rho} \right)^{1/2}$ $= \left[ \frac{8 \times f \times m^2}{\rho \times \pi^2 \times \frac{\Delta p}{d}} \right]^{1/5}$	$D$ = inner diameter (m); $m$ = mass flow (kg/s); $v$ = fluid velocity (m/s); $\rho$ = fluid density (kg/m <sup>3</sup> ); $f$ = Darcy-Weisbach friction factor; $(\Delta p/d)$ = pressure drop per metre (Pa/m).
Reynolds number	$Re = \frac{\rho \times v \times D}{\eta} = \frac{4 \times m}{\pi \times \eta \times D}$	$Re$ = Reynolds number; $\rho$ = fluid density (kg/m <sup>3</sup> ); $v$ = fluid velocity (m/s); $D$ = inner diameter (m); $\eta$ = fluid viscosity (Pa.s); $m$ = mass flow (kg/s).
Darcy-Weisbach friction factor	$f = \frac{1.325}{\left[ \ln \left[ \frac{e}{3.7 \times D} + \frac{5.74}{Re^{0.9}} \right] \right]^2}$	$f$ = Darcy-Weisbach friction factor; $e$ = roughness height (m); $D$ = inner diameter (m); $Re$ = Reynolds number.
Pressure drop per meter	$\frac{\Delta p}{d} = \frac{8 \times f \times m^2}{\rho \times \pi^2 \times D^5}$	$(\Delta p/d)$ = pressure drop per metre (Pa/m); $m$ = mass flow (kg/s); $\rho$ = fluid density (kg/m <sup>3</sup> ); $f$ = Darcy-Weisbach friction factor; $D$ = inner diameter (m).
Normalized storage capacity	$\frac{M}{M_0} = \frac{\rho}{\rho_0 \left[ 1 + \sum \frac{m_i}{m_0} \right]}$	$M/M_0$ = normalized storage capacity; $\rho$ = mixture density (kg/m <sup>3</sup> ); $\rho_0$ = pure CO <sub>2</sub> density (kg/m <sup>3</sup> ); $m_i$ : mass of impurity in the mixture; $m_0$ = mass of pure CO <sub>2</sub> in the mixture
Normalized flotability in saline aquifers	$\frac{F}{F_0} = \frac{(\rho_{Br} - \rho)}{(\rho_{Br} - \rho_0)}$	$F/F_0$ = normalized rising velocity; $\rho_{Br}$ = brine density (kg/m <sup>3</sup> ); $\rho$ = mixture density (kg/m <sup>3</sup> ); $\rho_0$ = pure CO <sub>2</sub> density (kg/m <sup>3</sup> )
Normalized rising velocity in saline aquifers	$\frac{v}{v_0} = \frac{F(\rho_0 \eta_0)}{F_0(\rho \eta)}$	$v/v_0$ = normalized rising velocity; $\rho_{Br}$ = brine density (kg/m <sup>3</sup> ); $\rho$ = mixture density (kg/m <sup>3</sup> ); $\rho_0$ = pure CO <sub>2</sub> density (kg/m <sup>3</sup> ); $\eta_0$ = pure CO <sub>2</sub> viscosity (μPa.s); $\eta$ = mixture viscosity (μPa.s)
Normalized permeation flux	$\frac{\dot{M}}{\dot{M}_0} = \frac{\rho \left( \frac{\eta_0}{\eta} \right)}{\rho_0 \left[ 1 + \sum_i \left( \frac{m_i}{m_0} \right) \right]}$	$\dot{M}/\dot{M}_0$ = normalized permeation flux; $\rho$ = mixture density (kg/m <sup>3</sup> ); $\rho_0$ = pure CO <sub>2</sub> density (kg/m <sup>3</sup> ); $\eta_0$ = pure CO <sub>2</sub> viscosity (μPa.s); $\eta$ = mixture viscosity (μPa.s); $m_i$ : mass of impurity in the mixture; $m_0$ = mass of pure CO <sub>2</sub> in the mixture

**Table S14.** Values of  $A_{ij}$  for CO<sub>2</sub>-SO<sub>2</sub> and CO<sub>2</sub>-CH<sub>4</sub> binary interactions in equation (4) at temperatures  $T$ , as well as the mean relative deviations.

nominal $T/K$	Mixture 1				Mixture 3			
	CO <sub>2</sub> -SO <sub>2</sub>	$MRD_{\eta}$	CO <sub>2</sub> -CH <sub>4</sub>	$MRD_{\eta}$	CO <sub>2</sub> -SO <sub>2</sub>	$MRD_{\eta}$	CO <sub>2</sub> -CH <sub>4</sub>	$MRD_{\eta}$
	$A_{ij}$	(%)	$A_{ij}$	(%)	$A_{ij}$	(%)	$A_{ij}$	(%)
<b>263.15</b>	-2.180112618	0.127	-0.58983459	0.039	-2.180004184	0.003	-0.586747075	0.033
<b>273.15</b>	-2.117443478	0.114	-0.697565558	0.087	-2.115882548	0.004	-0.694667243	0.072
<b>293.15</b>	-1.936169707	0.107	-1.081669075	0.656	-1.942971147	0.002	-1.074678272	0.541
<b>304.21</b>	-1.75701828	1.172	-1.446079943	2.946	-1.784737626	0.085	-1.474927128	3.424
<b>313.15</b>	-1.637614902	2.896	-1.636773689	2.548	-1.626320111	0.033	-1.609095873	1.723
<b>333.15</b>	-1.484693256	1.591	-1.007982262	0.942	-1.495222467	0.030	-1.004597385	0.795
<b>353.15</b>	-1.30579895	1.234	-0.729379179	0.534	-1.288744387	0.022	-0.816200505	0.465
<b>373.15</b>	-1.208723722	1.048	-0.589233545	0.432	-1.170544409	0.018	-0.592422323	0.357

$$MRD_{\eta} = \frac{100}{N} \sum_i^N \left| \frac{\eta_i - \eta_{i,fit}}{\eta_i} \right|; N: \text{number of points at each composition and temperature.}$$

