# Assessment of station metadata in Alaska based on analysis of Love waves from the 2012-04-11 $M_w$ 8.6 offshore Sumatra earthquake, Version 5 (January 27, 2014)

Carl Tape

carltape@gi.alaska.edu Geophysical Institute, University of Alaska Fairbanks

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Previous versions of this report:

Version 4: June 13, 2013 (waveforms and metadata extracted on June 13, 2013)
Version 3: November 19, 2012 (waveforms and metadata extracted on November 17, 2012)
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Version 1: July 5, 2012 (waveforms and metadata extracted on April 28, 2012)

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#### Overview

This report is part of a detailed investigation of a  $M_w 3.9$  earthquake near Nenana, Alaska, that was triggered by Love waves from a  $M_w 8.6$  offshore Sumatra earthquake. Results from that study appeared in *Tape et al.* (2013). We analyze all BH and HH channel waveforms that are available at the Alaska Earthquake Center.

This report has three objectives:

- 1. to provide information that may help improve station metadata at Alaska stations
- 2. to provide a snapshot of station performance in Alaska at one particular time (11-April-2012)
- 3. to provide details and figures on part of the waveform processing used in *Tape et al.* (2013) (see report version 3)

This is the fifth version of this report. It should be continually updated, as long as updates for station metadata (on the epoch containing 11-April-2012) are made, since the changing metadata will influence our scientific analysis (e.g., Table 9). See below for a summary of previous versions of the report.

Please contact Carl Tape (carltape@gi.alaska.edu) if you have suggestions for improving the information in these notes. The hope is to establish this kind of analysis in an automated fashion, so that we can routinely assess station performance using a variety of relatively simple data processing tools.

#### **IMPORTANT NOTES:**

- 1. All waveforms were obtained from AEC, not IRIS. In several cases for non-AK stations, I have checked that the IRIS waveforms match those used in this analysis. In other cases, like some CN stations (Figure 7), the waveforms are not available at IRIS. Waveforms represent the network codes listed in Table 1.
- 2. All station metadata were obtained from AEC, not IRIS. However, the metadata should be the same. For networks AK (including the former XZ stations) and PS, AEC is responsible for metadata. For all other networks, AEC obtains dataless seed files from IRIS.
- 3. The assessment of station alignment should be done with as many events as possible from as many azimuths as possible, in order to average out the effects of 3D structure (e.g., *Laske and Masters*, 1996; *Ekström and Busby*, 2008; *Hanna and Long*, 2012). We only use one event in this report. However, the misalignments we identify are, for the most part, consistent with those of *Hanna and Long* (2012), who used several events (Section 4).

#### Summary of previous reports

Previous version of this report are available on the AEC website under "Technical Reports."

• Version 1, July 5, 2012. Documenting station performance in Alaska based on Love wave from  $M_{\rm w}$  8.6 earthquake in Alaska. Key metadata problems include misalignment of stations, clock errors, phase response errors, and amplitude response errors. Another significant problem are data gaps within the time series.

The initial data "grabbed" for KDAK.BH1 was spurious (Figure 5) but later okay.

- Version 2, August 16, 2012. Expanded analysis. Re-analysis with updated metadata for the phase response for AT stations (MENT, YKU2, SVW2). Identified that the borehole sensor for KDAK.II had a problem on the BH1 component, but the surface sensor is okay.
  - Newly identified problems are station misalignments for MENT.AT and YKU2.AT.
- Version 3, November 19, 2012 [cited in *Tape et al.* (2013)]. Re-analysis with updated metadata for station alignments (e.g., PAX.AK, PNL.AK).
- Version 4, June 13, 2013. Re-analysis with updated metadata for station alignments: MENT.AT, CCB.AK, PS10.PS, PS12.PS, TRF.AK. Also, the XZ network (STEEP) was changed to AK.
- Version 5, January 27, 2014. Included HH channels, represented by 8 stations: YKW1.CN, YUK5.CN, HYT.CN, YUK7.CN, VIB.CN, PLBC.CN, HARP.AK, AKT.AK. Added Table 6 and Table 9.

Newly identified problems are that from the HH stations, only PLBC.CN is usable. The other stations have gaps (Figure 7) or other problems, though this might be specific to the waveforms received at AEC. The latest metadata (e.g., Figure 12) now suggest a misalignment for MDM.AK and SKN.AK for the 2012-04-11 epoch (Table 7).

#### **1** Stations not in operation

Table 1 shows the fraction of "active" stations (as of 11-April-2012) that do **not** provide waveforms. This fraction is listed as B/N in the last column. Quote from AEC: "Spring is probably the time when we have the most stations out. They tend to drop out over the winter, and in most cases we can't start bringing them back until May." So in some sense, the April event analyzed here occurred at the worst time of year.

Below is a list of stations that were listed as active but that did not have waveforms. The parenthetical label denotes ("observed inactive stations"/"expected active stations").

• AK network (29/94):

CNP CRQ CTGDCPH ANM ATKA BWN CHI CHUM FID GLI GRIN GRNC HIN HMT LOGN MCAR NIKH PIN PTPK PWL SGA SII SSP SWD TGL TNA WAX YAH

- PS network (0/11)
- AT network (1/14): TTA
- AV network (22/28):

AKBB AKGG AKLV AKMO AKSA AMKA KAKN OKCE OKFG OKNC OKSO RDDF RDJH RDSO RDWB RED SPBG SPCG SPCN SPCR SPNN SSBA

• CN network (54/66):

BMBC BPCB BTB BVCY CBB CPLB DIB EDB EDM BCBC HOLB HOPB LLLB LZB MOBC EUNU FHRB FNBB MGB MWAB NLLB OZB PA01 PA02 PA03 PA04PA05 PA12 PACB PFB PGC PHC PNT RES RUBB SHB SLEB SNB SOKB SPLB TLCB TOFB UBRB VGZ WALA WSLR YKW2 YKW4 YOUB YUK1 YUK6 YUK2 YUK3 YUK4

Among these CN stations, the only one with data at IRIS (but not AEC) is EUNU, and it appears to have major gaps over the time interval of interest.

- US network (0/2)
- IU network (2/4): ADK, BILL
- II network (0/1)
- PP network (1/1): GCSA

#### 2 Selection and processing of seismograms

We analyzed the waveforms from the 2012-April-11  $M_{\rm w}$  8.6 Sumatra earthquake. In Alaska the dominant waveform from the Sumatra earthquake was the Love wave, which had a dominant period of 130 s and a peak-to-peak displacement exceeding 4 cm (median 4.3 cm). The group velocity across Alaska was 4.5 km/s and therefore the wavelength is approximately 585 km. This long-wavelength Love wave is relatively insensitive to the structural complexity in Alaska associated with active subduction tectonics, and it therefore provides an opportunity to check stations for possible errors associated with timing (clocks), orientation (i.e., alignment), and instrument response to ground motion.

Seismograms and station metadata were obtained from the the Alaska Earthquake Information Center. All stations within an arc distance of  $25^{\circ}$  of a point in central Alaska. Processing and analysis was done in Matlab using the GISMO Suite (*Reyes and West*, 2011). The instrument responses were deconvolved from all raw time series using the bandpass 0.5 s to 500 s. More problems arise if the cutoff period is lengthened to 1000 s, especially on the 120 s Trillium instruments. (See Table 3 for a list of instruments.) This is not surprising, as deconvolution may amplify low-signal, long-wavelengths for stations with lower corner periods.

Here we list some of the different types of inferred errors in the metadata for stations in Alaska. Some of these can be identified in the transverse component seismograms in Figures 13–17 or in the zoomed-in versions in Figures 18–22.

- 1. Misalignment of stations. Due to the consistency of the Sumatra Love wave across Alaska, (Figure 2), we are able to identify stations with suspected misalignment (Section 4).
- 2. Clock error. Two stations, NCT.AV and TABL.AK, had known clock errors that were awaiting servicing at the time of the earthquake. These stations were not excluded since their waveforms appear to be accurate. We applied clock corrections of 50 s (NCT) and 200 s (TABL) prior to the analysis; this is needed to isolate the approximate time window of the Love wave.
- 3. Phase response error. Version 1 of the report identified phase response errors (of nearly 180° at periods 100–150 s) at MENT.AT, YKU2.AT, and SVW2.AT. Associated metadata have since been corrected.
- 4. Amplitude response error. In other cases (e.g., DOT.AK, DIV.AK) the waveforms look similar to the other 86 stations in mainland Alaska, (Figure 2), but the amplitude of the Love wave differs by at least ±10% (this will depend on the frequency), which in this case cannot be explained by structural effects.

#### 3 Thresholding stations for scientific analysis

Thresholding of waveforms for analysis reduces the initial set of **115 stations** to 86 stations (Figure 2).

#### 3.1 115 to 113: Eliminating (2) records without three components

The COR.IU waveforms for horizontal components are available at IRIS but not at AEC.

• COR.IU, IL31.IM

#### 3.2 113 to 104: Eliminating (9) records with data gaps

Several time series were unusable due to the presence of data gaps (e.g., Figure 6); a complete list is shown in Table 6. Figure 8 shows the spatial pattern. The proximity of gap-stations to non-gap stations suggests that the problem is station-specific, rather than due to external effects (such as inclement weather). For example, three (formerly XZ) stations within a dense cluster in south east Alaska (GOAT.AK, BERG.AK, BARK.AK) have gaps, but no stations around them do. OHAK.AT has gaps, but adjacent KDAK.II does not; AKUT.AT has gaps, but adjacent AKRB.AV does not.

There is no obvious relationship between data gaps and the type of instrument (Table 3).

- GOAT.AK, BERG.AK, BARK.AK have data gaps.
- AKUT.AT, SDPT.AT, OHAK.AT, CHGN.AT have data gaps (Figure 6).
- ILBB.XM has data gaps and looks really odd.
- SPIA.AK has data gaps and is noisy (all three components).

#### 3.3 104 to 100: Eliminating (4) "odd-looking records"

The borehole station for KDAK.II.BH1 was not usable, but the surface station channel SH1 was usable (Figure 9).

- SIT.AT east component is super noisy.
- PS01.PS north component is garbage.
- KABU.AV waveform is too dissimilar; also a long-period notch at  $\sim 2000$  s (Figure 17).
- PS07.PS has no seismometer, but there is a data stream.

#### 3.4 100 to 93: Eliminating (7) records based on suspected instrument response errors (amplitude or phase)

• DIV.AK has wrong amplitude response (too high). (Figure 21)

cmg3esp\_30sec+dm24@50

• DOT.AK has wrong amplitude response (too low). (Figure 19)

cmg3esp\_30sec+dm24@50

Version 1: DOT.AK has wrong amplitude response (too high).

• FALS.AK has wrong amplitude response (too high). (Figure 22)

cmg3esp\_30sec+q330\_1b100c@50

• GAMB.AK amplitude is too high. (Figure 22)

cmg3esp\_30sec+q330\_1b100c@50

• MID.AT has an odd phase and low amplitude. (Figure 22)

(Yun Wang, a postdoc at UAF, has examined amplitude patterns for hundreds of events from 2009–2011. She also identified anomalously low amplitudes at MID from events arriving from all directions. Based on this, we believe that the amplitude response is incorrect, or at least too low.)

• YKW3.CN amplitude is too large. (Figure 18)

Version 1: YKW3.CN Love waveform is dissimilar from others (might be structural effects), and the vertical is pure noise. (Figure 18)

• DAWY.CN waveform is dissimilar from others (might be structural effects). (Figure 18)

#### 3.5 93 to 86: Eliminating (7) HH records based on gaps or other problems

In Version 5 of this report, I included stations with HH channels, in addition to the BH channels from before. This resulted in using 8 additional stations in the analysis: YKW1.CN, YUK5.CN, HYT.CN, YUK7.CN, VIB.CN, PLBC.CN, HARP.AK, AKT.AK. All but PLBC.CN are unusable, mainly due to data gaps (Figure 7). It is possible that the waveforms for CN stations are AEC are bad, while the "final" waveforms for these stations are okay. I cannot easily check this, since the waveforms of interest are not available at the IRIS DMC.

- YKW1.CN, YUK5.CN, YUK7.CN, and HYT.CN all have data gaps (Figure 7).
- VIB.CN is garbage.
- AKT.AK is garbage.
- HARP.AK has garbage horizontal components.

#### 3.6 Other problematic records that should probably be cut

- As shown in Table 7, the following stations have suspected misalignments > 20°: YKU2.AT and COLD.AK. These stations should not be used for a scientific analysis that uses the horizontal component waveforms. These stations were excluded from Figure 1.
- NCT.AV and SPCP.AV are clearly too low in amplitude (Figure 3); so is MSW.AV (2.3 cm), which is the lowest among all 86 stations. These are all CMG-6TD-T6054.4 response files. These might benefit from a cutoff period shorter than 500 s.

AKRB.AV is also CMG-6TD-T6054.4 but has a "normal" amplitude — if anything, too high (4.6 cm) for where it is located relative to maximal recorded displacements.

SPCP.AV has a long-period notch at  $\sim 2000$  s (Figure 17).

• BBB.CN peak-to-peak amplitude of 5.34 cm is anomalously high (largest among 86 stations), especially considering its large epicentral distance (where geometrical spreading should lead to a decreased amplitude). The waveform is quite dissimilar, but it is also far from the other stations. It also has a subtle (240 points long), late data gap.

Figure 22

#### 4 Station misalignments

A seismic station is aligned to a particular azimuth  $(\phi')$ , but this direction may not be identical to the angle that is associated with the station metadata  $(\phi)$ . This angular discrepancy,  $\Delta \phi = \phi - \phi'$ , represents a misalignment of the station, and fortunately these can be corrected either by reorienting the station by  $\Delta \phi$  or by changing the metadata from to  $\phi = \phi'$ . Several different techniques can be used to identify station misalignments: global surface wave propagation (*Laske and Masters*, 1996; *Ekström and Busby*, 2008), ambient noise cross correlation, regional waveform modeling (*Tape et al.*, 2010), and shear-wave splitting (*Hanna and Long*, 2012). For example, *Laske and Masters* (1996) found significant misalignments of 3–16 degrees at 12 of 76 GSN (II, IU) and Geoscope (G) stations.

Due to the consistency of the Sumatra Love wave across Alaska (Figures 2 and 3), we are able to identify stations with suspected misalignment. *Hanna and Long* (2012) (HL2012) provided a table of alignment corrections; however, these corrections are only valid at some particular time period (epoch) for each station. Therefore, we examine the time history for the horizontal alignment entry, hang, for all stations in the analysis (Figure 12). In some cases (e.g., DOT, PNL, DIV), HL2012 report a misalignment, and hang has changed within the past few months or years, so we do not apply their correction. In other cases (e.g., WRH.AK; Figure 12d) hang has never changed over the lift of the station, so we apply the correction of HL2012. Our resultant list of corrections is in Table 5.

Table 7 contains information comparing the apparent deviation of the Sumatra Love wave from a great-circle path. Because the Love wave is the largest waveform from Sumatra, we simply compute a horizontal vector associated with the absolute value of the maximum horizontal displacement. We then compare the azimuthal angle of this vector with the azimuthal angle associated with the transverse component, which is perpendicular to the station back-azimuth angle. We also performed a polarization analysis on the Love waveforms to ensure that the max horizontal displacement azimuth is a good approximation for the polarization vector. Two example stations are shown in Figures 10 and 11. For all 86 stations, the standard deviation between the two different estimates for the azimuthal angle is 1.6°, which much less than the inferred misalignment angles (e.g., Figure 4 and Table 7).

In Table 7 we make the calculations assuming no HL2012 corrections, then next assuming the corrections in Table 5. Here we explain a couple stations to clarify what is in Table 7. With respect to the Sumatra epicenter, the positive transverse component for TRF.AK points toward 205.5°; its negative transverse component points to  $25.5^{\circ}$ . For a 1D Earth, the maximum horizontal displacement would be in one of these two directions. The following numbers are no longer true, since the TRF alignment metadata changed between v. 3 and v. 4. (Therefore the HL2012 correction is no longer applied.) For the Sumatra Love wave, the max displacement is in the direction of  $49.3^{\circ}$ , which deviates by  $23.9^{\circ}$  from the transverse component. Assuming the  $-22^{\circ}$  correction of HL2012 (we add this number to the hang field), the max displacement is in the direction of  $27.3^{\circ}$ , which deviates by  $1.9^{\circ}$  from the transverse component. In other words, after the HL2012 correction is applied, we have a discrepancy of  $1.9^{\circ}$ ; without the correction, the discrepancy is  $23.9^{\circ}$ .

Other stations, like PS06.PS and MLY.AK, were not analyzed by HL2012. For these stations, Table 7 could be used as the primary guide for identifying station misalignments. (Until a more rigorous analysis is performed, e.g., *Ekström and Busby* (2008).)

There are two physical reasons why the Love wave arrival angle could differ from its greatcircle path. First, the Love wave could have been deflected from its path by very large-scale structure, like the transition between continental lithosphere and oceanic lithosphere. In this case we might expect that all deviations would be systematically positive or negative. Second, it is possible that regional structure might influence the arrival angle. However, the Love wave here has a wavelength of approximately 585 km and is therefore only sensitive to relatively large-scale regional structures.

Figures 4 and 5 explores the patterns in the apparent deviation angles of the Love wave. We make three observations:

- 1. Figure 4 shows that there is a wide spread of deviation angles, and there are no strong spatial correlations to suggest that structure is the primary cause (Figure 5). Therefore, we hypothesize that the spread of angles is primarily due to installation errors.
- 2. Applying the HL2012 corrections eliminates some of the outliers and clusters more values near 0° (Figure 4). This gives us confidence that the Sumatra Love wave is identifying the same misalignments as the HL2012 SKS splitting measurements. (However, one station Table 7, HOM.AK, has much larger deviations for Sumatra after applying the HL2012 correction.)
- 3. There is a suggestion of predominantly positive deviation angles: Figure 4b shows a median of 3.2° and a mean 5.5°. From Figure 5 there is a tendency for ~10° positive deviations for stations with lower azimuthal angles from Sumatra (TOLK, FYU, EGAK, PS06, GLM, COLA, MDM), but there are also counter-examples (PS05, CCB, WRH, MLY).

Note that almost all of the STEEP stations (southeastern Alaska)—which were similar instruments installed over a relatively short time period—are within  $\pm 5^{\circ}$ . This suggests that where stations are installed in a consistent fashion, the station alignments tend to be more accurate. In summary, I believe that the primary source of the spread of deviation angles is due to errors in station installation or errors in metadata (including the possibility of instrument response).

### 5 Results by network

Results by network are summarized with the ratios in Table 1. Three ratios are listed:

- A/B, the fraction of waveform-producing stations that were used for scientific purposes
- A/N, the fraction of "active" stations that were used for scientific purposes
- B/N, the fraction of "active" stations that produced waveforms (usable or not)

The ratio A/B is the fraction of stations that was used for scientific purposes. The ratio A/N is the fraction of "active" stations that provided waveforms, whether usable for scientific analysis or not. For example, in the region of interest there are four network-IU stations, two of which provide waveforms (COLA, COR) two of which do not (ADK, BILL).

# 6 Recommendations for networks in Alaska and for the AEC database of waveforms and metadata

These recommendations are in approximate order of importance:

1. Check station alignments, wherever possible. Our results in Table 5 (see also previous report versions) corroborate the corrections listed by *Hanna and Long* (2012), with only one exception (HOM.AK). Note that Table 5 examined a only a subset of the total stations in operation.