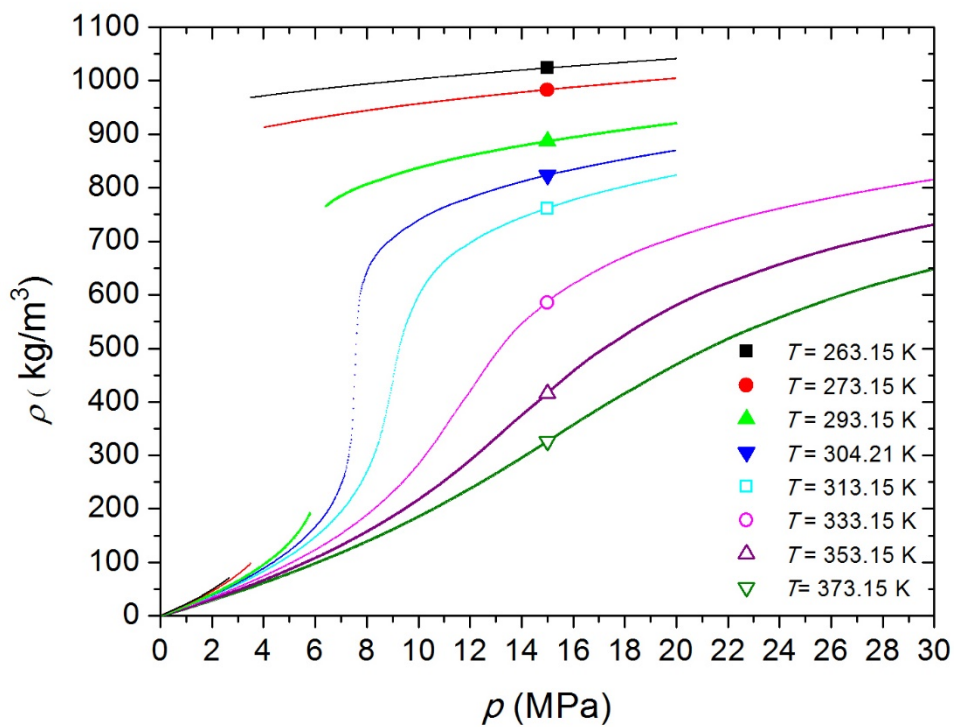


**Table S15.** Experimental bubble pressures,  $p_{\text{bubble}}$ , for the studied ternary and binary mixtures and saturation pressure for pure CO<sub>2</sub>.

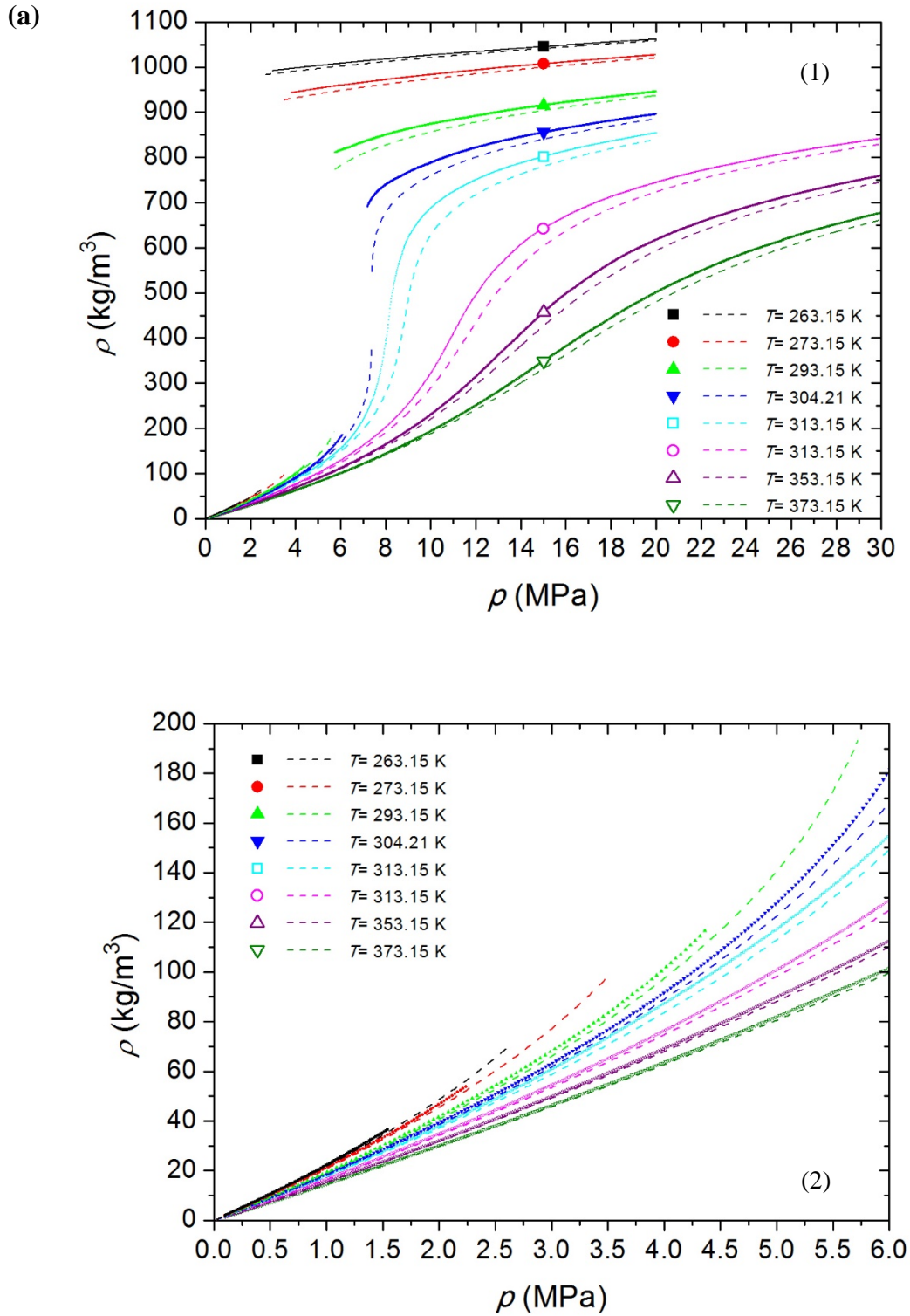
<b>nominal <math>T</math> (K)</b>	<b><math>p_{\text{bubble}}</math> (MPa)</b>					<b><math>p_{\text{sat}}</math> (MPa)</b>
	<b>co- capture<sup>a</sup></b>	<b>emissions<sup>a</sup></b>	<b>CO<sub>2</sub>+SO<sub>2</sub> (4.68%)<sup>b</sup></b>	<b>CO<sub>2</sub>+SO<sub>2</sub> (0.69%)<sup>b</sup></b>	<b>CO<sub>2</sub>+CH<sub>4</sub> (1.91%)<sup>c</sup></b>	<b>CO<sub>2</sub><sup>d</sup></b>
<b>263.15</b>	2.928	2.863	2.530	2.633	3.150	2.649
<b>273.15</b>	3.750	3.740	3.263	3.462	3.983	3.485
<b>293.15</b>	5.726	5.909	5.316	5.699	6.210	5.729
<b>304.21</b>	7.185		6.689	7.182		

<sup>a</sup> This work; <sup>b</sup> Ref. [8]; <sup>c</sup> Ref. [21]; <sup>d</sup> Ref. [42].