Figure 5 suggests a systematic deflection of the Sumatra Love wave from its great circle path, which is indicated by the angular discrepancies  $\Delta \phi = 5^{\circ} - 15^{\circ}$  for stations north of about 63° latitude. Given this pattern and the stations listed in Table 5, I consider the stations with the "most suspect" alignments for the station epoch containing 2012-04-11 (note <sup>1</sup>) to be

- YKU2.AT (-32°)
- MLY.AK (-18°)
- WRH.AK  $(-15^{\circ})$ ; also Hanna and Long
- UNV.AK  $(-15^{\circ})$ ; also Hanna and Long
- MENT.AT  $(-7^{\circ})$ ; surrounded by 6 stations with  $\Delta \phi$  between 0° and 10° (Figure 5)
- CRAG.AT  $(-11^{\circ})$ ; nearby WRAK.US is  $4^{\circ}$ , which is consistent with all the STEEP stations
- MCK.AK (18°); also Hanna and Long
- SKN.AK (27°); surrounding stations are between  $-5^{\circ}$  and  $10^{\circ}$  (Figure 5)
- MDM.AK (24°); surrounding stations (except WRH and MLY) are between 0° (CCB, 0.5°) and 15° (GLM, 13.3°) (Figure 5)

(Note that these estimates are only approximate, since they are based on the analysis of one earthquake.)

MDM.AK and SKN.AK are new to this list in Version 5; Figure 12 shows how the horizontal alignment had changed with time, according to the latest metadata.

- 2. Consider applying corrections to metadata based on detailed surface wave analysis (e.g., *Ekström and Busby*, 2008). For example, a station like SKN.AK, which has been visited multiple times since 2012-04-11 (Figure 12), may have the correct metadata now, but incorrect metadata for 2012-04-11 (or some particlar epoch). Using teleseismic surface waves for events during that epoch, one could probably demonstrate that the station alignment metadata is incorrect. Such a procedure could be applied to retroactively correct metadata at least in the most extreme cases where misalignment of  $|\Delta \phi| > 10^{\circ}$  is identified.
- 3. Check the amplitude responses for the stations identified here.

For the AK network, DIV, DOT, FALS, and GAMB are all Guralp CMG3 instruments, suggesting a problem with the CMG3 metadata being used.

<sup>&</sup>lt;sup>1</sup>A suspected misalignment here does not mean that the current alignment value in the metadata is incorrect, since the epoch could have changed since the epoch containing 2012-04-11.

- 4. Minimize data gaps (e.g., Figure 6, Table 6). These appear to be station-specific problems (Section 3.2), since gap-stations are adjacent to non-gap-stations for this analysis.
- 5. Determine why there are pervasive gaps in the HH stations (Section 3.5). I have seen scientific results that use the same records, but without gaps, so the gaps seem specific to AEC waveforms. (Note that several CN stations do not have waveforms available at IRIS, e.g., Figure 7.)
- 6. Check all stations for clock errors. Two identified here, NCT.AV and TABL.AK, had conspicuously large timing errors (>50 s) or "clock shifts." But there could be subtler errors (<5 s). Clock errors will have a detrimental impact on tomography studies, since arrival times will incorporate the clock error, which will then be incorrectly mapped onto source or structure errors in the tomographic inversion.

Stehly et al. (2007) showed how ambient noise analysis could be used to identify "significant instrumental time errors (0.5 s)" in the southern California network. Such an analysis— continuously running—would be valuable for any network, it seems.

- 7. Provide an easy-to-identify log-tracking system for any updates to the metadata in master\_stations. An example is shown in Table 2.
- 8. Provide location codes KDAK.II and COLA.IU that are consistent with IRIS convention. For example, for this event there are these broadband channels:

TOLK.TA	BHZ	BHE	BHN	 BHZ_01	BHE_01	BHN_01
WRAK.US	BHZ	BH1	BH2	 BHZ_10	BH1_10	BH2_10
COLA.IU	BHZ	BH1	BH2	 SHZ	SH1	SH2
KDAK.II	BHZ	BH1	BH2	 SHZ	SH1	SH2

It would be simpler to eliminate the in-house use of the SH channel for COLA and KDAK, since there are other multi-sensor stations (like TOLK and WRAK) that are left with the IRIS convention.

9. Provide horizontal components for COR.IU (and all other non-AK stations), if possible. This request is aimed at allowing UAF/GI users to not make a separate request to IRIS DMC for waveforms (and metadata). But it is important that the waveforms at AEC are the "final" versions available at IRIS.

Finally, it would obviously be great to have waveforms from stations that are listed as active (Section 1).

#### **Related** questions

- 1. Are there standards set forth by IRIS (or AEC) for measuring alignment? What measurement devices are used?
- 2. Are data gaps "permanent"? In other words, is it possible to recover information that is missing in the digital waveforms? (Figure 6)

# Acknowledgments

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Table 1: Networks in Alaska for the stations in this analysis. The region of stations is a circular cap with radius  $25^{\circ}$ , centered on interior Alaska (lon  $-148.95^{\circ}$ , lat  $64.92^{\circ}$ ). Networks are listed in order of the number stations used for scientific analysis (A). A is the number of stations with waveforms usable for scientific analysis. B is the number of stations with waveforms available. N is the number of stations listed as active in the database. PP.GCSA will eventually migrate to the AK network. (The network code PS officially belongs to the POSEIDON network.) (The borehole station for KDAK.II was unusable, but the surface station was usable: Figure 9.)

Network	code	A	В	N	A/B	A/N	B/N
Alaska Regional Network	AK	56	65	94	0.86	0.60	0.69
"Pump Station"	$PS^*$	9	11	11	0.82	0.82	1.00
Alaska Tsunami Warning Seismic System	AT	7	13	14	0.54	0.50	0.93
Canadian National Seismic Network	CN	5	12	66	0.42	0.08	0.18
Alaska Volcano Observatory	AV	4	6	28	0.67	0.14	0.21
US National Seismic Network	US	2	2	2	1.00	1.00	1.00
IRIS/USGS Network	IU	1	2	4	0.50	0.25	0.50
IRIS/IDA Network	II	1	1	1	1.00	1.00	1.00
USArray Transportable Array	TA	1	1	1	1.00	1.00	1.00
Princeton Earth Physics Program	PP	0	0	1	_	0.00	0.00
TOTAL		86	113	222	0.76	0.39	0.51

Table 2: Suggested table for tracking dataless seed updates in the AEC master\_stations database. See Table 1 for names of networks. The dates of IRIS dataless seed files at IRIS were last checked on 17-Nov-2012. (Table from Version 3 report.)

Network	file name	file date	IRIS file date	date of last	MS update
		at IRIS	in MS	MS update	needed?
AK	AK.dataless	23-Oct-2012	_	—	—
AT	AT.dataless	06-Aug-2012	???	03-Aug-2012	Y
AV	AV.dataless	25-Aug-2012	???	27-Sept-2012	Ν
CN	CN.dataless	06-Aug-2012	???	03-Aug-2012	Y
II	II.dataless	10-Nov-2012	???	??	??
IU	IU.dataless	13-Nov-2012	??	??	??
ТА	TA.dataless	14-Nov-2012	??	16-Oct-2012	Y
US	US.dataless	19-Sept-2012	??	24-Aug-2011	Y
XZ	XZ.2005-2012.dataless	10-Oct-2012	_	_	_

Table 3: First part of 112 stations with three components available. The azimuth and distance, both in degrees, are measured with respect to the offshore Sumatra event  $(92.78^{\circ}, 2.24^{\circ})$ .

AKRB	AV	az	35.30	dist	94.71	lon	-166.0708	lat	54.1292	CMG-6TD-T6054.4
AKT	AV	az	35.26	dist	94.88	lon	-165.7720	lat	54.1349	cmg40t_30sec+dm24@100
AKUT	AT	az	35.26	dist	94.88	lon	-165.7719	lat	54.1352	STS-2:Trident.1
BAGL	AK	az	24.61	dist	104.48	lon	-142.0915	lat	60.4896	trillium_240_2+q330_1b100c@50
BAL	AK	az	24.21	dist	104.08	lon	-142.3462	lat	61.0360	trillium_120+q330_1b100c@50
BARK	AK	az	24.80	dist	104.36	lon	-142.4931	lat	60.4030	trillium_240_2+q330_1b100c@50
BARN	AK	az	24.00	dist	104.35	lon	-141.6622	lat	61.0595	trillium_240_2+q330_1b100c@50
BBB	CN	az	26.43	dist	115.69	lon	-128.1133	lat	52.1847	Guralp_CMG3T_120sec:CNSN_GD2_v.4
BCP	AK	az	24.38	dist	105.80	lon	-139.6369	lat	59.9534	trillium_120+q330_1b100c@50
BERG	AK	az	25.13	dist	103.85	lon	-143.7038	lat	60.3923	trillium_120+q330_1b100c@50
BESE	AK	az	23.99	dist	108.58	lon	-134.8559	lat	58.5792	trillium_240_2+q330_1b100c@50
BGLC	AK	az	25.26	dist	104.17	lon	-143.2841	lat	60.1205	trillium_120+q330_lb100c@50
BMR	AK	az	24.86	dist	103.18	lon	-144.6051	lat	60.9677	cmg3t_120sec+dm24@50
BPAW	AK	az	23.42	dist	99.11	lon	-150.9873	lat	64.0997	trillium_240_2+q330_1b100c@50
BRLK	AK	az	27.42	dist	100.96	lon	-150.9063	lat	59.7511	sts2 g3+g330 lb100c@50
CAST	AK	az	24.25	dist	98.94	lon	-152.0844	lat	63.4188	trillium 240 2+q330 lb100c@50
CCB	AK	az	22.30	dist	100.10	lon	-147.8053	lat	64.6453	trillium 240 2+q330 lb100c@50
CHGN	AT	az	32.12	dist	98.45	lon	-158.4142	lat	56.3014	STS-2:Trident.1
COLA	TU	az	22.11	dist	99.97	lon	-147.8616	lat	64.8736	Geotech KS-54000 Borehole Sei.35
COLD	AK	az	20.42	dist	98.05	lon	-150.2038	lat	67.2269	cmg3t 120sec+a330 lb100c@50
CRAG	АТ	az	25.91	dist	111.29	lon	-133,1230	lat	55.4689	STS-2:Trident.1
DAWY	CN	az	20.84	dist	103.51	lon	-139.3909	lat	64.0655	Guralp CMG3ESP 60sec:CNSN GD2.15
DHY	AK	az	23.62	dist	101.01	lon	-147.3759	lat	63.0753	trillium 240 2+a330 lb100c050
DTV	AK	az	25.00	dist	102.60	lon	-145,7749	lat	61, 1292	cmg3esp_60sec+dm24050
DLBC	CN	az	22.33	dist	110.58	lon	-130.0272	lat	58,4372	Guralp CMG3T 120sec: CNSN GD2 v 4
тод	ΔK	27	22.00	dist	102 01	lon	-144 0697	lat	63 6482	cmg3esp_30sec+dm24050
EGAK	US	27	20.69	dist	102.01	lon	-141 1581	lat	64 7774	STS2-I=80414=Gen=0330SB=0742 1
EYAK	ΔK	27	25.51	dist	102.11	lon	-145 7500	lat	60 5487	cmg3t 120sec+dm24050
FALS	ΔK	22	34 27	dist	96.08	lon	-163 4175	lat	54 8564	$cmg3esp_30sec+a330_{1b100c050}$
FTR	ΔK	27	25 96	dist	100 69	lon	-150 1775	lat	61 1656	trillium 120+a330 lb100c@50
FYII	ΔK	27	20.00	dist	100.00	lon	-145 2342	lat	66 5657	trillium 120+q330 lb100c@50
CAMR	ΔK	27	26.01	digt	90.42	lon	-171 7035	lat	63 7758	cmg3esp 60sec+g330 lb100c050
CHU	ΔK	27	25.10	digt	100.42	lon	-148 9260	lat	61 7710	$t_{rillium} 120 + a330 lb100c@50$
CI M	ΔK	27	20.14	digt	100.09	lon	-147 3999	lat	64 9878	trillium 120+q330 lb100c@50
COAT	٨ĸ	27	21.01	digt	103 32	lon	-14/ 7292	12+	60 5805	$trillium_{120}, q_{500}_{10100000000000000000000000000000000$
HARD	٨ĸ	27	20.20	digt	102.02	lon	-145 1567	12+	62 3986	cmg3esp 60sec+dm2/0100
	ΔK	27	20.12	digt	100 54	lon	-146 9477	lat	64 4095	$r_{111} = 240 2 + a_{330} + b_{100} + a_{50}$
н∩м	٨ĸ	27	22.04	digt	100.04	lon	-151 6515	12+	59 6572	trillium 120+a330 lb100c@50
нут	CM	27	27.07	digt	106 14	lon	-137 5038	12+	60 8250	Curalo CMC3ESP NSN: Taurus Inf 40
TNK	CN	az 27	15 92	digt	100.14	lon	-133 5254	lat	68 3065	Guralp CMG3T 120sec CNSN GD2 43
TSLE	ΔK	27	24 58	digt	102.07	lon	-142 3406	lat	60.6024	trillium 240 2+a330 lb100c050
PTI	٨ĸ	27	24.00	digt	109.01	lon	-13/ 38/8	12+	58 2758	trillium 120+a330 lb100c@50
VADII 919	AV	a2	24.07	dict	100.97	lon	-155 28/3	lat	58 2702	CMC_6TD_T6054_80
KADU KAT	AV AV	a2	29.09	dict	103 78	lon	-14/ /188	lat	50.2702	$r_{111} = 120 + 330$
KDVK	TT	a2	20.10	dict	100.00	lon	-152 5835	lat	57 7828	Strockojson STS-2 Sojsmonotor 86
VUTT		az	29.02	diat	100.94	lon	-142 2510	lat	60 4427	trillium 240 2+a220 lb100a0E0
KTIC	AV	az	24.91	diat	104.02	lon	-143.2510	lat	60 0221	$t_{rillium}^{240}_{2+q}^{20}_{30}_{1b100c}^{200}_{60}$
VIII	AK	a2	24.31 24.71	dict	104.13	lon	-142.3003	lat	61 / 02/	$r_{11111}$ $r_{240}$ $2+q_{330}$ $r_{10100}$ $r_{650}$
KUK	AV	az	24.71	diat	102.30	lon	143. <i>3221</i>	lat	$61 \ 121$	trillium_240_21050_1010000000
NNA VTU	AN AV	az	20.01	dic+	101.99	1011	140.4000 -150 0000	1~+	01.4101	$t_{rillium} 240 2t_{a}220 1b1000000$
<u>м</u> пл тил	AN AV	az	22.91	dic+	101 21	1011	-1/0 702/	1~+	60 0/7/	$t_{rillium} 240 2 + 4330 101000000$
MOLI	AN AV	aZ az	20.00	diat	104.34		-142.1234 -110 0272	lat	00.24/4	$t_{rillium} 240 2 \tau q_{330} 101000000$
	AN AV	aZ az	20.30	diat	100.00		-140.33/3	lat	61 0600	$t_{rillium} 240_2 \tau q_{330} lb1000000$
MENT	AN AT	az	22.11		39.19		-140.2318	lat	62 0200	UIIIIIIII1207930_101000000
MEGA	A I	az	22.90	aist	102.52	TOU	-143./194	⊥at le±	02.9380	111111um=240:1r1dent.2
MESA	АK	az	24.05	aist	104./1	TOU	-141.9505	тат	00.1/05	LIIIIII_240_2+q330_1D100C@50

Table 4:Part 2 of Table 3.

MID	AT	az	26.67	dist	103.18	lon	-146.3388	lat	59.4278	STS-2:Trident.1
MLY	AK	az	22.52	dist	98.81	lon	-150.7418	lat	65.0303	trillium_240_2+q330_1b100c@50
MSW	AV	az	35.59	dist	94.33	lon	-166.7880	lat	53.9148	CMG-6TD-T6054.143
NCT	AV	az	27.08	dist	99.71	lon	-152.9293	lat	60.5621	CMG-6TD-T6054.149
NICH	AK	az	25.34	dist	103.82	lon	-143.9692	lat	60.2361	trillium_240_2+q330_1b100c@50
OHAK	AT	az	30.29	dist	100.80	lon	-153.2875	lat	57.2225	STS-2:Trident.1
PAX	AK	az	23.29	dist	101.82	lon	-145.4699	lat	62.9699	sts2_g3+q330_lb100c@50
PLBC	CN	az	23.77	dist	107.43	lon	-136.3659	lat	59.4550	Guralp_CMG3T_30sec:CNSN_GD2_v.72
PMR	AT	az	25.35	dist	100.96	lon	-149.1308	lat	61.5922	STS-2:Trident.1
PNL	AK	az	24.55	dist	106.06	lon	-139.4036	lat	59.6659	trillium_240_2+q330_1b100c@50
PPD	AK	az	21.05	dist	100.52	lon	-145.5246	lat	65.5174	trillium_240_2+q330_1b100c@50
PPLA	AK	az	24.76	dist	99.11	lon	-152.1894	lat	62.8962	sts2_g3+q330_lb100c@50
PS01	PS	az	17.43	dist	97.18	lon	-148.6139	lat	70.2580	cmg3t_120sec+q330_1b100c@50
PS04	PS	az	19.20	dist	97.80	lon	-149.3568	lat	68.4215	cmg3t_120sec+q330_1b100c@50
PS05	PS	az	20.88	dist	98.07	lon	-150.6646	lat	66.8133	cmg3esp_60sec+q330_1b100c@50
PS06	PS	az	21.59	dist	98.82	lon	-149.7370	lat	65.8545	cmg40t_30sec+q330_1b100c@50
PS07	PS	az	21.80	dist	99.61	lon	-148.2816	lat	65.3101	cmg3esp_60sec+q330_1b100c@50
PS08	PS	az	22.19	dist	100.52	lon	-146.8220	lat	64.5421	cmg3esp_60sec+q330_1b100c@50
PS09	PS	az	22.51	dist	101.22	lon	-145.7682	lat	63.9299	cmg3esp_60sec+q330_1b100c@50
PS10	PS	az	22.96	dist	101.47	lon	-145.7707	lat	63.4229	cmg3t 100sec+q330 lb100c@50
PS11	PS	az	24.08	dist	102.26	lon	-145.4752	lat	62.0788	cmg3esp 60sec+q330 lb100c@50
PS12	PS	az	24.54	dist	102.70	lon	-145.1459	lat	61.4749	cmg3esp 60sec+q330 lb100c@50
RAG	AK	az	25.39	dist	103.44	lon	-144.6773	lat	60.3863	sts2 g3+g330 lb100c@50
RC01	AK	az	25.94	dist	100.92	lon	-149.7390	lat	61.0890	cmg3esp 60sec+dm24@50
RDOG	AK	az	21.32	dist	93.22	lon	-162,9080	lat	68.0541	trillium 240 2+a330 lb100c@50
RTDG	AK	az	22.46	dist	101.67	lon	-144.8440	lat	63.7403	sts2 g3+g330 lb100c@50
RKAV	AK	az	24.57	dist	104.89	lon	-141.3478	lat	60.2994	sts2 g3+g330 lb100c@50
RND	AK	az	23.64	dist	100.26	lon	-148.8602	lat	63.4056	sts2 g3+g330 lb100c@50
SAMH	AK	az	24.56	dist	105.22	lon	-140.7828	lat	60.1294	trillium 240 2+a330 lb100c@50
SAW	AK	az	24.98	dist	101.20	lon	-148.3318	lat	61.8070	trillium 240 2+q330 lb100c050
SCM	AK	az	24.73	dist	101.61	lon	-147.3296	lat	61.8329	trillium 240 2+q330 lb100c050
SCRK	AK	az	22.06	dist	101.87	lon	-143,9882	lat	63.9765	sts2 g3+g330 lb100c050
SDPT	АТ	az	33.38	dist	97.60	lon	-160.4766	lat	55.3493	STS-2:Trident.4
SIT	АТ	az	25.41	dist	109.34	lon	-135.3244	lat	57.0569	STS-2:Trident.6
SKAG	AT	az	23.43	dist	107.84	lon	-135.3290	lat	59,4601	STS-2:Trident.4
SKN	AK	az	25.48	dist	99.76	lon	-151.5317	lat	61,9800	sts2 g3+g330 lb100c050
SMY	ΔТ	27	37 20	dist	82 97	lon	174 1031	lat	52 7308	STS-2.Trident 6
SPCP	۵v	27	26 27	dist	99 78	lon	-152 1550	lat	61 2655	CMG-6TD-T6054 178
SPTA	ΔK	27	32 65	dist	91 90	lon	-170 2477	lat	57 1766	cmg3esp 60sec+dm24050
SSN	٨K	27	25 81	dist	100.32	lon	-150 7467	lat	61 4636	sts2 g3+g330 lb100c050
SUCK	٨K	27	25 44	dist	103.99	lon	-143 7790	lat	60 0720	trillium 120+a330 lb100c@50
SVW2	ΔТ	27	27 05	dist	98.28	lon	-155 6217	lat	61 1082	Trillium-240.Trident 10
TARI.	AK	az	24.39	dist	104.90	lon	-141, 1443	lat	60,4399	trillium 240 2+a330 lb100c@50
TOLK	ТΑ	az	19.04	dist	97.63	lon	-149.5724	lat	68,6408	Guralp CMG3T:Quanterra 330 Li 17
TRF	ΔK	27	23 89	dist	99 66	lon	-150 2893	lat	63 4502	$cmg3esp_60sec+dm24050$
IINV	ΔK	27	35 62	dist	94 51	lon	-166 5040	lat	53 8456	$cmg3esp_60sec+dm24050$
VTR	CN	27	27 51	dist	112 97	lon	-132 5406	lat	53 2522	Guraln CMG3T 120sec CNSN GD2 100
VMT	PS	27	25 19	dist	102 37	lon	-146 3694	lat	61 0827	cmg3esp 60sec+g330 lb100c050
VRDT	NK NK	a2	20.10	diet	102.07	lon	-143 4545	1at	61 2275	$t_{rillium} 240.2 + a330 lb100ce50$
WHY	CM	a2	27.00	diet	107.02	lon	-134 8806	1at	60 6597	Curalo CMC3ESP NSN-CNSN CD1 d 80
WRAK	US SII	27	22.00	die+	111 01	lon	-132 3466	1at	56 4191	STS2-I=80404=Gen=0330SR=1366 5
WBH	٨K	27	22.00	die+	100 07	lon	-148 0016	12+	64 4715	trillium 240 2+a330 1b100c050
VKIIO	Δт	27	22.02	die+	106 03	lon	-139 6710	12+	59 5101	$Trillium - 240 \cdot Triden + 10$
VKU1	CM	27	13 01	die+	112 12	lon	-114 /8/3	12+	62 4822	Guraln CMC3ESP NGN+CNGN CD2 100
AKUJO TUZMI	CM	a2	13 00	dia+	112.13	lon	-11/ 6000	12t	62 5616	Streckeigen STS-1. CNSN Volla 110
VIIKE	CM	a2	10.22 22 QF	dia+	105 20	lon	-137 8502	12+	61 1215	Curaln CMC3FQD 60cec.Taurus 115
VIIV7	CM	a۲	22.00	4:~+	106.02	1011	130 1300	1~+	60 6202	Curala CMC3EGD 60ccc. Taurus 115
1001	CN	aΖ	23.44	uist	100.07	TOU	-120.1238	Tat	00.0307	Gurarp_ONGSESF_OUSec: Taurus115

Table 5: Station misalignments in *Hanna and Long* (2012) that were applied in this analysis. We applied only the (non-zero) alignment corrections in HL2012 for stations whose horizontal alignment metadata had **not** changed prior to 2014-01-21. See Version 3 for a list of corrections that were applied for the analysis of *Tape et al.* (2013).

station	longitude	latitude	angle
WRH	-148.09	64.47	18.0
UNV	-166.50	53.85	12.0
HOM	-151.65	59.66	-10.0
MCK	-148.94	63.73	-10.0
SAW	-148.33	61.81	-9.0
RIDG	-144.84	63.74	-7.0

Table 6: Records with data gaps. The station list is AKT, AKUT, BARK, BBB, BERG, CHGN, EYAK, GOAT, HYT, IL31, ILBB, KABU, OHAK, SDPT, SKAG, SPCP, SPIA, YKW1, YKW3, YUK5, YUK7. Stations EYAK, BBB, SKAG, SPCP were kept within the analysis, despite having small gaps that could have an effect. (The filtered records of SPCP and BBB were cut to avoid the influence of the gaps.) Note that filtering seismograms that have gaps will generally lead to spurious results.

start time 2012-04-11 08:41:57, end time 2012-04-11 10:21:57 AKUT AT BHZ ngaps = 264424 BARK AK BHZ ngaps = 280424 BBB CN BHZ ngaps = 240 BERG AK BHZ ngaps = 276076 CHGN AT BHZ ngaps = 78556 GOAT AK BHZ ngaps = 261250 IL31 IM BHZ ngaps = 96698 ILBB XM BHZ ngaps = 10680 KABU AV BHZ ngaps = 500 OHAK AT BHZ ngaps = 91872 SDPT AT BHZ ngaps = 46006 SPIA AK BHZ ngaps = 78300 YKW3 CN BHZ ngaps = 5960 AKUT AT BHE ngaps = 261746 BARK AK BHE ngaps = 280424 BBB CN BHE ngaps = 240 BERG AK BHE ngaps = 276076 CHGN AT BHE ngaps = 78148 EYAK AK BHE ngaps = 450 GOAT AK BHE ngaps = 261250 ILBB XM BHE ngaps = 10480 OHAK AT BHE ngaps = 91790 SDPT AT BHE ngaps = 46486 SPIA AK BHE ngaps = 73850 YKW3 CN BHE ngaps = 1080 AKUT AT BHN ngaps = 264472 BARK AK BHN ngaps = 280424 BBB CN BHN ngaps = 240 BERG AK BHN ngaps = 276076 CHGN AT BHN ngaps = 77720 GOAT AK BHN ngaps = 261250 ILBB XM BHN ngaps = 10520 KABU AV BHN ngaps = 1500 OHAK AT BHN ngaps = 92522 SDPT AT BHN ngaps = 46468 SKAG AT BHN ngaps = 500 SPCP AV BHN ngaps = 500 SPIA AK BHN ngaps = 82700 YKW3 CN BHN ngaps = 5960 AKT AV HHZ ngaps = 2 HYT CN HHZ ngaps = 323144 YKW1 CN HHZ ngaps = 19600 YUK5 CN HHZ ngaps = 236344 YUK7 CN HHZ ngaps = 258744 AKT AV HHE ngaps = 2 HYT CN HHE ngaps = 331344 YKW1 CN HHE ngaps = 13200 YUK5 CN HHE ngaps = 243600 YUK7 CN HHE ngaps = 245544 AKT AV HHN ngaps = 2 HYT CN HHN ngaps = 320000 YKW1 CN HHN ngaps = 29000

YUK5 CN HHN ngaps =

240400

Table 7: Angular deviation of max horizontal vector from transverse component for the 86 stations used for scientific analysis (Figure 2). Misalignments at the non-86 stations might also be possible. The stations are sorted in order from maximum to minimum angular deviation, without any corrections applied. The first set of numbers following GC refer to great-circle directions: the back-azimuth (baz), the azimuth of the positive transverse component (Tp), and the azimuth of the negative transverse component (Tn). The number following CT is the azimuthal direction of the maximum horizontal displacement, followed by its deviation from the transverse component. The numbers following HL are the same, but with the *Hanna and Long* (2012) (Table 5) corrections applied. In all cases except one (HOM), the angular deviation decreases after applying the correction.

YKU2	ΑT	GC:	baz	304.6	Тр	214.6	Tm	34.6	//	CT:	2.3	(	-32.3)				
SKN	AK	GC:	baz	294.1	Тр	204.1	Tm	24.1	//	CT:	51.1	(	27.0)				
MDM	AK	GC:	baz	297.6	Тр	207.6	Tm	27.6	//	CT:	51.2	(	23.6)				
COLD	AK	GC:	baz	296.1	Тр	206.1	Tm	26.1	//	CT:	49.3	(	23.3)				
MCK	AK	GC:	baz	296.8	Тр	206.8	Tm	26.8	//	CT:	45.0	(	18.2)	HL:	35.0	(	8.2)
MLY	AK	GC:	baz	295.3	Тр	205.3	Tm	25.3	//	CT:	7.4	(	-17.9)				
SCM	AK	GC:	baz	297.9	Тр	207.9	Tm	27.9	//	CT:	44.2	(	16.2)				
WRH	AK	GC:	baz	297.7	Тр	207.7	Tm	27.7	//	CT:	12.4	(	-15.3)	HL:	30.4	(	2.7)
UNV	AK	GC:	baz	280.1	Тр	190.1	Tm	10.1	//	CT:	175.0	(	-15.2)	HL:	187.0	(	-3.2)
GLM	AK	GC:	baz	298.4	Тр	208.4	Tm	28.4	//	CT:	41.8	(	13.3)				
COLA	IU	GC:	baz	298.0	Тр	208.0	Tm	28.0	//	CT:	40.5	(	12.5)				
PPD	AK	GC:	baz	300.3	Тр	210.3	Tm	30.3	//	CT:	222.7	(	12.5)				
RND	AK	GC:	baz	296.8	Тр	206.8	Tm	26.8	//	CT:	38.7	(	11.9)				
KTH	AK	GC:	baz	294.9	Тр	204.9	Tm	24.9	//	CT:	36.6	(	11.7)				
AKRB	AV	GC:	baz	280.5	Тр	190.5	Tm	10.5	//	CT:	202.2	(	11.6)				
CRAG	ΑT	GC:	baz	309.8	Тр	219.8	Tm	39.8	//	CT:	28.7	(	-11.1)				
WHY	CN	GC:	baz	309.5	Тр	219.5	Tm	39.5	//	CT:	50.5	(	11.0)				
RDOG	AK	GC:	baz	284.2	Тр	194.2	Tm	14.2	//	CT:	204.2	(	10.0)				
SSN	AK	GC:	baz	294.7	Тр	204.7	Tm	24.7	//	CT:	14.9	(	-9.9)				
EGAK	US	GC:	baz	304.3	Тр	214.3	Tm	34.3	//	CT:	223.3	(	9.0)				
FIB	AK	GC:	baz	295.2	Тр	205.2	Tm	25.2	//	CT:	34.2	(	9.0)				
DHY	AK	GC:	baz	298.1	Тр	208.1	Tm	28.1	//	CT:	37.0	(	8.9)				
KNK	AK	GC:	baz	296.8	Тр	206.8	Tm	26.8	//	CT:	35.7	(	8.9)				
TOLK	ΤA	GC:	baz	296.8	Тр	206.8	Tm	26.8	//	CT:	215.4	(	8.6)				
PS06	PS	GC:	baz	296.3	Тр	206.3	Tm	26.3	//	CT:	34.3	(	7.9)				
PLBC	CN	GC:	baz	307.8	Тр	217.8	Tm	37.8	//	CT:	45.6	(	7.8)				
PMR	ΑT	GC:	baz	296.2	Тр	206.2	Tm	26.2	//	CT:	33.9	(	7.6)				
PS11	PS	GC:	baz	299.7	Тp	209.7	Tm	29.7	//	CT:	37.3	(	7.6)				
PAX	AK	GC:	baz	299.9	Тр	209.9	Tm	29.9	//	CT:	37.1	(	7.3)				
RIDG	AK	GC:	baz	300.6	- Tp	210.6	Tm	30.6	//	CT:	37.8	(	7.2)	HL:	30.8	(	0.2)
MENT	AT	GC:	baz	301.5	Тp	211.5	Tm	31.5	//	CT:	24.4	(	-7.2)				
DLBC	CN	GC:	baz	313.6	тр	223.6	Tm	43.6	11	CT:	50.7	(	7.1)				

Table 8:Part 2 of Table 7.