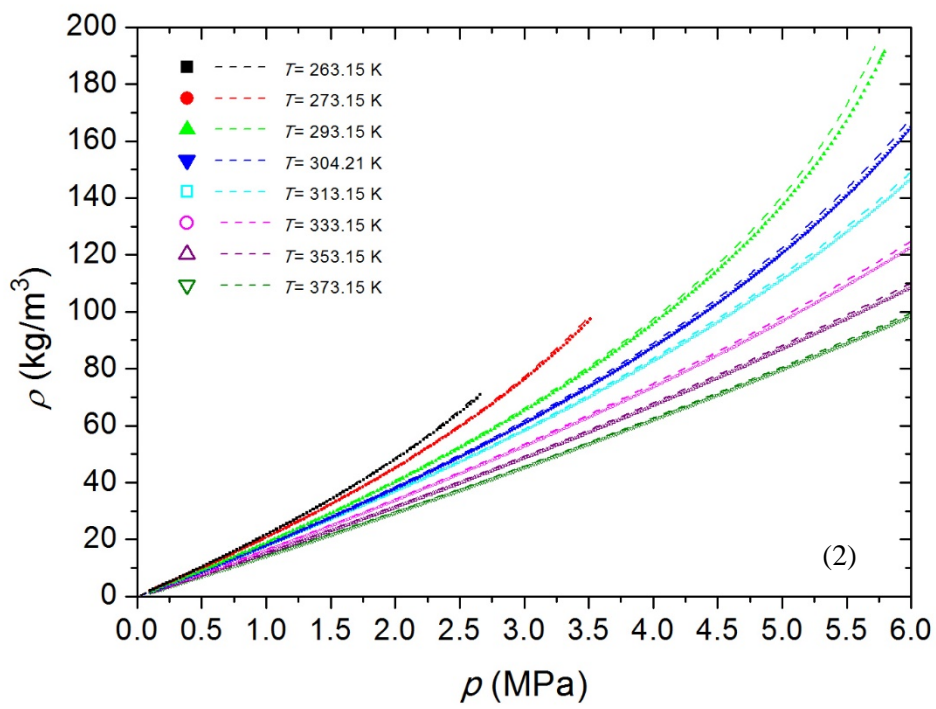
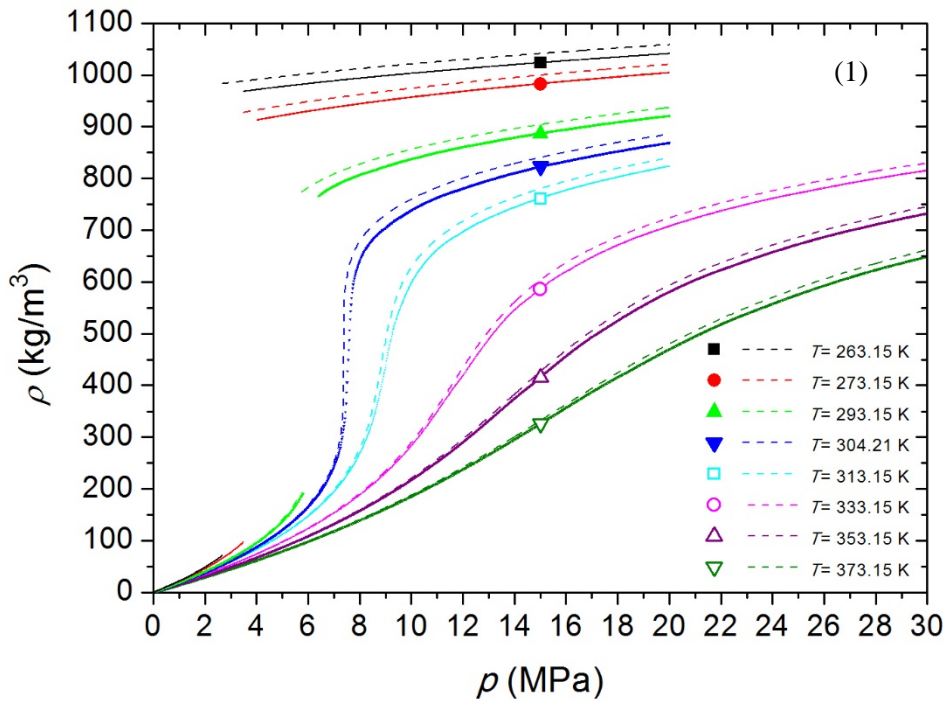
**Figure S1.** Experimental densities,  $\rho$ , for Mixture 3 (emissions) versus pressure,  $p$ , at the nominal temperatures  $T$ .



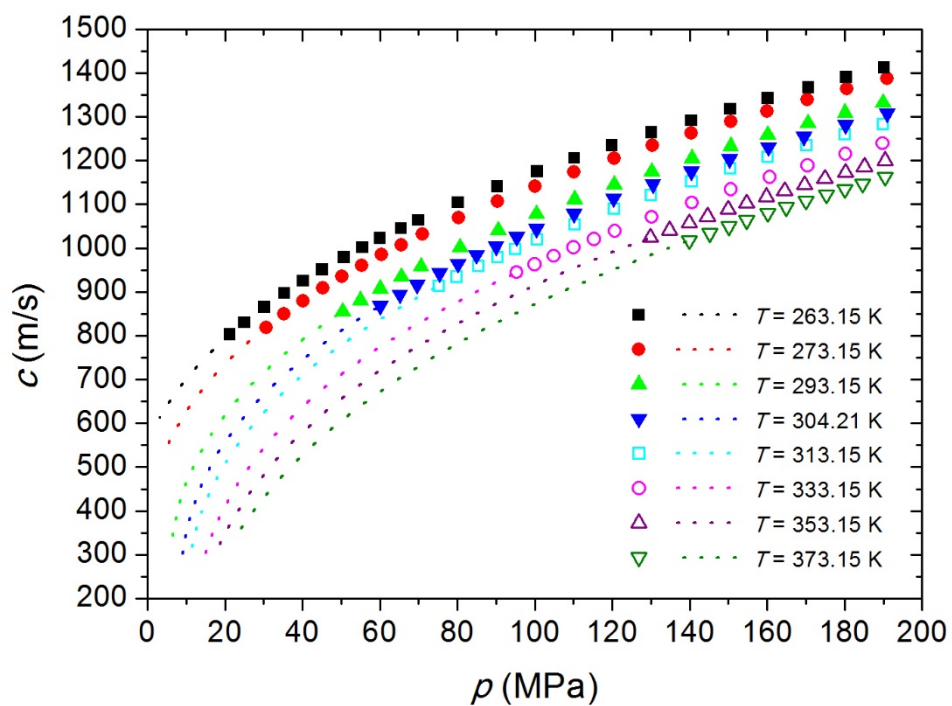
**Figure S2.** Experimental densities,  $\rho$ , of Mixture 1 (co-capture) (a) and Mixture 3 (emissions) (b) (symbols), and pure CO<sub>2</sub> [42] (dashed line) versus pressure,  $p$ , at the nominal temperatures,  $T$ . (1) Whole studied range of pressures. (2) Enlargement of the gas phase region.