PSO4 PS GC: baz       297.0 Tp       207.0 Tp       227.0 Tp       28.9 // CT:       31.8 (       6.8)         PSO8 PS GC: baz       298.9 Tp       208.9 Tp       208.9 Tm       28.9 // CT:       35.5 (       6.6)         CAST AK GC: baz       293.8 Tp       203.8 Tm       23.4 // CT:       16.8 (       -6.6)         CAST AK GC: baz       293.8 Tp       203.8 Tm       23.4 // CT:       30.1 (       6.2)         HDA AK GC: baz       293.7 Tp       200.7 Tm       28.7 // CT:       34.9 (       6.1)         MSSA AK GC: baz       293.8 Tp       223.6 Tm       43.6 // CT:       49.3 (       5.6)         PS12 PS GC: baz       299.9 Tp       209.9 Tm       27.0 // CT:       35.4 (       5.4)       HL:       23.4 (       -3.6)         SMA KA GC: baz       290.7 Tp       20.7 // CT:       33.7 // CT:       34.7 (       5.0)       5.0         SW2 AT GC: baz       290.3 Tp       200.3 Tm       20.3 // CT:       43.7 (       5.0)       5.0         SW4 AK GC: baz       203.7 Tp       210.7 Tm       31.7 // CT:       34.7 (       5.0)       5.6         SW4 AK GC: baz       203.6 Tp       20.2.6 Tm       33.2 // CT:       31.1 (       39)       4.00	JIS	AK	GC:	baz	309.4 Tp	219.4 Tm	39.4 // CT:	46.2 (	6.9)		
PS08 P5 0C: baz       298.9 T       208.9 T       208.9 T       208.9 T       208.4 T       00.5       00.5       0.5         SPCP AV GC: baz       293.4 T       203.4 T       203.4 T       203.4 T       16.8 (       -6.6)         SAST AK GC: baz       293.7 TP       201.7 Tm       30.7 // CT:       36.9 (       6.2)         FYU AK GC: baz       300.7 TP       201.7 Tm       30.7 // CT:       38.4 (       5.7)         BBB CN GC: baz       302.6 TP       202.6 Tm       32.6 // CT:       38.4 (       5.6)         F312 PS GC: baz       299.9 TP       209.9 Tm       29.9 // CT:       35.4 (       5.6)         SAM AK GC: baz       297.0 TP       200.7 Tm       29.7 // CT:       38.7 (       5.0)         SW2 AT GC: baz       290.3 TP       213.7 Tm       33.7 // CT:       42.0 (       4.0)         KLU AK GC: baz       303.7 TP       213.7 Tm       33.7 // CT:       42.9 (       4.0)         KAK US GC: baz       303.2 TP       213.7 Tm       33.7 // CT:       42.9 (       4.0)         KAK US GC: baz       303.2 TP       213.2 Tm       33.2 // CT:       33.2 (       4.0)         KAK US GC: baz       303.2 TP       213.2 Tm       33.2 // CT:       33.1	PS04	PS	GC:	baz	297.0 Tp	207.0 Tm	27.0 // CT:	213.8 (	6.8)		
SPCP NV GC: baz       293.4 Tp       203.4 Tp       23.4 // CT:       16.8 (-6.6)         CAST AK GC: baz       293.8 Tp       203.8 Tp       203.8 Tp       203.8 Tp       203.8 Tp         FYU AK GC: baz       293.8 Tp       203.8 Tp       203.8 Tp       203.8 Tp       203.8 Tp       203.8 Tp         MEXA AK GC: baz       292.7 Tp       200.7 Tm       33.7 // CT:       34.9 (       6.1)         MESA AK GC: baz       299.9 Tp       209.9 Tm       209.7 // CT:       35.4 (       5.6)         PS10 FS GC: baz       299.7 Tp       200.7 Tm       29.7 // CT:       35.4 (       5.0)         SWWA AT GC: baz       290.3 Tp       203.7 // CT:       34.7 (       5.0)         SWWA AT GC: baz       290.3 Tp       203.7 // CT:       33.2 (       4.0)         WAK GC: baz       290.3 Tp       203.7 // CT:       33.2 (       4.0)         WAK GC: baz       290.3 Tp       203.7 // CT:       33.2 (       4.0)         WAK GC: baz       291.7 P       209.2 Tm       29.2 // CT:       33.2 (       4.00         KLU AK GC: baz       291.7 P       202.8 Tm       33.9 // CT:       33.2 (       4.00         KLU AK GC: baz       291.7 P       202.8 Tm       22.8 // CT: <td< td=""><td>PS08</td><td>PS</td><td>GC:</td><td>baz</td><td>298.9 Tp</td><td>208.9 Tm</td><td>28.9 // CT:</td><td>35.5 (</td><td>6.6)</td><td></td><td></td></td<>	PS08	PS	GC:	baz	298.9 Tp	208.9 Tm	28.9 // CT:	35.5 (	6.6)		
CAST MA GC: baz 293.8 Tp 203.8 Tp 203.8 Tm 23.8 // CT: 30.1 ( 6.3) FYU MA GC: baz 298.7 Tp 208.7 Tm 33.7 // CT: 36.9 ( 6.2) MESA MA GC: baz 300.7 Tp 212.6 Tm 32.6 // CT: 38.4 ( 5.7) MESA MA GC: baz 30.6 Tp 212.6 Tm 43.6 // CT: 43.3 ( 5.6) FS12 PS GC: baz 299.9 Tp 209.9 Tm 29.9 // CT: 35.4 ( 5.6) FS12 PS GC: baz 297.0 Tp 200.7 Tm 27.7 // CT: 34.7 ( 5.0) SAM MA GC: baz 303.7 Tp 213.7 Tm 33.7 // CT: 38.7 ( 5.0) SAM MA GC: baz 303.7 Tp 213.7 Tm 33.7 // CT: 38.7 ( 5.0) SAM MA GC: baz 299.2 Tp 200.2 Tm 29.2 // CT: 33.2 ( 4.0) MEXA MA GC: baz 299.2 Tp 200.2 Tm 20.3 // CT: 42.9 ( 4.2) KLU AK GC: baz 303.7 Tp 213.7 Tm 33.7 // CT: 33.7 ( 5.0) SKAG AT GC: baz 303.7 Tp 213.7 Tm 33.7 // CT: 43.9 ( 4.2) KLU AK GC: baz 303.2 Tp 213.2 Tm 33.2 // CT: 37.1 ( 3.9) WLUT AK GC: baz 303.2 Tp 213.2 Tm 33.2 // CT: 37.1 ( 3.9) WLUT AK GC: baz 303.2 Tp 213.2 Tm 33.2 // CT: 37.1 ( 3.9) WLUT AK GC: baz 304.8 Tp 214.8 Tm 34.8 // CT: 43.8 ( -3.7) BCP AK GC: baz 303.3 Tp 210.3 Tm 20.3 // CT: 38.5 ( 3.7) KAK U SG C: baz 292.6 Tp 20.6 Tm 22.6 // CT: 14.8 ( -3.7) BCP AK GC: baz 300.3 Tp 210.3 Tm 30.3 // CT: 38.5 ( 3.2) EXTA WA GC: baz 300.3 Tp 210.3 Tm 30.3 // CT: 35.6 ( 3.2) EXTA WA GC: baz 302.4 Tp 212.4 Tm 32.4 // CT: 35.6 ( 3.2) EXTA WA GC: baz 302.4 Tp 212.4 Tm 32.4 // CT: 35.6 ( 2.6) KAI AK GC: baz 303.3 Tp 210.3 Tm 30.3 // CT: 35.6 ( 2.6) FS09 PS GC: baz 294.8 Tp 204.8 Tm 24.8 // CT: 35.0 ( 2.6) FX01 AK GC: baz 303.1 Tp 210.3 Tm 30.3 // CT: 32.8 ( 2.5) KAI AK GC: baz 303.3 Tp 210.3 Tm 30.3 // CT: 32.8 ( 2.5) FXA FA GC: baz 303.3 Tp 210.3 Tm 30.3 // CT: 32.8 ( 2.5) FXA FA GC: baz 303.3 Tp 210.3 Tm 30.3 // CT: 32.8 ( 2.5) FXA FA GC: baz 303.3 Tp 210.3 Tm 30.3 // CT: 32.8 ( 2.5) FXA FA GC: baz 303.1 Tp 213.1 Tm 33.1 // CT: 32.8 ( 2.5) FXA FA GC: baz 303.1 Tp 213.1 Tm 33.1 // CT: 32.8 ( 2.5) FXA FA GC: baz 304.8 Tp 214.9 Tm 34.9 // CT: 35.4 ( 1.9) EFX MA GC: baz 304.8 Tp 214.9 Tm 34.9 // CT: 35.4 ( 1.9) EFX MA GC: baz 304.8 Tp 214.9 Tm 34.9 // CT: 35.6 ( 0.1) FXA FA GC: baz 304.8 Tp 214.9 Tm 34.9 // CT: 35.6	SPCP	AV	GC:	baz	293.4 Tp	203.4 Tm	23.4 // CT:	16.8 (	-6.6)		
FYU AK GC: baz       300.7 Tp       210.7 Tm       30.7 // CT:       36.9 (       6.2)         HDA AK GC: baz       228.7 Tp       208.7 Tm       23.7 // CT:       34.9 (       6.1)         MESA AK GC: baz       230.6 Tp       212.6 Tm       32.6 // CT:       34.4 (       5.7)         BEB CN GC: baz       239.6 Tp       209.7 Tm       29.9 // CT:       35.4 (       5.6)         SAM AK GC: baz       297.0 Tp       200.7 Tm       23.7 // CT:       34.7 (       5.0)         SMM AK GC: baz       290.7 Tp       200.7 Tm       33.7 // CT:       34.7 (       5.0)         SW24 AT GC: baz       290.3 Tp       200.3 Tm       20.3 // CT:       33.2 (       4.0)         WRAK US GC: baz       301.8 Tp       220.8 Tm       40.8 // CT:       44.8 (       4.0)         WRAK US GC: baz       301.9 Tp       211.9 Tm       31.9 // CT:       28.1 (       -3.8)         PSO5 PS GC: baz       295.6 Tp       202.5 Tm       22.5 // CT:       18.8 (       -3.7)         PELA AK CC: baz       292.6 Tp       202.5 Tm       22.6 // CT:       18.4 (       -3.2)         EMR AK GC: baz       292.6 Tp       202.6 Tm       23.6 (       -3.2)       EX         KULJ AK CC: baz	CAST	AK	GC:	baz	293.8 Tp	203.8 Tm	23.8 // CT:	30.1 (	6.3)		
HDA AK GC: baz 298.7 Tp 208.7 Tn 28.7 // CT: 34.9 ( 6.1) MESA AK GC: baz 302.6 Tp 212.6 Tn 32.6 // CT: 38.4 ( 5.7) BEB CN GC: baz 299.9 Tp 209.9 Tn 29.9 // CT: 35.4 ( 5.6) PS12 PS GC: baz 297.0 Tp 207.0 Tn 27.0 // CT: 32.4 ( 5.6) PS12 PS GC: baz 297.0 Tp 209.7 Tn 29.7 // CT: 34.7 ( 5.0) SAM AK GC: baz 297.0 Tp 209.7 Tn 29.7 // CT: 34.7 ( 5.0) SAM AK GC: baz 297.0 Tp 209.7 Tn 29.7 // CT: 34.7 ( 5.0) SAM AK GC: baz 297.0 Tp 209.7 Tn 29.7 // CT: 34.7 ( 5.0) SAM AK GC: baz 299.2 Tp 209.2 Tn 29.2 // CT: 33.2 ( 4.0) KLU AK GC: baz 303.7 Tp 213.7 Tn 33.7 // CT: 42.9 ( 4.2) KLU AK GC: baz 303.8 Tp 213.7 Tn 33.2 // CT: 47.1 ( 3.9) KULT AK GC: baz 301.9 Tp 211.9 Tn 31.9 // CT: 28.1 ( -3.8) PS05 PS GC: baz 295.6 Tp 205.6 Tn 22.6 // CT: 21.8 ( -3.7) BCP AK GC: baz 293.6 Tp 203.6 Tn 23.6 // CT: 21.8 ( -3.7) BCP AK GC: baz 293.6 Tp 203.6 Tn 22.6 // CT: 19.4 ( -3.2) MENAK US GC: baz 294.7 Tp 209.7 Tn 29.2 // CT: 31.8 ( -3.7) PPLA AK GC: baz 292.6 Tp 202.6 Tn 22.6 // CT: 19.4 ( -3.2) BCP AK GC: baz 292.6 Tp 202.6 Tn 22.6 // CT: 31.8 ( -3.7) PPLA AK GC: baz 292.6 Tp 202.6 Tn 22.6 // CT: 31.8 ( -3.7) PPLA AK GC: baz 292.7 Tp 209.2 Tn 29.2 // CT: 31.8 ( 2.6) BCT AK GC: baz 292.6 Tp 202.6 Tn 22.6 // CT: 19.4 ( -3.2) BCR AK GC: baz 299.2 Tp 209.2 Tn 29.2 // CT: 31.8 ( 2.6) BCA AK GC: baz 299.2 Tp 209.2 Tn 29.2 // CT: 31.8 ( 2.6) BCA AK GC: baz 299.7 TP 209.7 Tn 28.7 // CT: 35.0 ( 2.6) KAII AK GC: baz 300.3 Tp 210.3 Tn 30.3 // CT: 32.8 ( 2.5) KAII AK GC: baz 301.5 Tp 211.5 Tn 31.5 // CT: 31.8 ( 2.4) BAR NAK GC: baz 303.1 Tp 210.3 Tn 30.3 // CT: 32.8 ( 2.5) KAII AK GC: baz 303.1 Tp 210.3 Tn 30.3 // CT: 32.8 ( 2.5) KAII AK GC: baz 303.1 Tp 210.3 Tn 30.3 // CT: 32.8 ( 2.5) KAII AK GC: baz 303.1 Tp 210.3 Tn 30.3 // CT: 33.9 ( 2.5) KAII AK GC: baz 303.1 Tp 210.1 Tn 30.1 // CT: 32.8 ( 2.1) PNL AK GC: baz 30.1 Tp 210.1 Tn 30.1 // CT: 33.6 ( 2.1) PNL AK GC: baz 30.1 TP 210.1 Tn 30.1 // CT: 32.8 ( 2.2) TAEL AK GC: baz 30.1 TP 210.1 Tn 30.1 // CT: 32.6 ( 2.1) PNL AK GC: baz 30.1 TP 210.1 Tn 30.1 // CT: 33.6 (	FYU	AK	GC:	baz	300.7 Tp	210.7 Tm	30.7 // CT:	36.9 (	6.2)		
MESA AK GC: baz       30.6 Tp       212.6 Tm       33.6 // CT:       38.4 (       5.7)         BEB CN GC: baz       313.6 Tp       223.6 Tm       43.6 // CT:       48.4 (       5.6)         SAW AK GC: baz       299.7 Tp       209.7 Tm       27.0 // CT:       32.4 (       5.6)         SAW AK GC: baz       290.7 Tp       207.0 Tm       27.0 // CT:       38.7 (       5.0)         SW2 AT GC: baz       290.3 Tp       20.3 Tm       33.7 // CT:       38.7 (       5.0)         SW4A AT GC: baz       303.7 Tp       213.7 Tm       33.7 // CT:       38.7 (       6.0)         SW4A TG C: baz       303.7 Tp       213.7 Tm       33.7 // CT:       43.2 (       4.0)         WLAK GC: baz       301.7 Tp       213.7 Tm       33.7 // CT:       43.8 (       4.0)         WAK GC: baz       301.9 Tp       201.8 Tm       40.8 // CT:       33.2 (       4.0)         WAK AK GC: baz       301.9 Tp       211.9 Tm       31.9 // CT:       38.5 (       3.7)         BCD AK GC: baz       304.8 Tp       214.8 Tm       34.8 // CT:       38.5 (       3.7)         KDAK AK GC: baz       30.3 Tp       210.3 Tm       30.3 // CT:       33.6 (       3.2)         KHA K GC: baz <td< td=""><td>HDA</td><td>AK</td><td>GC</td><td>baz</td><td>298.7 Tp</td><td>208.7 Tm</td><td>28.7 // CT:</td><td>34.9 (</td><td>6.1)</td><td></td><td></td></td<>	HDA	AK	GC	baz	298.7 Tp	208.7 Tm	28.7 // CT:	34.9 (	6.1)		
Inc. T         Oct. 6         D <thd< th="">         D         <thd< th="">         D         D         <thd<< td=""><td>MESA</td><td>ΔK</td><td>CC.</td><td>haz</td><td>302 6 Tp</td><td>212 6 Tm</td><td>32 6 // CT·</td><td>38.4 (</td><td>57)</td><td></td><td></td></thd<<></thd<></thd<>	MESA	ΔK	CC.	haz	302 6 Tp	212 6 Tm	32 6 // CT·	38.4 (	57)		
Bill 2PS GC: baz       299.9 Th       209.9 Th       27.0 // CT:       35.4 (       5.5)         SAW AK GC: baz       297.0 Tp       207.0 Tm       27.0 // CT:       32.4 (       5.4) HL:       23.4 (       -3.6)         SAM AK GC: baz       290.7 Tp       209.7 Tm       29.7 // CT:       38.7 (       5.0)         SAM AK GC: baz       203.3 Tp       203.3 Tm       20.3 // CT:       15.9 (       -4.3)         SKG AT GC: baz       299.7 Tp       209.2 Tm       29.2 // CT:       33.2 (       4.0)         WAK GC: baz       301.9 Tp       211.9 Tm       31.9 // CT:       28.1 (       -3.6)         WAK KG C: baz       301.9 Tp       211.9 Tm       31.9 // CT:       28.1 (       -3.7)         WAK KG C: baz       301.8 Tp       22.6 Tm       34.8 // CT:       38.5 (       3.7)         KDA K GC: baz       29.6 Tp       202.6 Tm       22.5 // CT:       18.8 (       -3.7)         PPLA AK GC: baz       29.6 Tp       202.6 Tm       22.6 // CT:       19.4 (       -3.2)         BMR AK GC: baz       30.3 Tp       210.3 Tm       30.3 // CT:       31.8 (       2.6)         RC C: baz       30.3 Tp       212.4 Tm       32.4 // CT:       31.6 (       3.2)	BBB	CN	GC.	haz	313 6 Tp	222.0 Im 223 6 Tm	43 6 // CT:	49.3 (	5.6)		
ALX       AC       DATA       DATA <t< td=""><td>PS12</td><td>PS</td><td>CC.</td><td>haz</td><td>299 9 Tn</td><td>209 9 Tm</td><td>29 9 // CT·</td><td>35.4 (</td><td>5 5)</td><td></td><td></td></t<>	PS12	PS	CC.	haz	299 9 Tn	209 9 Tm	29 9 // CT·	35.4 (	5 5)		
Data in Got Data 2016 Tp       Data 7 Tp	SAM	ΔK	CC.	haz	297 0 Tp	203.3 Im 207 0 Tm	27.0 // CT	32.4 (	54) HI·	234 (	-3 6)
Alt AK GC: baz       303.7 Tp       213.7 Tm       33.7 // CT:       51.7 (       50.7 (         SWA2 AT GC: baz       290.3 Tp       200.3 Tm       20.3 // CT:       15.9 (       -4.3)         SKAG AT GC: baz       290.2 Tp       200.2 Tm       29.2 // CT:       33.2 (       4.0)         WRAK US GC: baz       303.2 Tp       213.2 Tm       33.2 // CT:       41.0         WRAK US GC: baz       303.2 Tp       213.2 Tm       33.2 // CT:       37.1 (       3.9)         KULT AK GC: baz       303.2 Tp       213.2 Tm       33.2 // CT:       37.1 (       3.9)         KULT AK GC: baz       303.4 Tp       213.2 Tm       33.2 // CT:       28.1 (       -3.6)         PSOS PS GC: baz       292.6 Tp       202.5 Tm       22.5 // CT:       18.8 (       -3.7)         PLA AK GC: baz       292.6 Tp       202.6 Tm       22.6 // CT:       19.4 (       -3.2)         EMR AK GC: baz       30.3 JP       210.3 Tm       30.3 // CT:       35.5 (       3.2)         KIAG AK GC: baz       292.7 D       29.2 // CT:       35.6 (       3.2)         KIAG AK GC: baz       30.3 JP       210.3 Tm       30.3 // CT:       32.3 (       2.5)         KIAG AK GC: baz       30.2 A Tp       2	PS10	PS	CC.	haz	201.0 Ip	207.0 Im 209.7 Tm	29.7 // CT·	34 7 (	5 0)	20.1 (	0.0)
Similar GC: baz       300.1 Tp       200.3 Tm       20.3 // CT:       50.1 / P:       60.1         SKAG AT GC: baz       308.7 Tp       218.7 Tm       38.7 // CT:       42.9 (       4.2)         KLU AK GC: baz       310.8 Tp       220.8 Tm       40.8 // CT:       33.2 (       4.0)         WRAK US GC: baz       310.8 Tp       220.8 Tm       40.8 // CT:       33.2 (       4.0)         RKAV AK GC: baz       310.8 Tp       220.8 Tm       30.8 // CT:       37.1 (       3.9)         VULT AK GC: baz       303.2 Tp       20.5 Tm       22.5 // CT:       28.1 (       -3.8)         PS05 PS GC: baz       29.6 Tp       20.6 Tm       25.6 // CT:       21.8 (       -3.7)         PCHA K GC: baz       292.6 Tp       202.6 Tm       22.6 // CT:       19.4 (       -3.7)         PPLA AK GC: baz       292.6 Tp       202.6 Tm       22.6 // CT:       19.4 (       -3.2)         KIAG C: baz       202.4 Tp       212.4 Tm       32.4 // CT:       35.6 (       3.2)         KIAG C: baz       202.4 Tp       212.4 Tm       32.4 // CT:       35.0 (       2.6)         RCO1 AK GC: baz       292.7 Tp       209.2 Tm       29.2 // CT:       31.8 (       2.6)         RCO1 AK GC: baz </td <td>SAWH</td> <td>Δĸ</td> <td>CC.</td> <td>haz</td> <td>203.7 Tp</td> <td>200.7 Im 213 7 Tm</td> <td>33 7 // CT·</td> <td>38 7 (</td> <td>5.0)</td> <td></td> <td></td>	SAWH	Δĸ	CC.	haz	203.7 Tp	200.7 Im 213 7 Tm	33 7 // CT·	38 7 (	5.0)		
SWA AT GC: baz 308.7 Tp 218.7 Tm 38.7 // CT: 42.9 ( 4.2) KLU AK GC: baz 308.7 Tp 218.7 Tm 38.7 // CT: 33.2 ( 4.0) WRAK US GC: baz 301.9 Tp 210.8 Tm 40.8 // CT: 37.1 ( 3.9) KULT AK GC: baz 301.9 Tp 211.9 Tm 31.9 // CT: 37.1 ( 3.9) KULT AK GC: baz 301.9 Tp 211.9 Tm 31.9 // CT: 28.1 ( -3.8) PSO5 PS GC: baz 292.6 Tp 202.6 Tm 22.6 // CT: 21.8 ( -3.7) BCP AK GC: baz 304.8 Tp 214.8 Tm 34.8 // CT: 38.5 ( 3.7) KDAK US C: baz 292.6 Tp 202.6 Tm 22.6 // CT: 19.4 ( -3.2) BVR AK GC: baz 300.3 Tp 201.3 Tm 30.3 // CT: 33.5 ( 3.2) KIAC AK GC: baz 300.3 Tp 210.3 Tm 30.3 // CT: 35.6 ( 3.2) KIAC AK GC: baz 302.4 Tp 212.4 Tm 32.4 // CT: 35.6 ( 3.2) KIAC AK GC: baz 292.6 Tp 202.6 Tm 22.6 // CT: 31.8 ( 2.6) BAL AK GC: baz 292.7 Tp 209.2 Tm 29.2 // CT: 31.8 ( 2.6) BAL AK GC: baz 299.2 Tp 209.2 Tm 29.2 // CT: 31.8 ( 2.6) BAL AK GC: baz 299.2 Tp 209.2 Tm 29.8 // CT: 32.3 ( 2.5) KIA AK GC: baz 299.8 Tp 209.8 Tm 25.8 // CT: 32.3 ( 2.5) KAI AK GC: baz 300.3 Tp 210.3 Tm 30.3 // CT: 32.8 ( 2.5) KAI AK GC: baz 301.3 Tp 212.3 Tm 32.8 // CT: 32.3 ( 2.5) KAI AK GC: baz 301.3 Tp 212.3 Tm 30.3 // CT: 32.4 ( 2.4) BAL AK GC: baz 301.3 Tp 212.3 Tm 30.3 // CT: 32.3 ( 2.5) KAI AK GC: baz 301.7 Tp 208.7 Tm 28.7 // CT: 31.1 ( 2.4) BAR AK GC: baz 300.1 Tp 210.1 Tm 30.1 // CT: 32.4 ( 2.4) BAR AK GC: baz 300.1 Tp 211.5 Tm 31.5 // CT: 33.6 ( 2.1) FML AK GC: baz 300.1 Tp 211.5 Tm 30.1 // CT: 32.3 ( 2.2) TRF AK GC: baz 300.1 Tp 211.5 Tm 30.1 // CT: 32.6 ( 2.1) FML AK GC: baz 300.1 Tp 211.5 Tm 30.1 // CT: 32.6 ( 2.1) FML AK GC: baz 300.1 Tp 211.5 Tm 30.1 // CT: 32.6 ( 2.1) FML AK GC: baz 300.1 Tp 211.4 Tm 30.1 // CT: 32.6 ( 2.1) FML AK GC: baz 300.1 Tp 211.5 Tm 30.1 // CT: 32.6 ( 2.1) FML AK GC: baz 300.1 Tp 211.5 Tm 33.6 // CT: 33.6 ( 2.1) FML AK GC: baz 300.1 Tp 211.5 Tm 33.6 // CT: 33.6 ( 2.1) FML AK GC: baz 300.1 Tp 211.6 Tm 30.6 // CT: 35.4 ( 2.4) BESE AK GC: baz 300.1 Tp 211.6 Tm 30.6 // CT: 35.4 ( 2.9) EXE AK GC: baz 300.1 Tp 211.6 Tm 30.6 // CT: 30.6 ( 0.1) FML AK GC: baz 300.0 Tp 210.0 Tm 30.0 // CT: 30.6 ( 0.1) FML A	SMUD		ас. сс.	baz	200.3 Tp	210.7 III 200 3 Tm	20.3 // CT	15.9 (	-4.3)		
Sixt J GC. baz       290.2 Tp       200.2 Tm       20.2 // C1:       33.2 (       4.0)         WRAK US GC: baz       303.2 Tp       213.2 Tm       33.2 // C1:       33.2 // C1:       33.2 // C1:       33.2 // C1:         WLLT AK GC: baz       301.9 Tp       211.9 Tm       31.2 // C1:       28.1 (       -3.8)         PSO5 PS GC: baz       295.6 Tp       205.6 Tm       25.6 // C1:       21.8 C       -3.7)         BCP AK GC: baz       293.6 Tp       203.6 Tm       23.6 // C1:       27.3 (       3.6)         NOT AV GC: baz       292.6 Tp       202.6 Tm       22.6 // C1:       19.4 (       -3.2)         FMR AK GC: baz       302.4 Tp       212.4 Tm       30.3 // C1:       35.6 (       3.2)         KIAG AK GC: baz       302.4 Tp       212.4 Tm       32.4 // C1:       35.6 (       3.2)         KIAG AK GC: baz       30.2 Tp       209.2 Tm       29.2 // C1:       31.8 (       2.6)         ROC1 AK GC: baz       30.3 Tp       210.3 Tm       30.4 // C1:       35.6 (       3.2)         KIAG AK GC: baz       30.4 Tp       212.4 Tm       32.4 // C1:       35.6 (       2.6)         ROC1 AK GC: baz       30.3 Tp       210.3 Tm       30.4 // C1:       32.8 (       2.5) </td <td>GKVC</td> <td>AT AT</td> <td>ас. сс.</td> <td>baz</td> <td>290.3 IP</td> <td>200.3 III 218 7 Tm</td> <td>20.3 // CI.</td> <td>10.9 (</td> <td>4.3)</td> <td></td> <td></td>	GKVC	AT AT	ас. сс.	baz	290.3 IP	200.3 III 218 7 Tm	20.3 // CI.	10.9 (	4.3)		
ALO AK GC: baz       299.2 19       209.2 11       29.2 / / C1:       33.2 / (C1:       34.8 (C1:         WAK US GC: baz       303.2 Tp       213.2 Tm       33.2 / (C1:       37.1 (C1:       3.9)         KULT AK GC: baz       303.2 Tp       213.2 Tm       33.2 / (C1:       37.1 (C1:       3.9)         KULT AK GC: baz       305.6 Tp       205.6 Tm       25.6 // C1:       21.8 (C1:       -3.7)         BCP AK GC: baz       292.6 Tp       202.6 Tm       22.5 // C1:       18.8 (C1:       -3.7)         PPLA AK GC: baz       292.6 Tp       202.6 Tm       22.6 // C1:       19.4 (C1:       -3.2)         BMR AK GC: baz       292.6 Tp       202.6 Tm       22.6 // C1:       35.6 (C1:       3.6)         NCT AV GC: baz       292.1 Tp       209.2 Tm       29.2 // C1:       31.8 (C1:       3.2)         EYAK AK GC: baz       209.2 Tp       209.2 Tm       29.2 // C1:       31.8 (C1:       2.6)         FLA AK GC: baz       209.2 Tp       209.2 Tm       29.2 // C1:       31.8 (C1:       2.6)         FVAK AK GC: baz       209.2 Tp       209.2 Tm       29.2 // C1:       31.8 (C1:       2.6)         FVAK AK GC: baz       303.3 Tp       21.3 Tm       30.3 // C1:       32.3 (C1:       2.5)	VIII	AV	GC.	baz	200.7 IP	210.7 III	30.7 / 01.	42.9 (	4.2)		
<ul> <li>WRAM (DS GC: baz 30.3 2 Tp 220.5 lm 40.6 // C1: 37.1 (3.9)</li> <li>KULT AK GC: baz 301.9 Tp 211.9 Tm 31.9 // CT: 28.1 (-3.8)</li> <li>PSO5 PS GC: baz 295.6 Tp 205.6 Tm 25.6 // CT: 21.8 (-3.7)</li> <li>ECP AK GC: baz 304.8 Tp 214.8 Tm 34.8 // CT: 38.5 (3.7)</li> <li>KDAK II GC: baz 292.5 Tp 202.5 Tm 22.5 // CT: 18.8 (-3.7)</li> <li>PDAK GC: baz 202.6 Tp 203.6 Tm 22.6 // CT: 19.4 (-3.2)</li> <li>BMR AK GC: baz 30.3 Tp 210.3 Tm 30.3 // CT: 33.5 (3.2)</li> <li>EYAK AK GC: baz 30.2.4 Tp 212.4 Tm 32.4 // CT: 35.6 (3.2)</li> <li>EYAK AK GC: baz 30.2.4 Tp 212.4 Tm 32.4 // CT: 35.6 (2.6)</li> <li>RCO1 AK GC: baz 295.6 Tp 205.6 Tm 25.6 // CT: 28.1 (2.5)</li> <li>PSO9 PS GC: baz 302.4 Tp 212.4 Tm 32.4 // CT: 35.0 (2.6)</li> <li>RCO1 AK GC: baz 30.3 Tp 210.3 Tm 30.3 // CT: 32.8 (2.5)</li> <li>KIAG CC: baz 30.3 Tp 210.3 Tm 30.3 // CT: 33.9 (2.5)</li> <li>KIA CC: baz 301.5 Tp 211.5 Tm 31.5 // CT: 33.9 (2.5)</li> <li>KHT AK GC: baz 301.5 Tp 213.1 Tm 30.3 // CT: 32.4 (2.4)</li> <li>BARN AK GC: baz 303.1 Tp 213.1 Tm 33.1 // CT: 35.4 (2.4)</li> <li>BARN AK GC: baz 301.5 Tp 211.5 Tm 31.5 // CT: 31.1 (2.4)</li> <li>BARN AK GC: baz 301.5 Tp 211.5 Tm 31.5 // CT: 31.1 (2.4)</li> <li>BARN AK GC: baz 301.1 Tp 213.1 Tm 28.7 // CT: 31.4 (2.4)</li> <li>BARN AK GC: baz 301.5 Tp 211.5 Tm 31.5 // CT: 31.4 (2.4)</li> <li>BARN AK GC: baz 301.5 Tp 211.5 Tm 31.5 // CT: 31.4 (2.4)</li> <li>BARN AK GC: baz 301.5 Tp 211.5 Tm 31.5 // CT: 31.4 (2.4)</li> <li>BARN AK GC: baz 301.5 Tp 211.5 Tm 31.5 // CT: 31.4 (2.4)</li> <li>BARN AK GC: baz 301.5 Tp 211.5 Tm 31.5 // CT: 31.4 (2.4)</li> <li>BARN AK GC: baz 301.5 Tp 211.5 Tm 31.5 // CT: 33.5 (2.1)</li> <li>TAF AK GC: baz 301.5 Tp 211.5 Tm 31.5 // CT: 33.6 (2.1)</li> <li>TAF AK GC: baz 301.4 Tp 211.4 Tm 31.4 // CT: 32.3 (2.2)</li> <li>TAF AK GC: baz 301.5 Tp 211.5 Tm 33.5 // CT: 191.0 (1.1)</li> <li>SCR AK GC: baz 301.4 Tp 211.4 Tm 31.4 // CT: 33.6 (2.1)</li> <li>SCR AK GC: baz 301.4 Tp 211.4 Tm 31.4 // CT: 33.6 (2.1)</li> <li>SCR AK GC: baz 301.4 Tp 211.4 Tm 31.4 // CT: 33.5 (0.9)</li> <li>TABL</li></ul>		AN		baz	299.2 Ip	209.2 IM	29.2 // CI:	33.2 (	4.0)		
RAA W AK GC: baz       30.1.9 Tp       213.2 Im       33.2 // CI:       37.1 (C       3.9)         WULT AK GC: baz       295.6 Tp       205.6 Tm       25.6 // CT:       21.8 (C       -3.7)         BCD AK GC: baz       295.6 Tp       202.5 Tm       22.5 // CT:       18.8 (C       -3.7)         BCD AK GC: baz       292.6 Tp       202.6 Tm       22.6 // CT:       18.8 (C       -3.7)         PLA AK GC: baz       292.6 Tp       202.6 Tm       22.6 // CT:       18.8 (C       -3.7)         PLA AK GC: baz       292.6 Tp       202.6 Tm       22.6 // CT:       31.6 (C       -3.2)         BMR AK GC: baz       292.6 Tp       202.6 Tm       22.6 // CT:       31.8 (C       -3.2)         EYAK AK GC: baz       292.1 Tp       209.2 Tm       29.2 // CT:       31.8 (C       2.6)         RAU K GC: baz       299.2 Tp       209.2 Tm       29.2 // CT:       31.8 (C       2.6)         PSO9 PS GC: baz       299.8 Tp       205.6 Tm       25.6 // CT:       28.1 (C       2.5)         KAI K GC: baz       30.3 Tp       210.3 Tm       30.3 // CT:       32.8 (C       2.5)         VMT PS GC: baz       298.7 Tp       208.7 Tm       28.7 // CT:       31.1 (C       2.4)         BA	WRAN	05		baz	310.8 Ip	220.8 Im	40.8 // CI:	44.8 (	4.0)		
NUL1 AK GC: baz       201.9 ip       211.9 in       51.9 // C1:       20.1 ( - 3.0)         BYOS PS GC: baz       232.6 Tp       202.5 Tn       22.5 // CT:       18.8 ( -3.7)         PLA AK GC: baz       292.5 Tp       202.5 Tn       22.5 // CT:       18.8 ( -3.7)         PPLA AK GC: baz       292.6 Tp       202.6 Tn       22.5 // CT:       18.8 ( -3.7)         PPLA AK GC: baz       292.6 Tp       202.6 Tn       23.6 // CT:       19.4 ( -3.2)         MR AK GC: baz       292.6 Tp       202.6 Tn       30.3 // CT:       33.5 ( 3.2)         KIAG AK GC: baz       30.3 Tp       210.3 Tn       30.3 // CT:       35.6 ( 3.2)         EYAK AK GC: baz       302.4 Tp       212.4 Tn       32.4 // CT:       35.6 ( 3.2)         EYAK AK GC: baz       302.4 Tp       212.4 Tn       32.4 // CT:       35.0 ( 2.6)         BAL AK GC: baz       302.4 Tp       212.4 Tn       32.4 // CT:       35.0 ( 2.6)         SYOP SP SC C: baz       29.8 Tp       20.9 S Tn       20.8 // CT:       32.8 ( 2.5)         KAI AK GC: baz       30.3 Tp       210.3 Tn       30.3 // CT:       32.8 ( 2.5)         INK CN GC: baz       303.1 Tp       213.1 Tn       33.1 // CT:       32.4 ( 2.4)         BAL AK GC: baz       303.1 Tp<	KKAV	AK	GC:	baz	303.2 Ip	213.2 Im	33.2 // CI:	37.1 (	3.9)		