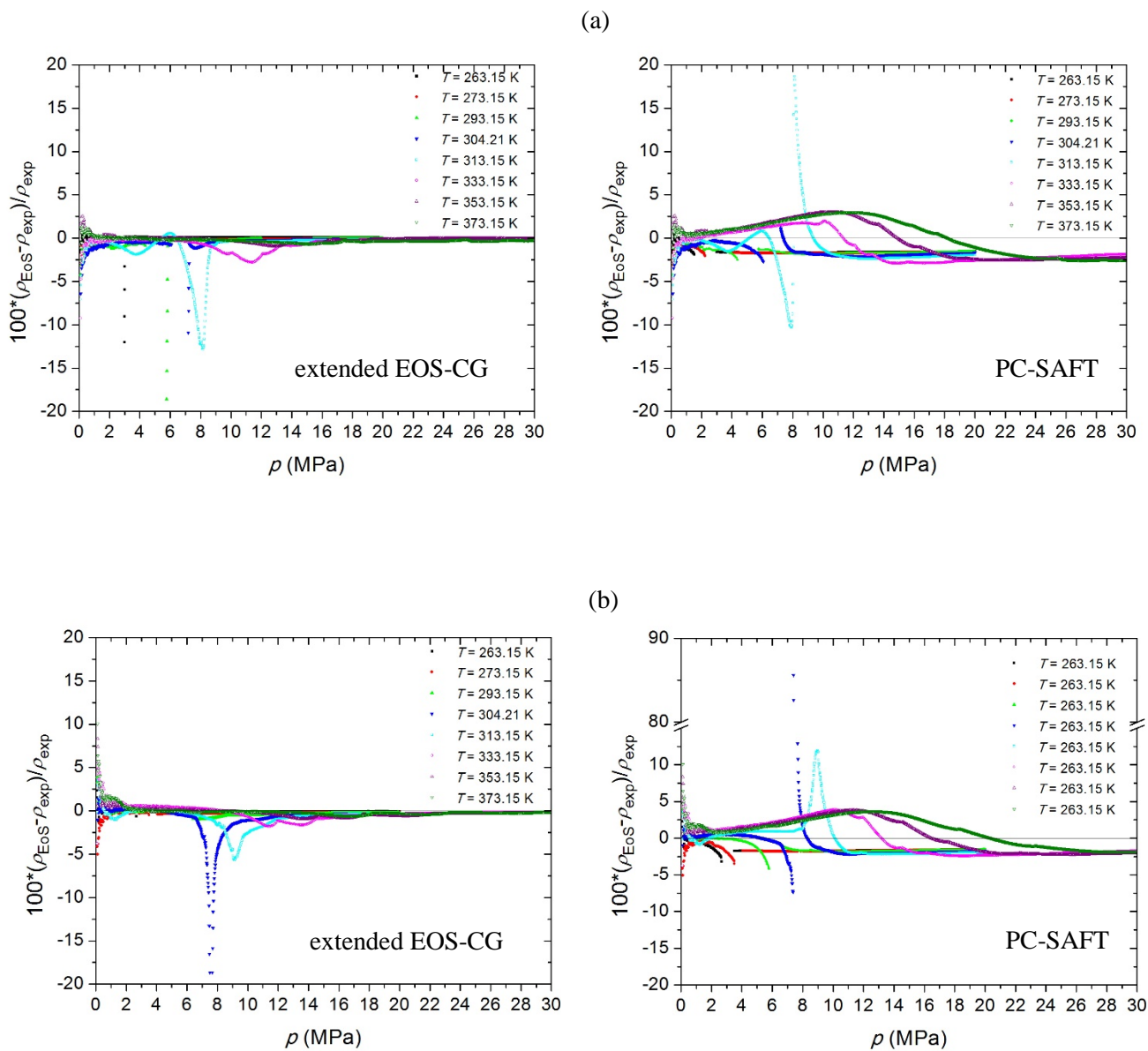
(b)



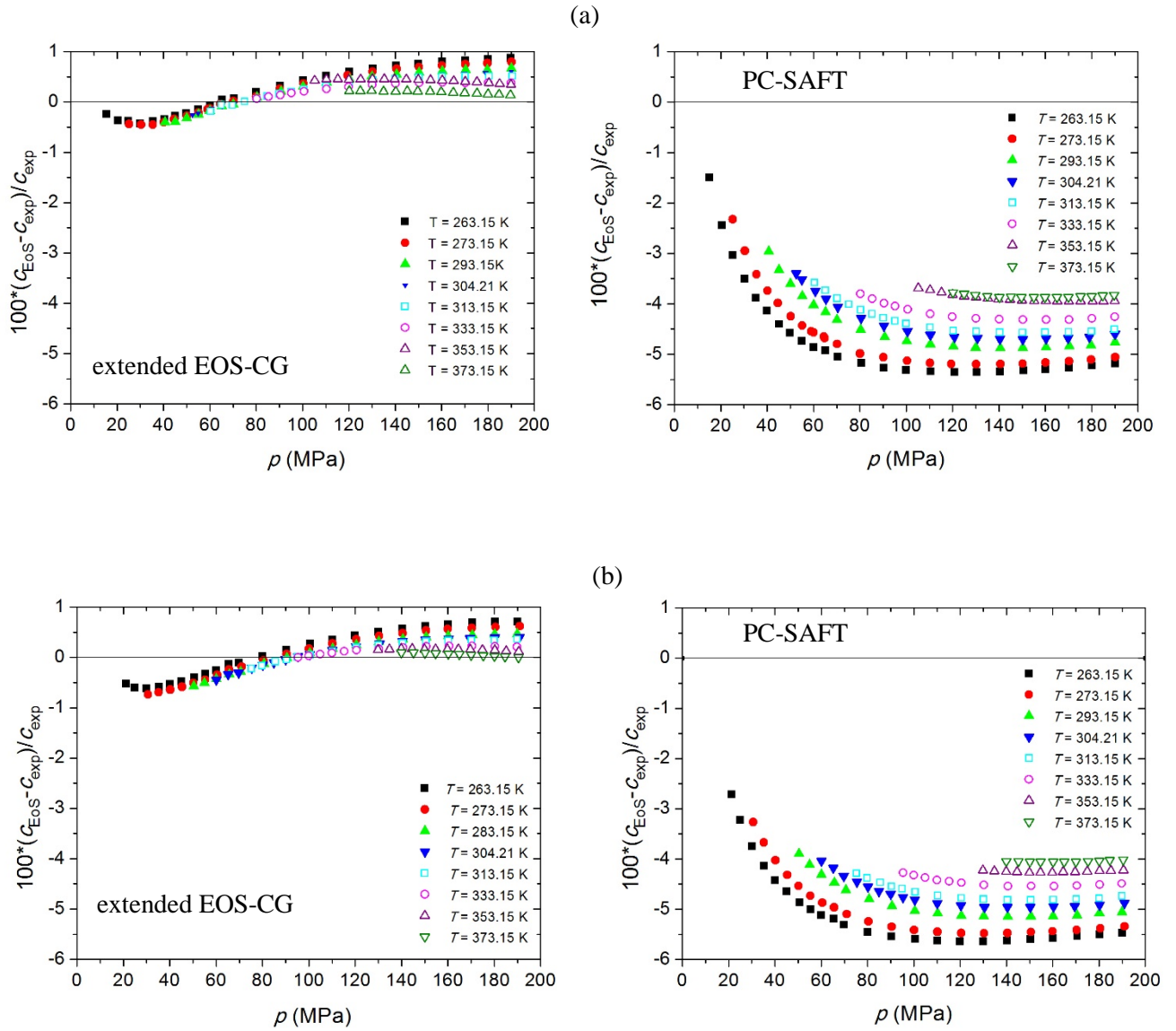
**Figure S3.** Experimental speed of sound,  $c$ , for Mixture 4 (emissions) versus pressure,  $p$ , at the nominal temperatures  $T$ .