PSUS PS GC: baz 298.5 lp 205.5 lm 205.6 lm 24.8 lm 34.8 // CT: 38.5 ( 3.7) KDAK II GC: baz 304.8 lp 202.5 lm 22.5 // CT: 18.8 ( -3.7) PPLA AK GC: baz 292.6 lp 202.6 lm 22.6 // CT: 27.3 ( 3.6) NCT AV GC: baz 292.6 lp 202.6 lm 22.6 // CT: 19.4 ( -3.2) BMR AK GC: baz 300.3 lp 210.3 lm 30.3 // CT: 33.5 ( 3.2) KIAG AK GC: baz 302.4 lp 212.4 lm 32.4 // CT: 35.6 ( 3.2) EYAK AK GC: baz 299.2 lp 209.2 lm 29.2 // CT: 31.8 ( 2.6) BAL AK GC: baz 302.4 lp 212.4 lm 32.4 // CT: 35.0 ( 2.6) RCO1 AK GC: baz 302.4 lp 212.4 lm 32.4 // CT: 32.3 ( 2.5) FX0 PS GC: baz 299.8 lp 209.8 lm 29.8 // CT: 32.3 ( 2.5) KAI AK GC: baz 300.3 lp 210.3 lm 30.3 // CT: 32.8 ( 2.5) KAI AK GC: baz 301.5 lp 211.5 lm 31.5 // CT: 31.1 ( 2.4) BARN AK GC: baz 303.1 lp 213.1 lm 33.1 // CT: 32.4 ( 2.4) BARN AK GC: baz 300.1 lp 210.1 lm 30.1 // CT: 32.3 ( 2.5) VMT PS GC: baz 298.7 lp 204.3 lm 24.3 // CT: 22.0 ( -2.3) RAG AK GC: baz 300.1 lp 210.1 lm 30.1 // CT: 32.3 ( 2.2) TFF AK GC: baz 300.1 lp 210.1 lm 30.1 // CT: 32.3 ( 2.2) TFF AK GC: baz 300.1 lp 210.1 lm 30.1 // CT: 32.3 ( 2.2) TFF AK GC: baz 301.5 lp 211.5 lm 31.5 // CT: 33.6 ( 2.1) PML AK GC: baz 301.5 lp 211.5 lm 31.5 // CT: 33.6 ( 2.1) PML AK GC: baz 301.4 lp 211.4 lm 33.4 // CT: 35.4 ( 1.9) ESE AK GC: baz 301.4 lp 211.4 lm 33.4 // CT: 35.4 ( 1.10) ESE AK GC: baz 301.4 lp 211.4 lm 31.4 // CT: 35.4 ( 1.10) ESE AK GC: baz 301.4 lp 211.4 lm 31.4 // CT: 30.4 ( -1.0) BARL AK GC: baz 301.4 lp 211.4 lm 31.4 // CT: 30.4 ( -1.0) BARL AK GC: baz 301.4 lp 211.4 lm 31.4 // CT: 30.4 ( -1.0) BARL AK GC: baz 301.4 lp 211.4 lm 31.4 // CT: 30.4 ( -1.0) BARL AK GC: baz 301.4 lp 211.4 lm 31.4 // CT: 30.4 ( 0.7) HL AK GC: baz 301.4 lp 211.4 lm 31.4 // CT: 30.4 ( 0.7) HL AK GC: baz 301.4 lp 211.4 lm 31.4 // CT: 30.4 ( 0.7) HL AK GC: baz 301.4 lp 211.4 lm 31.4 // CT: 30.4 ( 0.7) HL AK GC: baz 301.4 lp 211.4 lm 31.4 // CT: 30.4 ( 0.7) HL AK GC: baz 301.4 lp 211.4 lm 31.4 // CT: 30.4 ( 0.7) HL AK GC: baz 301.4 lp 211.4 lm 31.4 // CT: 30.4 ( 0.7) HL AK GC: baz 300.4 lp 210.9 lm 30.9 // CT	NULI	AN		baz	301.9 Ip	211.9 Im	31.9 // CI:	28.1 (	-3.8)		
BUC AK GC: baz 304.8 ip 214.8 im 34.8 // CI: 38.5 ( 3.7) KDAK II GC: baz 292.5 Tp 202.5 Tm 22.5 // CT: 18.8 ( -3.7) PTLA AK GC: baz 293.6 Tp 202.6 Tm 22.6 // CT: 27.3 ( 3.6) NCT AV GC: baz 300.3 Tp 210.3 Tm 30.3 // CT: 33.5 ( 3.2) KNAK GC: baz 300.3 Tp 210.3 Tm 30.3 // CT: 35.6 ( 3.2) EYAK AK GC: baz 302.4 Tp 212.4 Tm 32.4 // CT: 35.0 ( 2.6) BAL AK GC: baz 302.4 Tp 212.4 Tm 32.4 // CT: 35.0 ( 2.6) BAL AK GC: baz 302.4 Tp 212.4 Tm 32.4 // CT: 35.0 ( 2.6) RC01 AK GC: baz 300.3 Tp 210.3 Tm 30.3 // CT: 32.8 ( 2.5) KAI AK GC: baz 301.5 Tp 211.5 Tm 31.5 // CT: 32.8 ( 2.5) KAI AK GC: baz 301.5 Tp 211.5 Tm 31.5 // CT: 33.9 ( 2.5) INK CN GC: baz 303.1 Tp 210.3 Tm 24.3 // CT: 32.8 ( 2.5) KHT AK GC: baz 301.5 Tp 211.5 Tm 31.5 // CT: 31.1 ( 2.4) BARN AK GC: baz 303.1 Tp 213.1 Tm 33.1 // CT: 35.4 ( 2.4) BARN AK GC: baz 303.1 Tp 213.1 Tm 33.1 // CT: 35.4 ( 2.4) BARN AK GC: baz 301.5 Tp 211.5 Tm 31.5 // CT: 33.6 ( 2.1) THF AK GC: baz 301.5 Tp 211.5 Tm 31.5 // CT: 33.6 ( 2.1) PNL AK GC: baz 301.5 Tp 211.4 Tm 30.1 // CT: 35.4 ( 2.4) BARN AK GC: baz 301.5 Tp 211.5 Tm 31.5 // CT: 33.6 ( 2.1) PNL AK GC: baz 301.7 Tp 213.1 Tm 34.9 // CT: 35.4 ( 1.9) ESE AK GC: baz 301.7 Tp 213.4 Tm 34.9 // CT: 35.4 ( 1.9) ESE AK GC: baz 303.4 Tp 213.4 Tm 34.9 // CT: 35.4 ( 1.9) EAR AK GC: baz 303.4 Tp 213.4 Tm 34.9 // CT: 35.4 ( 1.9) EAR AK GC: baz 303.4 Tp 213.4 Tm 34.9 // CT: 35.4 ( 1.9) EAR AK GC: baz 301.4 Tp 211.4 Tm 31.4 // CT: 35.4 ( 1.9) EAR AK GC: baz 301.4 Tp 211.4 Tm 34.4 // CT: 35.4 ( 1.9) EAR AK GC: baz 301.4 Tp 211.4 Tm 31.4 // CT: 35.5 ( 1.1) SNY AT GC: baz 301.4 Tp 211.4 Tm 34.6 // CT: 35.5 ( 0.9) ISLE AK GC: baz 301.4 Tp 211.4 Tm 31.4 // CT: 35.5 ( 0.9) ISLE AK GC: baz 301.4 Tp 211.4 Tm 31.4 // CT: 35.5 ( 0.9) ISLE AK GC: baz 301.4 Tp 211.4 Tm 32.6 // CT: 35.5 ( 0.9) ISLE AK GC: baz 301.4 Tp 211.4 Tm 32.6 // CT: 35.5 ( 0.9) ISLE AK GC: baz 301.4 Tp 211.4 Tm 32.6 // CT: 35.5 ( 0.9) ISLE AK GC: baz 301.4 Tp 211.4 Tm 32.6 // CT: 35.5 ( 0.9) ISLE AK GC: baz 300.9 Tp 200.6 Tm 23.6 // CT: 28.5 ( 0.5) SU	P505	PS	GC:	baz	295.6 Ip	205.6 Im	25.6 // CI:	21.8 (	-3.7)		
KDAK 11 GC: baz 292.5 1p 202.5 1m 22.6 // CT: 18.8 ( -3.7) PPLA AK GC: baz 292.6 1p 202.6 1m 22.6 // CT: 27.3 ( 3.6) NCT AV GC: baz 300.3 1p 210.3 1m 30.3 // CT: 33.5 ( 3.2) KIAG AK GC: baz 302.4 1p 212.4 1m 32.4 // CT: 35.6 ( 3.2) EYAK AK GC: baz 302.4 1p 212.4 1m 32.4 // CT: 35.6 ( 2.6) BAL AK GC: baz 302.4 1p 212.4 1m 32.4 // CT: 35.0 ( 2.6) RCO1 AK GC: baz 299.5 1p 209.5 1m 29.2 // CT: 31.8 ( 2.5) KAI AK GC: baz 300.3 1p 210.3 1m 30.3 // CT: 32.3 ( 2.5) KAI AK GC: baz 300.3 1p 210.3 1m 30.3 // CT: 32.8 ( 2.5) KHIT AK GC: baz 301.5 1p 211.5 1m 30.3 // CT: 32.8 ( 2.5) KHIT AK GC: baz 301.5 1p 211.5 1m 30.3 // CT: 33.9 ( 2.5) INK CN GC: baz 303.1 1p 213.1 1m 30.1 // CT: 33.9 ( 2.5) INK CN GC: baz 303.1 1p 213.1 1m 33.1 // CT: 31.1 ( 2.4) BANA K GC: baz 303.1 1p 210.1 1m 30.1 // CT: 32.3 ( 2.2) TRF AK GC: baz 301.5 1p 211.5 1m 31.5 // CT: 32.3 ( 2.2) TRF AK GC: baz 301.5 1p 211.5 1m 31.5 // CT: 32.3 ( 2.2) TRF AK GC: baz 301.5 1p 214.9 1m 34.9 // CT: 32.3 ( 2.1) PNL AK GC: baz 301.4 1p 214.9 1m 34.9 // CT: 36.9 ( 2.0) BESE AK GC: baz 303.4 1p 214.9 1m 34.9 // CT: 36.9 ( 2.0) TABL AK GC: baz 301.4 1p 214.9 1m 34.9 // CT: 36.9 ( 2.0) TABL AK GC: baz 301.4 1p 214.9 1m 34.9 // CT: 35.4 ( 1.9) EPAW AK GC: baz 301.4 1p 214.9 1m 34.9 // CT: 35.4 ( 1.0) BESE AK GC: baz 301.4 1p 214.9 1m 34.9 // CT: 35.4 ( 1.0) BESE AK GC: baz 301.4 1p 214.9 1m 34.9 // CT: 35.4 ( 1.0) BESE AK GC: baz 301.4 1p 214.9 1m 34.9 // CT: 35.4 ( 1.0) BESE AK GC: baz 301.4 1p 214.9 1m 34.9 // CT: 35.4 ( 1.0) BESE AK GC: baz 301.4 1p 214.9 1m 34.9 // CT: 35.4 ( 1.0) BAL AK GC: baz 301.4 1p 214.9 1m 34.9 // CT: 35.4 ( 1.0) BAL AK GC: baz 301.4 1p 214.9 1m 34.9 // CT: 35.4 ( 1.0) BAL AK GC: baz 301.4 1p 214.9 1m 34.9 // CT: 35.4 ( 1.0) BAL AK GC: baz 301.4 1p 214.9 1m 34.9 // CT: 35.4 ( 1.0) BAL AK GC: baz 301.4 1p 214.4 1m 34.4 // CT: 33.5 ( 0.9) ISLE AK GC: baz 301.4 1p 214.4 1m 34.4 // CT: 33.5 ( 0.9) ISLE AK GC: baz 300.9 1p 210.9 1m 30.9 // CT: 33.5 ( 0.9) ISLE AK GC: baz 300.9 1p 210.9 1m 30.9 // CT: 33.5 ( 0.	BCP	AK	GC:	baz	304.8 Ip	214.8 Im	34.8 // CI:	38.5 (	3.7)		
PPLA AK GC: baz       293.6 Tp       202.6 Tm       22.6 // CT:       27.3 (       3.6)         NCT AV GC: baz       292.6 Tp       202.6 Tm       22.6 // CT:       19.4 (       -3.2)         BMR AK GC: baz       300.3 Tp       210.3 Tm       30.3 // CT:       33.5 (       3.2)         KIAG AK GC: baz       302.4 Tp       212.4 Tm       32.4 // CT:       35.6 (       3.2)         EYAK AK GC: baz       299.2 Tp       209.2 Tm       29.2 // CT:       31.8 (       2.6)         RC01 AK GC: baz       299.2 Tp       209.2 Tm       29.2 // CT:       31.8 (       2.6)         RC01 AK GC: baz       300.3 Tp       210.4 Tm       32.4 // CT:       32.3 (       2.5)         NK GC: baz       300.3 Tp       210.3 Tm       30.3 // CT:       32.8 (       2.5)         VMT PS GC: baz       301.5 Tp       211.5 Tm       31.5 // CT:       31.1 (       2.4)         BAN AK GC: baz       303.1 Tp       213.1 Tm       33.1 // CT:       35.4 (       2.4)         BRIK AK GC: baz       303.1 Tp       213.1 Tm       30.1 // CT:       32.3 (       2.2)         TRF AK GC: baz       30.1 Tp       213.1 Tm       30.1 // CT:       32.3 (       2.2)         TRF AK GC: baz	KDAK	11	GC:	baz	292.5 Tp	202.5 Tm	22.5 // CT:	18.8 (	-3.7)		
NCT AV GC: baz 292.6 Tp 202.6 Tm 22.6 // CT: 19.4 ( -3.2) BNR AK GC: baz 300.3 Tp 210.3 Tm 30.3 // CT: 33.5 ( 3.2) KIAG AK GC: baz 302.4 Tp 212.4 Tm 32.4 // CT: 35.6 ( 3.2) EYAK AK GC: baz 302.4 Tp 212.4 Tm 32.4 // CT: 35.0 ( 2.6) BAL AK GC: baz 302.4 Tp 212.4 Tm 32.4 // CT: 32.8 ( 2.5) KAI GA K GC: baz 299.6 Tp 209.8 Tm 29.8 // CT: 32.3 ( 2.5) KAI AK GC: baz 300.3 Tp 210.3 Tm 30.3 // CT: 32.8 ( 2.5) KHI AK GC: baz 301.5 Tp 211.5 Tm 31.5 // CT: 32.8 ( 2.5) KHI AK GC: baz 303.1 Tp 213.1 Tm 33.1 // CT: 31.4 ( 2.4) BARN AK GC: baz 303.1 Tp 213.1 Tm 33.1 // CT: 32.3 ( 2.4) BRLK AK GC: baz 300.1 Tp 210.1 Tm 30.1 // CT: 32.3 ( 2.4) BRLK AK GC: baz 300.1 Tp 210.1 Tm 30.1 // CT: 32.3 ( 2.2) TFF AK GC: baz 301.5 Tp 211.5 Tm 31.5 // CT: 33.6 ( 2.4) BRLK AK GC: baz 300.1 Tp 210.1 Tm 30.1 // CT: 32.3 ( 2.2) TFF AK GC: baz 301.5 Tp 211.5 Tm 31.5 // CT: 33.6 ( 2.1) PNL AK GC: baz 301.5 Tp 211.5 Tm 31.5 // CT: 36.9 ( 2.0) BESE AK GC: baz 303.4 Tp 214.9 Tm 34.9 // CT: 36.9 ( 2.0) BESE AK GC: baz 303.4 Tp 214.9 Tm 34.9 // CT: 36.9 ( 2.0) BESE AK GC: baz 301.4 Tp 211.4 Tm 33.4 // CT: 32.5 ( 1.1) SMW AK GC: baz 301.4 Tp 211.4 Tm 32.4 // CT: 32.5 ( 1.1) SMY AT GC: baz 301.4 Tp 211.4 Tm 31.4 // CT: 32.5 ( 1.1) SMY AT GC: baz 302.4 Tp 212.4 Tm 32.6 // CT: 175.6 ( 1.0) BEAL AK GC: baz 302.4 Tp 212.4 Tm 32.6 // CT: 33.2 ( 0.9) HOM AK GC: baz 302.4 Tp 212.4 Tm 32.6 // CT: 33.2 ( 0.9) HOM AK GC: baz 303.4 Tp 212.4 Tm 32.6 // CT: 33.2 ( 0.9) HOM AK GC: baz 303.4 Tp 212.4 Tm 32.6 // CT: 33.2 ( 0.9) HOM AK GC: baz 303.4 Tp 212.4 Tm 32.6 // CT: 33.2 ( 0.9) HOM AK GC: baz 303.4 Tp 212.4 Tm 32.6 // CT: 33.2 ( 0.7) HL: 14.3 ( -9.3) CCB AK GC: baz 300.9 Tp 210.9 Tm 28.0 // CT: 28.5 ( 0.5) SUCK AK GC: baz 300.9 Tp 210.9 Tm 30.9 // CT: 31.3 ( 0.4) HOM AK GC: baz 300.9 Tp 210.9 Tm 30.9 // CT: 31.3 ( 0.4) HOM AK GC: baz 300.9 Tp 210.9 Tm 30.9 // CT: 31.3 ( 0.4) HOM AK GC: baz 300.9 Tp 210.9 Tm 30.9 // CT: 31.3 ( 0.4) HOM AK GC: baz 300.9 Tp 210.9 Tm 30.9 // CT: 31.3 ( 0.4) HOM AK GC: baz 300.9 Tp 210.9 Tm 30.9 // C	PPLA	AK	GC:	baz	293.6 Tp	203.6 Tm	23.6 // CT:	27.3 (	3.6)		
BMR AK GC: baz       300.3 Tp       210.3 Tm       30.3 // CT:       33.5 (       3.2)         KIAG AK GC: baz       302.4 Tp       212.4 Tm       32.4 // CT:       35.6 (       3.2)         EYAK AK GC: baz       299.2 Tp       209.2 Tm       29.2 // CT:       35.6 (       3.2)         EYAK AK GC: baz       299.2 Tp       209.2 Tm       29.2 // CT:       35.6 (       2.6)         BAL AK GC: baz       299.4 Tp       212.4 Tm       32.4 // CT:       32.3 (       2.6)         RC01 AK GC: baz       299.8 Tp       209.8 Tm       29.8 // CT:       28.1 (       2.5)         KAIG AK GC: baz       300.3 Tp       210.3 Tm       30.3 // CT:       32.8 (       2.5)         KAIT AK GC: baz       301.5 Tp       211.5 Tm       31.5 // CT:       33.9 (       2.5)         INK CN GC: baz       303.1 Tp       213.1 Tm       33.1 // CT:       35.4 (       2.4)         BARN AK GC: baz       301.1 Tp       210.1 Tm       30.1 // CT:       32.3 (       2.2)         TRF AK GC: baz       301.5 Tp       211.5 Tm       31.5 // CT:       33.3 (       -2.1)         SCRK AK GC: baz       309.0 Tp       219.0 Tm       39.0 // CT:       36.9 (       2.0)         EESE AK GC: ba	NCT	AV	GC:	baz	292.6 Tp	202.6 Tm	22.6 // CT:	19.4 (	-3.2)		
KIAG AK GC: baz 302.4 Tp 212.4 Tm 32.4 // CT: 35.6 ( 3.2) EYAK AK GC: baz 299.2 Tp 209.2 Tm 29.2 // CT: 31.8 ( 2.6) BAL AK GC: baz 302.4 Tp 212.4 Tm 32.4 // CT: 35.0 ( 2.6) RC01 AK GC: baz 295.6 Tp 205.6 Tm 25.6 // CT: 28.1 ( 2.5) PS09 PS GC: baz 299.8 Tp 209.8 Tm 29.8 // CT: 32.3 ( 2.5) KAT AK GC: baz 300.3 Tp 210.3 Tm 30.3 // CT: 32.8 ( 2.5) KHIT AK GC: baz 301.5 Tp 211.5 Tm 31.5 // CT: 33.9 ( 2.5) INK CN GC: baz 312.3 Tp 222.3 Tm 42.3 // CT: 224.8 ( 2.5) VMT PS GC: baz 303.1 Tp 213.1 Tm 33.1 // CT: 35.4 ( 2.4) BARN AK GC: baz 303.1 Tp 213.1 Tm 33.1 // CT: 35.4 ( 2.4) BARN AK GC: baz 300.1 Tp 210.1 Tm 30.1 // CT: 32.3 ( -2.1) SCRA AK GC: baz 301.5 Tp 211.5 Tm 31.5 // CT: 33.6 ( 2.1) PNL AK GC: baz 301.5 Tp 211.5 Tm 31.5 // CT: 33.6 ( 2.1) PNL AK GC: baz 300.1 Tp 210.1 Tm 30.1 // CT: 33.6 ( 2.1) PNL AK GC: baz 300.5 Tp 214.9 Tm 34.9 // CT: 36.9 ( 2.0) ESEE AK GC: baz 309.0 Tp 219.0 Tm 39.0 // CT: 40.9 ( 2.0) TABL AK GC: baz 303.4 Tp 214.9 Tm 34.9 // CT: 35.4 ( 1.9) EPAW AK GC: baz 301.4 Tp 211.4 Tm 33.4 // CT: 35.5 ( 1.1) SMY AT GC: baz 301.4 Tp 211.4 Tm 31.4 // CT: 32.5 ( 1.1) SMY AT GC: baz 301.4 Tp 211.4 Tm 31.4 // CT: 30.4 ( -1.0) BAGL AK GC: baz 302.6 Tp 212.6 Tm 32.6 // CT: 175.6 ( 1.0) EGL AK GC: baz 302.4 Tp 212.4 Tm 32.6 // CT: 33.5 ( 0.9) ISLE AK GC: baz 302.4 Tp 212.4 Tm 32.6 // CT: 33.5 ( 0.9) ISLE AK GC: baz 302.4 Tp 212.4 Tm 32.6 // CT: 33.5 ( 0.9) ISLE AK GC: baz 302.4 Tp 212.4 Tm 32.6 // CT: 33.5 ( 0.9) ISLE AK GC: baz 302.4 Tp 212.4 Tm 32.6 // CT: 33.5 ( 0.9) ISLE AK GC: baz 302.4 Tp 212.4 Tm 32.6 // CT: 24.3 ( 0.7) HL: 14.3 ( -9.3) CCB AK GC: baz 302.4 Tp 212.4 Tm 32.6 // CT: 24.3 ( 0.7) HL: 14.3 ( -9.3) CCB AK GC: baz 300.9 Tp 200.9 Tm 28.0 // CT: 24.3 ( 0.7) HL: 14.3 ( -9.3) CCB AK GC: baz 300.9 Tp 200.9 Tm 28.0 // CT: 24.3 ( 0.7) HL: 14.3 ( -9.3) CCB AK GC: baz 300.9 Tp 200.9 Tm 28.0 // CT: 24.3 ( 0.7) HL: 14.3 ( -9.3) CCB AK GC: baz 300.9 Tp 210.9 Tm 30.9 // CT: 24.3 ( 0.7) HL: 14.3 ( -9.3) CCB AK GC: baz 300.9 Tp 200.6 Tm 28.0 // CT: 24.3 ( 0.7) HL: 14.3 (	BMR	AK	GC:	baz	300.3 Tp	210.3 Tm	30.3 // CT:	33.5 (	3.2)		