**Figure S4.** Relative deviations between the experimental densities,  $\rho_{\text{exp}}$ , in this work and the values calculated from the extended EOS-CG and PC-SAFT EoS,  $\rho_{\text{EoS}}$ , for Mixtures 1 (co-capture) (a) and 3 (emissions) (b) at the nominal temperatures,  $T$ .

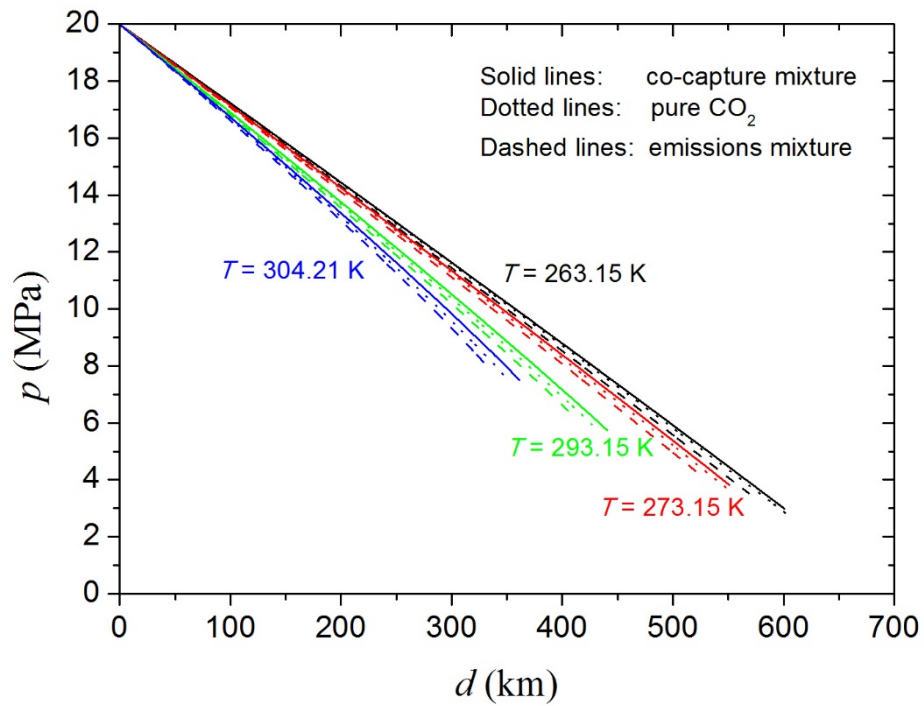


**Figure S5.** Relative deviations between the experimental speed of sound,  $c_{\text{exp}}$ , in this work and the values calculated from the extended EOS-CG and PC-SAFT EoSs,  $c_{\text{EoS}}$ , for Mixtures 2 (co-capture) (a) and 4 (emissions) (b) at the nominal temperatures,  $T$ .



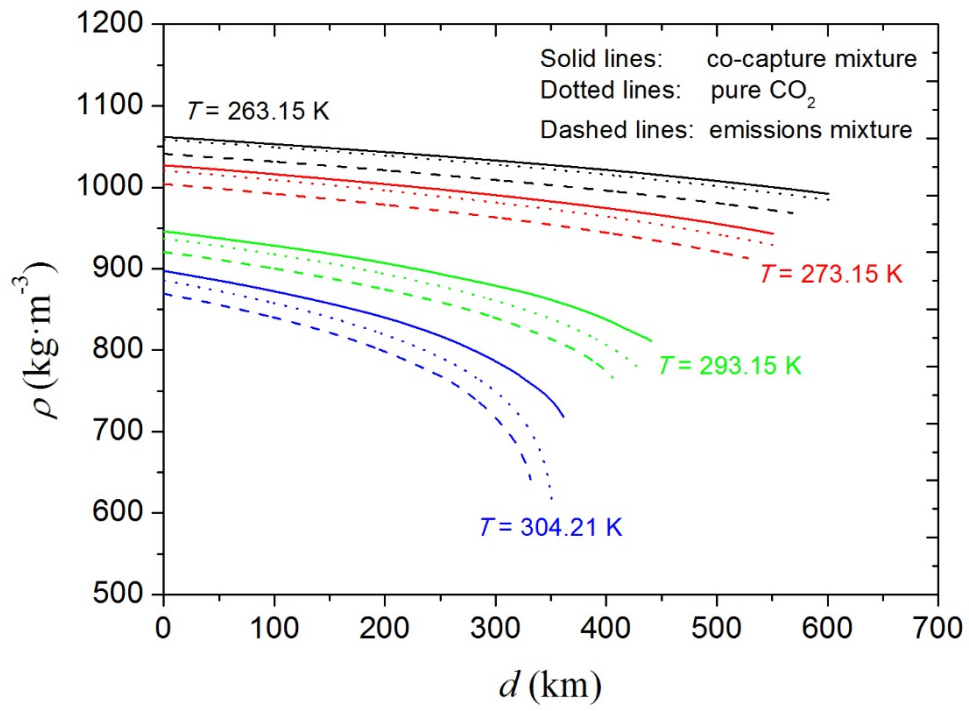
**Figure S6.** Comparison of pressure (a) and density (b) profiles along the pipeline for Mixtures 1 (co-capture) and 3 (emissions) and for pure CO<sub>2</sub> at several transport temperatures  $T$ . A mass flow of  $m = 317.1$  kg/s, an inner diameter of the pipeline of  $D = 0.508$  m, and a roughness height of  $e = 4.6 \times 10^{-5}$  m were used, along with a pipeline inlet pressure of 20.00 MPa.

(a)



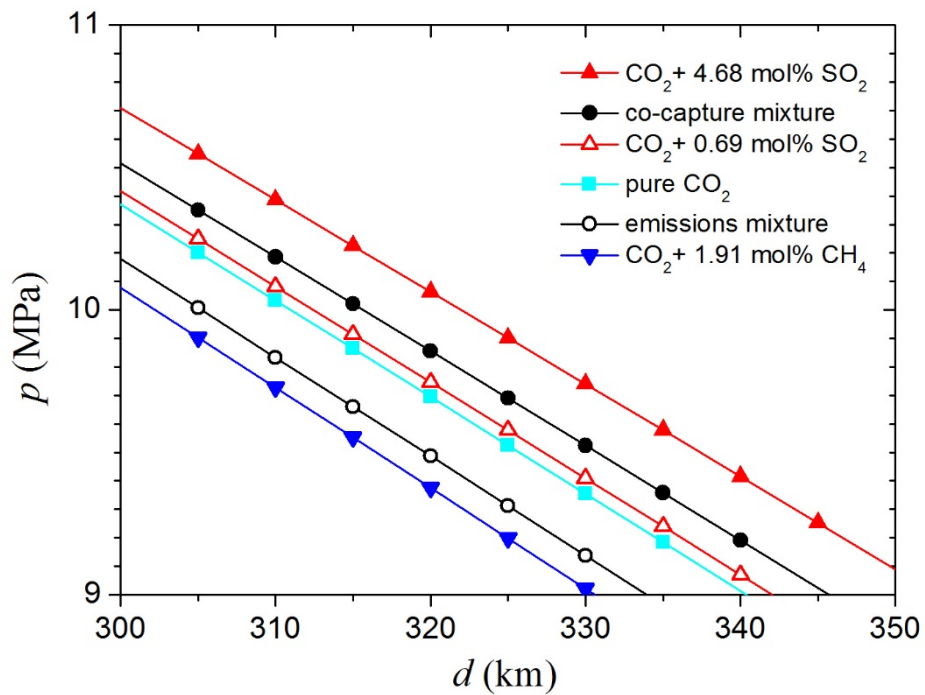


(b)

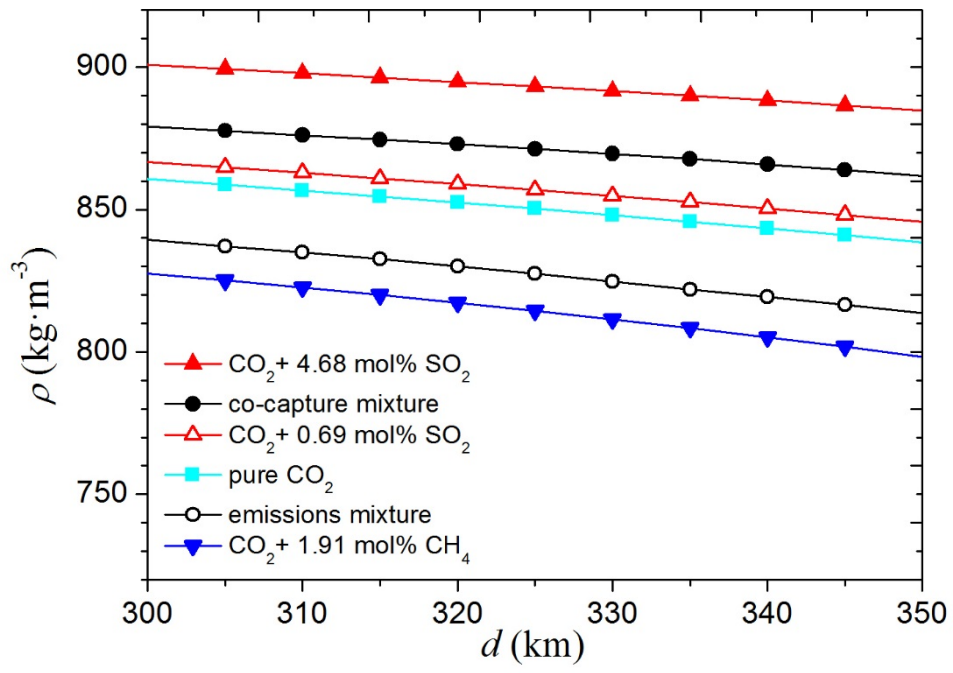


**Figure S7.** Comparison of pressure (a) and density (b) profiles along the pipeline for the co-capture mixture, the emissions mixture, pure CO<sub>2</sub>, CO<sub>2</sub>+SO<sub>2</sub> with  $x_{\text{SO}_2}=0.0468$  [8], CO<sub>2</sub>+SO<sub>2</sub> with  $x_{\text{SO}_2}=0.0069$  [8], and CO<sub>2</sub>+CH<sub>4</sub> with  $x_{\text{CH}_4}=0.0191$  [21] at 293.15 K. A mass flow of  $m = 317.1$  kg/s, an inner diameter of the pipeline of  $D = 0.508$  m, and a roughness height of  $e = 4.6 \times 10^{-5}$  m were used, along with a pipeline inlet pressure of 20.00 MPa.

(a)

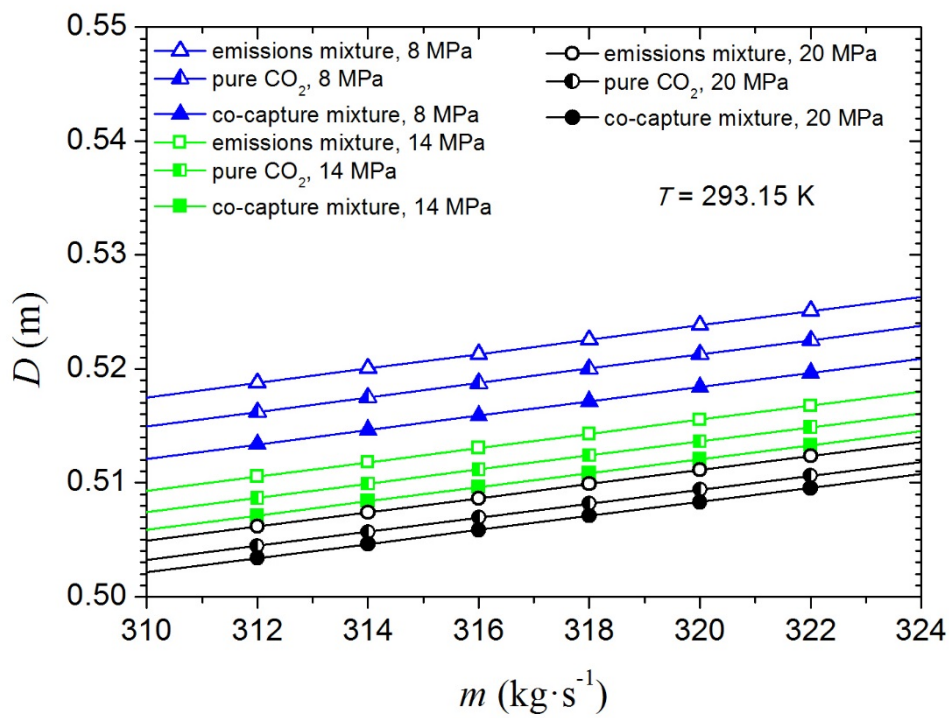


(b)