EYAK AK GC: baz 299.2 Tp 209.2 Tm 29.2 // CT: 31.8 ( 2.6) BAL AK GC: baz 302.4 Tp 212.4 Tm 32.4 // CT: 35.0 ( 2.6) RC01 AK GC: baz 295.6 Tp 205.6 Tm 25.6 // CT: 28.1 ( 2.5) KAI AK GC: baz 300.3 Tp 210.3 Tm 30.3 // CT: 32.3 ( 2.5) KAI AK GC: baz 301.5 Tp 211.5 Tm 31.5 // CT: 32.8 ( 2.5) KHIT AK GC: baz 301.5 Tp 211.5 Tm 31.5 // CT: 33.9 ( 2.5) INK CN GC: baz 312.3 Tp 222.3 Tm 42.3 // CT: 224.8 ( 2.5) WT PS GC: baz 298.7 Tp 208.7 Tm 28.7 // CT: 31.1 ( 2.4) BARN AK GC: baz 303.1 Tp 213.1 Tm 33.1 // CT: 35.4 ( 2.4) BARN AK GC: baz 300.1 Tp 210.1 Tm 30.1 // CT: 32.3 ( 2.2) TRF AK GC: baz 300.1 Tp 210.1 Tm 30.1 // CT: 32.3 ( 2.2) TRF AK GC: baz 301.5 Tp 211.5 Tm 31.5 // CT: 33.6 ( 2.1) SCRK AK GC: baz 301.5 Tp 211.5 Tm 31.5 // CT: 33.6 ( 2.1) PNL AK GC: baz 301.4 Tp 210.1 Tm 30.1 // CT: 33.6 ( 2.1) PNL AK GC: baz 304.9 Tp 214.9 Tm 34.9 // CT: 36.4 ( 1.9) ESE AK GC: baz 303.4 Tp 213.4 Tm 33.4 // CT: 35.4 ( 1.9) EPAW AK GC: baz 303.4 Tp 213.4 Tm 33.4 // CT: 35.4 ( 1.9) EPAW AK GC: baz 301.4 Tp 211.4 Tm 31.4 // CT: 32.5 ( 1.1) SMY AT GC: baz 301.4 Tp 211.4 Tm 31.4 // CT: 32.5 ( 1.1) SMY AT GC: baz 302.6 Tp 212.6 Tm 32.6 // CT: 175.6 ( 1.00) EGLC AK GC: baz 302.4 Tp 212.4 Tm 32.6 // CT: 33.5 ( 0.9) ISLE AK GC: baz 302.4 Tp 212.4 Tm 32.6 // CT: 33.5 ( 0.9) ISLE AK GC: baz 302.6 Tp 212.6 Tm 32.6 // CT: 33.5 ( 0.9) ISLE AK GC: baz 302.4 Tp 212.4 Tm 32.6 // CT: 33.5 ( 0.9) ISLE AK GC: baz 302.4 Tp 212.4 Tm 32.6 // CT: 33.5 ( 0.9) ISLE AK GC: baz 302.4 Tp 212.4 Tm 32.6 // CT: 33.5 ( 0.9) ISLE AK GC: baz 302.4 Tp 212.4 Tm 32.6 // CT: 33.5 ( 0.9) ISLE AK GC: baz 300.9 Tp 203.6 Tm 23.6 // CT: 24.3 ( 0.7) HL: 14.3 ( -9.3) CCB AK GC: baz 300.9 Tp 208.0 Tm 28.0 // CT: 28.5 ( 0.5) SUCK AK GC: baz 300.9 Tp 208.0 Tm 28.0 // CT: 26.0 ( -0.4) NICH AK GC: baz 300.9 Tp 210.9 Tm 30.9 // CT: 31.3 ( 0.4) GHO AK GC: baz 300.9 Tp 210.9 Tm 30.9 // CT: 30.5 ( -0.3)	KIAG	AK	GC:	baz	302.4 Tp	212.4 Tm	32.4 // CT:	35.6 (	3.2)		
BAL AK GC: baz 302.4 Tp 212.4 Tm 32.4 // CT: 35.0 ( 2.6) RC01 AK GC: baz 295.6 Tp 205.6 Tm 25.6 // CT: 28.1 ( 2.5) PS09 PS GC: baz 299.8 Tp 209.8 Tm 29.8 // CT: 32.3 ( 2.5) KAI AK GC: baz 301.5 Tp 211.5 Tm 31.5 // CT: 32.8 ( 2.5) KHIT AK GC: baz 301.5 Tp 211.5 Tm 31.5 // CT: 33.9 ( 2.5) INK CN GC: baz 312.3 Tp 222.3 Tm 42.3 // CT: 224.8 ( 2.5) VMT PS GC: baz 298.7 Tp 208.7 Tm 28.7 // CT: 31.1 ( 2.4) BARN AK GC: baz 303.1 Tp 213.1 Tm 33.1 // CT: 35.4 ( 2.4) BRLK AK GC: baz 300.1 Tp 210.1 Tm 30.1 // CT: 32.3 ( 2.2) TRF AK GC: baz 300.1 Tp 210.1 Tm 30.1 // CT: 32.3 ( 2.2) TRF AK GC: baz 301.5 Tp 211.5 Tm 31.5 // CT: 33.6 ( 2.1) PNL AK GC: baz 301.5 Tp 211.5 Tm 31.5 // CT: 33.6 ( 2.1) PNL AK GC: baz 304.9 Tp 214.9 Tm 34.9 // CT: 36.9 ( 2.0) EESE AK GC: baz 303.4 Tp 213.4 Tm 33.4 // CT: 35.4 ( 1.9) EPAW AK GC: baz 304.9 Tp 214.9 Tm 34.9 // CT: 35.4 ( 1.9) EPAW AK GC: baz 301.4 Tp 211.4 Tm 31.4 // CT: 32.5 ( 1.1) SMF AF GC: baz 301.4 Tp 211.4 Tm 31.4 // CT: 32.5 ( 1.1) SMF AF GC: baz 301.4 Tp 211.4 Tm 31.4 // CT: 32.5 ( 1.0) EGLC AK GC: baz 302.4 Tp 212.4 Tm 32.6 // CT: 175.6 ( 1.0) EGLC AK GC: baz 301.4 Tp 211.4 Tm 31.4 // CT: 33.5 ( 0.9) ISLE AK GC: baz 302.6 Tp 212.6 Tm 22.6 // CT: 33.5 ( 0.9) ISLE AK GC: baz 302.6 Tp 212.4 Tm 32.6 // CT: 33.5 ( 0.9) ISLE AK GC: baz 302.6 Tp 212.4 Tm 32.6 // CT: 33.5 ( 0.9) ISLE AK GC: baz 302.6 Tp 212.4 Tm 32.6 // CT: 33.5 ( 0.9) ISLE AK GC: baz 302.6 Tp 212.4 Tm 32.6 // CT: 33.5 ( 0.9) ISLE AK GC: baz 300.7 Tp 210.9 Tm 30.9 // CT: 31.3 ( 0.4) GHO AK GC: baz 300.9 Tp 210.9 Tm 30.9 // CT: 31.3 ( 0.4) GHO AK GC: baz 300.9 Tp 210.9 Tm 30.9 // CT: 30.5 ( -0.3)	EYAK	AK	GC:	baz	299.2 Tp	209.2 Tm	29.2 // CT:	31.8 (	2.6)		
RC01 AK GC: baz 295.6 Tp 205.6 Tm 25.6 // CT: 28.1 ( 2.5) PSO9 PS GC: baz 299.8 Tp 209.8 Tm 29.8 // CT: 32.3 ( 2.5) KAI AK GC: baz 300.3 Tp 210.3 Tm 30.3 // CT: 32.8 ( 2.5) KHIT AK GC: baz 312.3 Tp 222.3 Tm 42.3 // CT: 33.9 ( 2.5) VMT PS GC: baz 298.7 Tp 208.7 Tm 28.7 // CT: 31.1 ( 2.4) BARN AK GC: baz 303.1 Tp 213.1 Tm 33.1 // CT: 35.4 ( 2.4) BRLK AK GC: baz 300.1 Tp 210.1 Tm 30.1 // CT: 35.4 ( 2.4) BRLK AK GC: baz 300.1 Tp 210.1 Tm 30.1 // CT: 32.3 ( 2.2) TRF AK GC: baz 301.5 Tp 205.5 Tm 25.5 // CT: 23.3 ( 2.2) TRF AK GC: baz 301.5 Tp 214.9 Tm 31.9 // CT: 33.6 ( 2.1) PNL AK GC: baz 304.9 Tp 214.9 Tm 34.9 // CT: 36.9 ( 2.0) BESE AK GC: baz 303.4 Tp 214.9 Tm 34.9 // CT: 35.4 ( 1.9) BPAW AK GC: baz 303.4 Tp 214.4 Tm 33.4 // CT: 35.4 ( 1.9) BPAW AK GC: baz 301.4 Tp 211.4 Tm 33.4 // CT: 35.4 ( 1.9) BPAW AK GC: baz 301.4 Tp 211.4 Tm 31.4 // CT: 35.5 ( 1.1) SMY AT GC: baz 301.4 Tp 211.4 Tm 31.4 // CT: 35.5 ( 1.0) BGLC AK GC: baz 302.4 Tp 212.6 Tm 32.6 // CT: 33.5 ( 0.9) ISLE AK GC: baz 302.4 Tp 212.4 Tm 32.4 // CT: 33.5 ( 0.9) ISLE AK GC: baz 302.6 Tp 212.6 Tm 32.6 // CT: 33.2 ( 0.9) HOM AK GC: baz 293.6 Tp 203.6 Tm 23.6 // CT: 33.5 ( 0.9) ISLE AK GC: baz 293.6 Tp 203.6 Tm 23.6 // CT: 33.2 ( 0.7) HL: 14.3 ( -9.3) CCB AK GC: baz 209.0 Tp 210.9 Tm 30.9 // CT: 24.3 ( 0.7) HL: 14.3 ( -9.3) CCB AK GC: baz 300.9 Tp 210.9 Tm 30.9 // CT: 26.5 ( 0.5) SUCK AK GC: baz 300.9 Tp 210.9 Tm 30.9 // CT: 31.3 ( 0.4) GHO AK GC: baz 300.9 Tp 210.9 Tm 30.8 // CT: 30.5 ( -0.3)	BAL	AK	GC:	baz	302.4 Tp	212.4 Tm	32.4 // CT:	35.0 (	2.6)		
PSO9 PS GC: baz 299.8 Tp 209.8 Tm 29.8 // CT: 32.3 ( 2.5) KAI AK GC: baz 300.3 Tp 210.3 Tm 30.3 // CT: 32.8 ( 2.5) KHIT AK GC: baz 301.5 Tp 211.5 Tm 31.5 // CT: 33.9 ( 2.5) INK CN GC: baz 312.3 Tp 222.3 Tm 42.3 // CT: 224.8 ( 2.5) VMT PS GC: baz 298.7 Tp 208.7 Tm 28.7 // CT: 31.1 ( 2.4) BARN AK GC: baz 303.1 Tp 213.1 Tm 33.1 // CT: 35.4 ( 2.4) BARN AK GC: baz 300.1 Tp 210.1 Tm 30.1 // CT: 32.3 ( 2.2) TRF AK GC: baz 300.1 Tp 210.1 Tm 30.1 // CT: 32.3 ( 2.2) TRF AK GC: baz 301.5 Tp 211.5 Tm 31.5 // CT: 33.6 ( 2.1) PNL AK GC: baz 301.5 Tp 211.5 Tm 31.5 // CT: 36.9 ( 2.0) BESE AK GC: baz 30.9 Tp 219.0 Tm 39.0 // CT: 40.9 ( 2.0) BESE AK GC: baz 303.4 Tp 213.4 Tm 33.4 // CT: 35.4 ( 1.9) BPAW AK GC: baz 303.4 Tp 213.4 Tm 33.4 // CT: 35.4 ( 1.9) BPAW AK GC: baz 301.4 Tp 213.4 Tm 33.4 // CT: 35.4 ( 1.9) BPAW AK GC: baz 301.4 Tp 211.4 Tm 31.4 // CT: 32.5 ( 1.1) SMY AT GC: baz 301.4 Tp 211.4 Tm 31.4 // CT: 32.5 ( 1.1) SMY AT GC: baz 302.4 Tp 212.4 Tm 32.4 // CT: 33.5 ( 0.9) ISLE AK GC: baz 302.4 Tp 212.4 Tm 32.6 // CT: 33.5 ( 0.9) ISLE AK GC: baz 302.4 Tp 212.4 Tm 32.4 // CT: 33.2 ( 0.9) HOM AK GC: baz 302.4 Tp 212.4 Tm 32.4 // CT: 33.2 ( 0.9) HOM AK GC: baz 302.4 Tp 212.4 Tm 32.4 // CT: 33.2 ( 0.9) HOM AK GC: baz 302.4 Tp 212.4 Tm 32.4 // CT: 33.5 ( 0.9) ISLE AK GC: baz 302.4 Tp 212.4 Tm 32.4 // CT: 33.2 ( 0.9) HOM AK GC: baz 302.4 Tp 212.4 Tm 32.4 // CT: 33.5 ( 0.9) ISLE AK GC: baz 302.4 Tp 212.4 Tm 32.4 // CT: 33.5 ( 0.9) HOM AK GC: baz 300.9 Tp 210.9 Tm 30.9 // CT: 42.3 ( 0.7) HL: 14.3 ( -9.3) CCB AK GC: baz 300.9 Tp 210.9 Tm 30.9 // CT: 31.3 ( 0.4) GHO AK GC: baz 300.9 Tp 210.9 Tm 30.9 // CT: 30.5 ( -0.4) NICH AK GC: baz 300.8 Tp 210.8 Tm 30.8 // CT: 30.5 ( -0.4)	RC01	AK	GC:	baz	295.6 Tp	205.6 Tm	25.6 // CT:	28.1 (	2.5)		
KAI AK GC: baz 300.3 Tp 210.3 Tm 30.3 // CT: 32.8 ( 2.5) KHIT AK GC: baz 301.5 Tp 211.5 Tm 31.5 // CT: 33.9 ( 2.5) INK CN GC: baz 312.3 Tp 222.3 Tm 42.3 // CT: 224.8 ( 2.5) VMT PS GC: baz 298.7 Tp 208.7 Tm 28.7 // CT: 31.1 ( 2.4) BARN AK GC: baz 303.1 Tp 213.1 Tm 33.1 // CT: 35.4 ( 2.4) BRLK AK GC: baz 300.1 Tp 210.1 Tm 30.1 // CT: 32.3 ( 2.2) TRF AK GC: baz 301.5 Tp 211.5 Tm 31.5 // CT: 33.6 ( 2.1) PNL AK GC: baz 301.5 Tp 211.5 Tm 31.5 // CT: 33.6 ( 2.1) PNL AK GC: baz 304.9 Tp 214.9 Tm 34.9 // CT: 36.9 ( 2.0) BESE AK GC: baz 309.0 Tp 210.0 Tm 39.0 // CT: 40.9 ( 2.0) TABL AK GC: baz 301.4 Tp 213.4 Tm 33.4 // CT: 35.4 ( 1.9) BPAW AK GC: baz 301.4 Tp 213.4 Tm 33.4 // CT: 32.5 ( 1.1) SMY AT GC: baz 301.4 Tp 211.4 Tm 31.4 // CT: 32.5 ( 1.1) SMY AT GC: baz 301.4 Tp 211.4 Tm 31.4 // CT: 33.5 ( 0.9) ISLE AK GC: baz 302.6 Tp 212.6 Tm 32.6 // CT: 43.5 ( 0.9) ISLE AK GC: baz 302.4 Tp 212.4 Tm 32.4 // CT: 33.5 ( 0.9) ISLE AK GC: baz 302.4 Tp 212.4 Tm 32.4 // CT: 33.5 ( 0.9) ISLE AK GC: baz 302.6 Tp 212.6 Tm 32.6 // CT: 43.5 ( 0.9) ISLE AK GC: baz 302.6 Tp 212.6 Tm 32.6 // CT: 43.5 ( 0.9) ISLE AK GC: baz 302.6 Tp 212.6 Tm 32.6 // CT: 43.5 ( 0.9) ISLE AK GC: baz 302.6 Tp 212.6 Tm 32.6 // CT: 43.5 ( 0.9) ISLE AK GC: baz 302.6 Tp 212.6 Tm 32.6 // CT: 43.5 ( 0.9) ISLE AK GC: baz 302.6 Tp 212.6 Tm 32.6 // CT: 43.5 ( 0.9) ISLE AK GC: baz 302.6 Tp 212.6 Tm 32.6 // CT: 43.5 ( 0.9) ISLE AK GC: baz 302.6 Tp 212.6 Tm 32.6 // CT: 43.5 ( 0.9) ISLE AK GC: baz 302.6 Tp 212.6 Tm 32.6 // CT: 43.5 ( 0.9) ISLE AK GC: baz 302.6 Tp 212.6 Tm 32.6 // CT: 43.5 ( 0.9) ISLE AK GC: baz 302.6 Tp 213.6 Tm 23.6 // CT: 43.5 ( 0.9) HOM AK GC: baz 300.9 Tp 210.9 Tm 30.9 // CT: 31.3 ( 0.4) GHO AK GC: baz 300.9 Tp 210.9 Tm 30.9 // CT: 31.3 ( 0.4) GHO AK GC: baz 300.9 Tp 210.9 Tm 30.8 // CT: 30.5 ( -0.3)	PS09	PS	GC:	baz	299.8 Tp	209.8 Tm	29.8 // CT:	32.3 (	2.5)		
KHIT AK GC: baz       301.5 Tp       211.5 Tm       31.5 // CT:       33.9 (       2.5)         INK CN GC: baz       312.3 Tp       222.3 Tm       42.3 // CT:       224.8 (       2.5)         VMT PS CC: baz       298.7 Tp       208.7 Tm       28.7 // CT:       31.1 (       2.4)         BARN AK GC: baz       303.1 Tp       213.1 Tm       33.1 // CT:       35.4 (       2.4)         BRLK AK GC: baz       300.1 Tp       210.1 Tm       30.1 // CT:       32.3 (       2.2)         TRF AK GC: baz       301.5 Tp       210.1 Tm       30.1 // CT:       33.6 (       2.1)         SCRK AK GC: baz       304.9 Tp       214.9 Tm       31.5 // CT:       33.6 (       2.1)         PNL AK GC: baz       304.9 Tp       214.9 Tm       34.9 // CT:       36.9 (       2.0)         BESE AK GC: baz       309.0 Tp       219.0 Tm       39.0 // CT:       36.9 (       2.0)         TABL AK GC: baz       303.4 Tp       213.4 Tm       33.4 // CT:       35.4 (       1.9)         BPAW AK GC: baz       301.4 Tp       211.4 Tm       31.4 // CT:       32.5 (       1.1)         VRDI AK GC: baz       301.4 Tp       211.4 Tm       31.4 // CT:       30.4 (       -1.0)         BAGL AK GC: b	KAI	AK	GC:	baz	300.3 Tp	210.3 Tm	30.3 // CT:	32.8 (	2.5)		
INK CN GC: baz 312.3 Tp 222.3 Tm 42.3 // CT: 224.8 ( 2.5) VMT PS GC: baz 298.7 Tp 208.7 Tm 28.7 // CT: 31.1 ( 2.4) BARN AK GC: baz 303.1 Tp 213.1 Tm 33.1 // CT: 35.4 ( 2.4) BRLK AK GC: baz 294.3 Tp 204.3 Tm 24.3 // CT: 22.0 ( -2.3) RAG AK GC: baz 300.1 Tp 210.1 Tm 30.1 // CT: 32.3 ( 2.2) TRF AK GC: baz 295.5 Tp 205.5 Tm 25.5 // CT: 23.3 ( -2.1) SCRK AK GC: baz 301.5 Tp 211.5 Tm 31.5 // CT: 33.6 ( 2.1) PNL AK GC: baz 304.9 Tp 214.9 Tm 34.9 // CT: 36.9 ( 2.0) BESE AK GC: baz 303.4 Tp 219.0 Tm 39.0 // CT: 40.9 ( 2.0) TABL AK GC: baz 303.4 Tp 213.4 Tm 33.4 // CT: 35.4 ( 1.9) BPAW AK GC: baz 294.9 Tp 204.9 Tm 24.9 // CT: 26.6 ( 1.7) MSW AV GC: baz 301.4 Tp 211.4 Tm 31.4 // CT: 32.5 ( 1.1) SMY AT GC: baz 301.4 Tp 211.4 Tm 31.4 // CT: 32.5 ( 1.1) SMY AT GC: baz 302.6 Tp 212.6 Tm 32.6 // CT: 175.6 ( 1.0) BGLC AK GC: baz 302.4 Tp 212.4 Tm 32.4 // CT: 33.5 ( 0.9) ISLE AK GC: baz 302.4 Tp 212.4 Tm 32.4 // CT: 33.5 ( 0.9) ISLE AK GC: baz 302.4 Tp 212.6 Tm 32.6 // CT: 33.5 ( 0.9) ISLE AK GC: baz 302.4 Tp 212.4 Tm 32.4 // CT: 33.5 ( 0.9) ISLE AK GC: baz 302.4 Tp 212.6 Tm 32.6 // CT: 13.5 ( 0.9) ISLE AK GC: baz 302.4 Tp 212.4 Tm 32.4 // CT: 33.5 ( 0.9) ISLE AK GC: baz 302.4 Tp 212.4 Tm 32.4 // CT: 33.5 ( 0.9) ISLE AK GC: baz 302.6 Tp 212.6 Tm 32.6 // CT: 24.3 ( 0.7) HL: 14.3 ( -9.3) CCB AK GC: baz 298.0 Tp 208.0 Tm 28.0 // CT: 28.5 ( 0.5) SUCK AK GC: baz 300.9 Tp 210.9 Tm 30.9 // CT: 31.3 ( 0.4) GHD AK GC: baz 300.9 Tp 210.9 Tm 30.9 // CT: 31.3 ( 0.4) NICH AK GC: baz 300.8 Tp 210.8 Tm 30.8 // CT: 30.5 ( -0.3)	KHIT	AK	GC:	baz	301.5 Tp	211.5 Tm	31.5 // CT:	33.9 (	2.5)		
<pre>VMT PS GC: baz 298.7 Tp 208.7 Tm 28.7 // CT: 31.1 ( 2.4) BARN AK GC: baz 303.1 Tp 213.1 Tm 33.1 // CT: 35.4 ( 2.4) BRLK AK GC: baz 294.3 Tp 204.3 Tm 24.3 // CT: 22.0 ( -2.3) RAG AK GC: baz 300.1 Tp 210.1 Tm 30.1 // CT: 32.3 ( 2.2) TRF AK GC: baz 295.5 Tp 205.5 Tm 25.5 // CT: 23.3 ( -2.1) SCRK AK GC: baz 301.5 Tp 211.5 Tm 31.5 // CT: 33.6 ( 2.1) PNL AK GC: baz 304.9 Tp 214.9 Tm 34.9 // CT: 36.9 ( 2.0) BESE AK GC: baz 309.0 Tp 219.0 Tm 39.0 // CT: 40.9 ( 2.0) TABL AK GC: baz 303.4 Tp 213.4 Tm 33.4 // CT: 35.4 ( 1.9) BPAW AK GC: baz 294.9 Tp 204.9 Tm 24.9 // CT: 26.6 ( 1.7) MSW AV GC: baz 279.9 Tp 189.9 Tm 9.9 // CT: 191.0 ( 1.1) VRDI AK GC: baz 301.4 Tp 211.4 Tm 31.4 // CT: 32.5 ( 1.1) SMY AT GC: baz 301.4 Tp 211.4 Tm 354.6 // CT: 175.6 ( 1.0) BGLC AK GC: baz 302.4 Tp 212.6 Tm 32.6 // CT: 33.2 ( 0.9) HOM AK GC: baz 202.4 Tp 212.6 Tm 32.4 // CT: 33.2 ( 0.9) HOM AK GC: baz 203.6 Tp 203.6 Tm 23.6 // CT: 24.3 ( 0.7) HL: 14.3 ( -9.3) CCB AK GC: baz 209.7 P 210.9 Tm 30.9 // CT: 28.5 ( 0.5) SUCK AK GC: baz 300.9 Tp 210.9 Tm 30.9 // CT: 28.5 ( 0.5) SUCK AK GC: baz 30.8 Tp 210.9 Tm 30.9 // CT: 26.0 ( -0.4) NICH AK GC: baz 30.8 Tp 210.8 Tm 30.8 // CT: 30.5 ( -0.3)</pre>	INK	CN	GC:	baz	312.3 Tp	222.3 Tm	42.3 // CT:	224.8 (	2.5)		