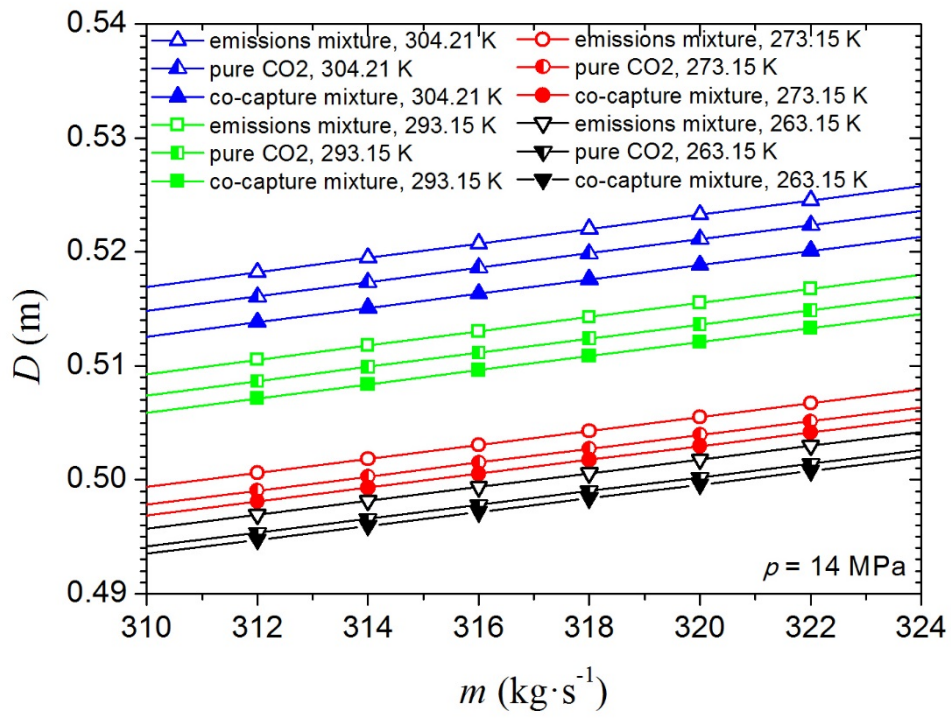


**Figure S8.** Pipeline inner diameter,  $D$ , versus mass flow (capacity),  $m$ , for Mixtures 1 (co-capture) and 2 (emissions) and for pure CO<sub>2</sub>. (a) at 293.15 K and 8, 14, and 20 MPa; (b) at 14.00 MPa and 263.15, 273.15, 293.15 K, and 304.21 K. The roughness height was set at  $e = 4.6 \times 10^{-5}$  m, and an average value for pressure drop per meter of  $31.1 \text{ Pa} \cdot \text{m}^{-1}$  was used.

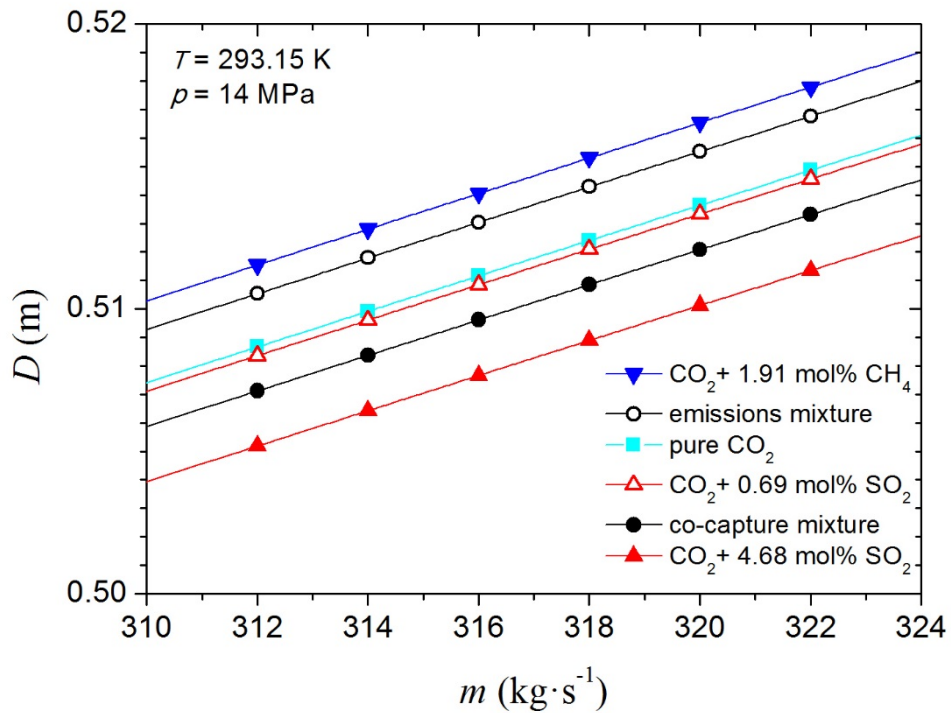
(a)



(b)

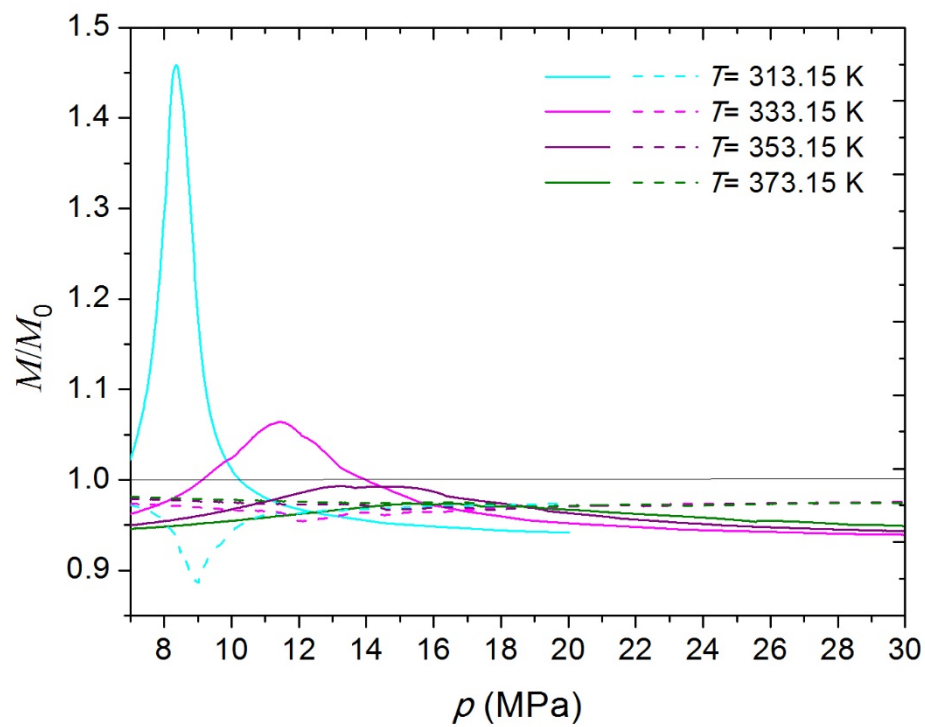


**Figure S9.** Pipeline inner diameter,  $D$ , versus mass flow (capacity),  $m$ , for the co-capture mixture, the emissions mixture, pure CO<sub>2</sub>, CO<sub>2</sub>+SO<sub>2</sub> with  $x_{\text{SO}_2} = 0.0468$  [8], CO<sub>2</sub>+SO<sub>2</sub> with  $x_{\text{SO}_2} = 0.0069$  [8], and CO<sub>2</sub>+CH<sub>4</sub> with  $x_{\text{CH}_4} = 0.0191$  [21] at 293.15 K and 14 MPa. The roughness height was set at  $e = 4.6 \times 10^{-5}$  m, and an average value for the pressure drop per meter of 31.1 Pa·m<sup>-1</sup> was used.

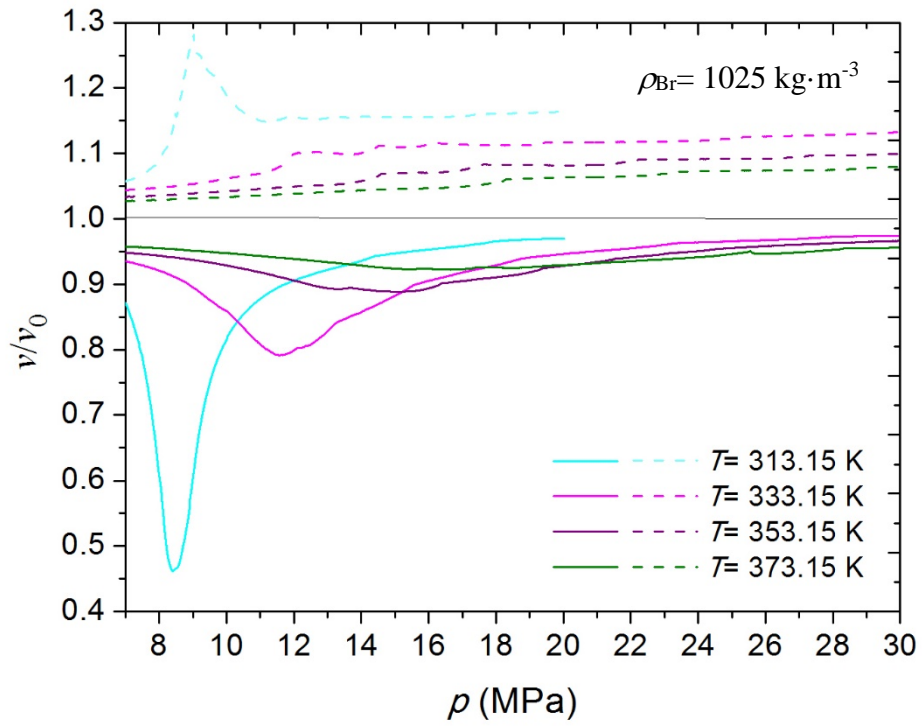


**Figure S10.** Normalized storage capacity,  $M/M_0$  (a), normalized rising velocity,  $v/v_0$  (b), and normalized permeation flux,  $\dot{M}/\dot{M}_0$  (c), for Mixtures 1, co-capture, (solid line) and 3, emissions, (dashed line) versus pressure,  $p$ , at the nominal temperatures,  $T$ .

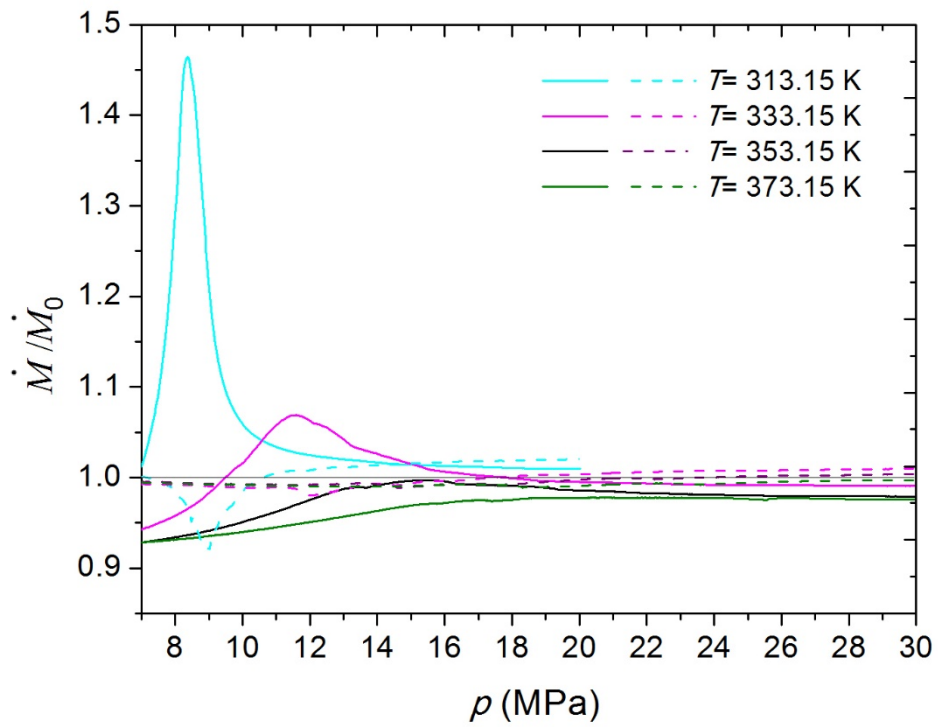
(a)



(b)



(c)





**Figure S11.** Normalized permeation flux,  $\dot{M}/\dot{M}_0$ , for the co-capture mixture, the emissions mixture, CO<sub>2</sub>+SO<sub>2</sub> with  $x_{\text{SO}_2}=0.0468$  [8], CO<sub>2</sub>+SO<sub>2</sub> with  $x_{\text{SO}_2}=0.0069$  [8], and CO<sub>2</sub>+CH<sub>4</sub> with  $x_{\text{CH}_4}=0.0191$  [21] at the reservoir conditions presented in Table 1 [22-28].