BARN AK GC: baz       303.1 Tp       213.1 Tm       33.1 // CT:       35.4 (       2.4)         BRLK AK GC: baz       294.3 Tp       204.3 Tm       24.3 // CT:       22.0 (       -2.3)         RAG AK GC: baz       300.1 Tp       210.1 Tm       30.1 // CT:       32.3 (       2.2)         TRF AK GC: baz       295.5 Tp       205.5 Tm       25.5 // CT:       23.3 (       -2.1)         SCRK AK GC: baz       301.5 Tp       211.5 Tm       31.5 // CT:       33.6 (       2.1)         PNL AK GC: baz       309.0 Tp       219.0 Tm       39.0 // CT:       40.9 (       2.0)         BESE AK GC: baz       303.4 Tp       213.4 Tm       33.4 // CT:       35.4 (       1.9)         BPAW AK GC: baz       294.9 Tp       204.9 Tm       24.9 // CT:       26.6 (       1.7)         MSW AV GC: baz       291.9 Tp       189.9 Tm       9.9 // CT:       191.0 (       1.1)         VRDI AK GC: baz       301.4 Tp       211.4 Tm       31.4 // CT:       32.5 (       1.1)         SMY AT GC: baz       301.4 Tp       211.4 Tm       31.4 // CT:       30.4 (       -1.0)         BGLC AK GC: baz       301.4 Tp       211.4 Tm       31.4 // CT:       30.4 (       -1.0)         BAGL AK GC:	VMT	PS	GC:	baz	298.7 Tp	208.7 Tm	28.7 // CT:	31.1 (	2.4)		
BRLK AK GC: baz       294.3 Tp       204.3 Tm       24.3 // CT:       22.0 ( -2.3)         RAG AK GC: baz       300.1 Tp       210.1 Tm       30.1 // CT:       32.3 ( 2.2)         TRF AK GC: baz       295.5 Tp       205.5 Tm       25.5 // CT:       23.3 ( -2.1)         SCRK AK GC: baz       301.5 Tp       211.5 Tm       31.5 // CT:       33.6 ( 2.1)         PNL AK GC: baz       304.9 Tp       214.9 Tm       34.9 // CT:       36.9 ( 2.0)         BESE AK GC: baz       303.4 Tp       213.4 Tm       33.4 // CT:       35.4 ( 1.9)         BPAW AK GC: baz       294.9 Tp       204.9 Tm       24.9 // CT:       26.6 ( 1.7)         MSW AV GC: baz       201.4 Tp       11.4 Tm       31.4 // CT:       32.5 ( 1.1)         SMY AT GC: baz       301.4 Tp       211.4 Tm       31.4 // CT:       32.5 ( 1.1)         SMY AT GC: baz       301.4 Tp       211.4 Tm       31.4 // CT:       30.4 ( -1.0)         BGLC AK GC: baz       302.6 Tp       212.6 Tm       32.6 // CT:       33.5 ( 0.9)         ISLE AK GC: baz       302.4 Tp       212.4 Tm       32.4 // CT:       33.2 ( 0.9)         HOM AK GC: baz       302.6 Tp       203.6 Tm       23.6 // CT:       24.3 ( 0.7) HL:       14.3 ( -9.3)         CCB AK GC: b	BARN	AK	GC:	baz	303.1 Tp	213.1 Tm	33.1 // CT:	35.4 (	2.4)		
RAG AK GC: baz 300.1 Tp 210.1 Tm 30.1 // CT: 32.3 ( 2.2) TRF AK GC: baz 295.5 Tp 205.5 Tm 25.5 // CT: 23.3 ( -2.1) SCRK AK GC: baz 301.5 Tp 211.5 Tm 31.5 // CT: 33.6 ( 2.1) PNL AK GC: baz 304.9 Tp 214.9 Tm 34.9 // CT: 36.9 ( 2.0) BESE AK GC: baz 309.0 Tp 219.0 Tm 39.0 // CT: 40.9 ( 2.0) TABL AK GC: baz 303.4 Tp 213.4 Tm 33.4 // CT: 35.4 ( 1.9) BPAW AK GC: baz 294.9 Tp 204.9 Tm 24.9 // CT: 26.6 ( 1.7) MSW AV GC: baz 301.4 Tp 211.4 Tm 31.4 // CT: 32.5 ( 1.1) SMY AT GC: baz 301.4 Tp 211.4 Tm 31.4 // CT: 32.5 ( 1.1) SMY AT GC: baz 301.4 Tp 211.4 Tm 31.4 // CT: 30.4 ( -1.0) BGLC AK GC: baz 302.6 Tp 212.6 Tm 32.6 // CT: 33.5 ( 0.9) ISLE AK GC: baz 302.4 Tp 212.4 Tm 32.4 // CT: 33.2 ( 0.9) HOM AK GC: baz 298.0 Tp 208.0 Tm 28.0 // CT: 28.5 ( 0.5) SUCK AK GC: baz 30.9 Tp 210.9 Tm 30.9 // CT: 31.3 ( 0.4) GHO AK GC: baz 30.8 Tp 210.8 Tm 30.8 // CT: 30.5 ( -0.3)	BRLK	AK	GC:	baz	294.3 Tp	204.3 Tm	24.3 // CT:	22.0 (	-2.3)		
TRF AK GC: baz       295.5 Tp       205.5 Tm       25.5 // CT:       23.3 ( -2.1)         SCRK AK GC: baz       301.5 Tp       211.5 Tm       31.5 // CT:       33.6 ( 2.1)         PNL AK GC: baz       304.9 Tp       214.9 Tm       34.9 // CT:       36.9 ( 2.0)         BESE AK GC: baz       309.0 Tp       219.0 Tm       39.0 // CT:       40.9 ( 2.0)         TABL AK GC: baz       303.4 Tp       213.4 Tm       33.4 // CT:       35.4 ( 1.9)         BPAW AK GC: baz       294.9 Tp       204.9 Tm       24.9 // CT:       26.6 ( 1.7)         MSW AV GC: baz       279.9 Tp       189.9 Tm       9.9 // CT:       191.0 ( 1.1)         VRDI AK GC: baz       301.4 Tp       211.4 Tm       31.4 // CT:       32.5 ( 1.1)         SMY AT GC: baz       301.4 Tp       211.4 Tm       31.4 // CT:       30.4 ( -1.0)         BGLC AK GC: baz       301.4 Tp       211.4 Tm       31.4 // CT:       30.4 ( -1.0)         BAGL AK GC: baz       302.6 Tp       212.6 Tm       32.6 // CT:       33.5 ( 0.9)         ISLE AK GC: baz       302.4 Tp       212.4 Tm       32.4 // CT:       33.2 ( 0.9)         HOM AK GC: baz       293.6 Tp       203.6 Tm       23.6 // CT:       24.3 ( 0.7) HL:       14.3 ( -9.3)         CCB AK GC	RAG	AK	GC:	baz	300.1 Tp	210.1 Tm	30.1 // CT:	32.3 (	2.2)		
SCRK AK GC: baz       301.5 Tp       211.5 Tm       31.5 // CT:       33.6 (       2.1)         PNL AK GC: baz       304.9 Tp       214.9 Tm       34.9 // CT:       36.9 (       2.0)         BESE AK GC: baz       309.0 Tp       219.0 Tm       39.0 // CT:       40.9 (       2.0)         TABL AK GC: baz       303.4 Tp       213.4 Tm       33.4 // CT:       35.4 (       1.9)         BPAW AK GC: baz       294.9 Tp       204.9 Tm       24.9 // CT:       26.6 (       1.7)         MSW AV GC: baz       279.9 Tp       189.9 Tm       9.9 // CT:       191.0 (       1.1)         VRDI AK GC: baz       301.4 Tp       211.4 Tm       31.4 // CT:       32.5 (       1.1)         SMY AT GC: baz       264.6 Tp       174.6 Tm       354.6 // CT:       175.6 (       1.0)         BGLC AK GC: baz       301.4 Tp       211.4 Tm       31.4 // CT:       30.4 (       -1.0)         BAGL AK GC: baz       302.6 Tp       212.6 Tm       32.6 // CT:       33.5 (       0.9)         ISLE AK GC: baz       302.4 Tp       212.4 Tm       32.4 // CT:       33.2 (       0.9)         HOM AK GC: baz       298.0 Tp       208.0 Tm       28.0 // CT:       28.5 (       0.5)         SUCK AK GC:	TRF	AK	GC:	baz	295.5 Tp	205.5 Tm	25.5 // CT:	23.3 (	-2.1)		
PNL AK GC: baz 304.9 Tp 214.9 Tm 34.9 // CT: 36.9 ( 2.0) BESE AK GC: baz 309.0 Tp 219.0 Tm 39.0 // CT: 40.9 ( 2.0) TABL AK GC: baz 303.4 Tp 213.4 Tm 33.4 // CT: 35.4 ( 1.9) BPAW AK GC: baz 294.9 Tp 204.9 Tm 24.9 // CT: 26.6 ( 1.7) MSW AV GC: baz 279.9 Tp 189.9 Tm 9.9 // CT: 191.0 ( 1.1) VRDI AK GC: baz 301.4 Tp 211.4 Tm 31.4 // CT: 32.5 ( 1.1) SMY AT GC: baz 264.6 Tp 174.6 Tm 354.6 // CT: 175.6 ( 1.0) BGLC AK GC: baz 301.4 Tp 211.4 Tm 31.4 // CT: 30.4 ( -1.0) BAGL AK GC: baz 302.6 Tp 212.6 Tm 32.6 // CT: 33.5 ( 0.9) ISLE AK GC: baz 302.4 Tp 212.4 Tm 32.4 // CT: 33.2 ( 0.9) HOM AK GC: baz 293.6 Tp 203.6 Tm 23.6 // CT: 24.3 ( 0.7) HL: 14.3 ( -9.3) CCB AK GC: baz 300.9 Tp 210.9 Tm 30.9 // CT: 31.3 ( 0.4) GHO AK GC: baz 296.5 Tp 206.5 Tm 26.5 // CT: 26.0 ( -0.4) NICH AK GC: baz 300.8 Tp 210.8 Tm 30.8 // CT: 30.5 ( -0.3)	SCRK	AK	GC:	baz	301.5 Tp	211.5 Tm	31.5 // CT:	33.6 (	2.1)		
BESE AK GC: baz 309.0 Tp 219.0 Tm 39.0 // CT: 40.9 ( 2.0) TABL AK GC: baz 303.4 Tp 213.4 Tm 33.4 // CT: 35.4 ( 1.9) BPAW AK GC: baz 294.9 Tp 204.9 Tm 24.9 // CT: 26.6 ( 1.7) MSW AV GC: baz 279.9 Tp 189.9 Tm 9.9 // CT: 191.0 ( 1.1) VRDI AK GC: baz 301.4 Tp 211.4 Tm 31.4 // CT: 32.5 ( 1.1) SMY AT GC: baz 264.6 Tp 174.6 Tm 354.6 // CT: 175.6 ( 1.0) BGLC AK GC: baz 301.4 Tp 211.4 Tm 31.4 // CT: 30.4 ( -1.0) BAGL AK GC: baz 302.6 Tp 212.6 Tm 32.6 // CT: 33.5 ( 0.9) ISLE AK GC: baz 302.4 Tp 212.4 Tm 32.4 // CT: 33.2 ( 0.9) HOM AK GC: baz 293.6 Tp 203.6 Tm 23.6 // CT: 24.3 ( 0.7) HL: 14.3 ( -9.3) CCB AK GC: baz 300.9 Tp 210.9 Tm 30.9 // CT: 31.3 ( 0.4) GHO AK GC: baz 300.8 Tp 210.8 Tm 30.8 // CT: 30.5 ( -0.3)	PNL	AK	GC:	baz	304.9 Tp	214.9 Tm	34.9 // CT:	36.9 (	2.0)		
TABL AK GC: baz       303.4 Tp       213.4 Tm       33.4 // CT:       35.4 (       1.9)         BPAW AK GC: baz       294.9 Tp       204.9 Tm       24.9 // CT:       26.6 (       1.7)         MSW AV GC: baz       279.9 Tp       189.9 Tm       9.9 // CT:       191.0 (       1.1)         VRDI AK GC: baz       301.4 Tp       211.4 Tm       31.4 // CT:       32.5 (       1.1)         SMY AT GC: baz       264.6 Tp       174.6 Tm       354.6 // CT:       175.6 (       1.0)         BGLC AK GC: baz       301.4 Tp       211.4 Tm       31.4 // CT:       30.4 (       -1.0)         BAGL AK GC: baz       302.6 Tp       212.6 Tm       32.6 // CT:       33.5 (       0.9)         ISLE AK GC: baz       302.4 Tp       212.4 Tm       32.4 // CT:       33.2 (       0.9)         HOM AK GC: baz       293.6 Tp       203.6 Tm       23.6 // CT:       24.3 (       0.7) HL:       14.3 (       -9.3)         CCB AK GC: baz       298.0 Tp       208.0 Tm       28.0 // CT:       28.5 (       0.5)       5         SUCK AK GC: baz       300.9 Tp       210.9 Tm       30.9 // CT:       31.3 (       0.4)         GHO AK GC: baz       296.5 Tp       206.5 Tm       26.5 // CT:       26.0 ( <td>BESE</td> <td>AK</td> <td>GC:</td> <td>baz</td> <td>309.0 Tp</td> <td>219.0 Tm</td> <td>39.0 // CT:</td> <td>40.9 (</td> <td>2.0)</td> <td></td> <td></td>	BESE	AK	GC:	baz	309.0 Tp	219.0 Tm	39.0 // CT:	40.9 (	2.0)		
BPAW AK GC: baz 294.9 Tp 204.9 Tm 24.9 // CT: 26.6 ( 1.7) MSW AV GC: baz 279.9 Tp 189.9 Tm 9.9 // CT: 191.0 ( 1.1) VRDI AK GC: baz 301.4 Tp 211.4 Tm 31.4 // CT: 32.5 ( 1.1) SMY AT GC: baz 264.6 Tp 174.6 Tm 354.6 // CT: 175.6 ( 1.0) BGLC AK GC: baz 301.4 Tp 211.4 Tm 31.4 // CT: 30.4 ( -1.0) BAGL AK GC: baz 302.6 Tp 212.6 Tm 32.6 // CT: 33.5 ( 0.9) ISLE AK GC: baz 302.4 Tp 212.4 Tm 32.4 // CT: 33.2 ( 0.9) HOM AK GC: baz 293.6 Tp 203.6 Tm 23.6 // CT: 24.3 ( 0.7) HL: 14.3 ( -9.3) CCB AK GC: baz 300.9 Tp 210.9 Tm 30.9 // CT: 31.3 ( 0.4) GHO AK GC: baz 296.5 Tp 206.5 Tm 26.5 // CT: 26.0 ( -0.4) NICH AK GC: baz 300.8 Tp 210.8 Tm 30.8 // CT: 30.5 ( -0.3)	TABL	AK	GC:	baz	303.4 Tp	213.4 Tm	33.4 // CT:	35.4 (	1.9)		
MSW AV GC: baz 279.9 Tp 189.9 Tm 9.9 // CT: 191.0 ( 1.1) VRDI AK GC: baz 301.4 Tp 211.4 Tm 31.4 // CT: 32.5 ( 1.1) SMY AT GC: baz 264.6 Tp 174.6 Tm 354.6 // CT: 175.6 ( 1.0) BGLC AK GC: baz 301.4 Tp 211.4 Tm 31.4 // CT: 30.4 ( -1.0) BAGL AK GC: baz 302.6 Tp 212.6 Tm 32.6 // CT: 33.5 ( 0.9) ISLE AK GC: baz 302.4 Tp 212.4 Tm 32.4 // CT: 33.2 ( 0.9) HOM AK GC: baz 293.6 Tp 203.6 Tm 23.6 // CT: 24.3 ( 0.7) HL: 14.3 ( -9.3) CCB AK GC: baz 300.9 Tp 210.9 Tm 30.9 // CT: 31.3 ( 0.4) GHO AK GC: baz 296.5 Tp 206.5 Tm 26.5 // CT: 26.0 ( -0.4) NICH AK GC: baz 300.8 Tp 210.8 Tm 30.8 // CT: 30.5 ( -0.3)	BPAW	AK	GC:	baz	294.9 Tp	204.9 Tm	24.9 // CT:	26.6 (	1.7)		
VRDI AK GC: baz 301.4 Tp 211.4 Tm 31.4 // CT: 32.5 ( 1.1) SMY AT GC: baz 264.6 Tp 174.6 Tm 354.6 // CT: 175.6 ( 1.0) BGLC AK GC: baz 301.4 Tp 211.4 Tm 31.4 // CT: 30.4 ( -1.0) BAGL AK GC: baz 302.6 Tp 212.6 Tm 32.6 // CT: 33.5 ( 0.9) ISLE AK GC: baz 302.4 Tp 212.4 Tm 32.4 // CT: 33.2 ( 0.9) HOM AK GC: baz 293.6 Tp 203.6 Tm 23.6 // CT: 24.3 ( 0.7) HL: 14.3 ( -9.3) CCB AK GC: baz 298.0 Tp 208.0 Tm 28.0 // CT: 28.5 ( 0.5) SUCK AK GC: baz 300.9 Tp 210.9 Tm 30.9 // CT: 31.3 ( 0.4) GHO AK GC: baz 296.5 Tp 206.5 Tm 26.5 // CT: 26.0 ( -0.4) NICH AK GC: baz 300.8 Tp 210.8 Tm 30.8 // CT: 30.5 ( -0.3)	MSW	AV	GC:	baz	279.9 Tp	189.9 Tm	9.9 // CT:	191.0 (	1.1)		
SMY AT GC: baz       264.6 Tp       174.6 Tm       354.6 // CT:       175.6 (       1.0)         BGLC AK GC: baz       301.4 Tp       211.4 Tm       31.4 // CT:       30.4 (       -1.0)         BAGL AK GC: baz       302.6 Tp       212.6 Tm       32.6 // CT:       33.5 (       0.9)         ISLE AK GC: baz       302.4 Tp       212.4 Tm       32.4 // CT:       33.2 (       0.9)         HOM AK GC: baz       293.6 Tp       203.6 Tm       23.6 // CT:       24.3 (       0.7) HL:       14.3 (       -9.3)         CCB AK GC: baz       298.0 Tp       208.0 Tm       28.0 // CT:       28.5 (       0.5)         SUCK AK GC: baz       300.9 Tp       210.9 Tm       30.9 // CT:       31.3 (       0.4)         GHO AK GC: baz       296.5 Tp       206.5 Tm       26.5 // CT:       26.0 (       -0.4)         NICH AK GC: baz       300.8 Tp       210.8 Tm       30.8 // CT:       30.5 (       -0.3)	VRDI	AK	GC:	baz	301.4 Tp	211.4 Tm	31.4 // CT:	32.5 (	1.1)		
BGLC AK GC: baz 301.4 Tp 211.4 Tm 31.4 // CT: 30.4 (-1.0) BAGL AK GC: baz 302.6 Tp 212.6 Tm 32.6 // CT: 33.5 (0.9) ISLE AK GC: baz 302.4 Tp 212.4 Tm 32.4 // CT: 33.2 (0.9) HOM AK GC: baz 293.6 Tp 203.6 Tm 23.6 // CT: 24.3 (0.7) HL: 14.3 (-9.3) CCB AK GC: baz 298.0 Tp 208.0 Tm 28.0 // CT: 28.5 (0.5) SUCK AK GC: baz 300.9 Tp 210.9 Tm 30.9 // CT: 31.3 (0.4) GHO AK GC: baz 296.5 Tp 206.5 Tm 26.5 // CT: 26.0 (-0.4) NICH AK GC: baz 300.8 Tp 210.8 Tm 30.8 // CT: 30.5 (-0.3)	SMY	ΑT	GC:	baz	264.6 Tp	174.6 Tm	354.6 // CT:	175.6 (	1.0)		
BAGL AK GC: baz       302.6 Tp       212.6 Tm       32.6 // CT:       33.5 (       0.9)         ISLE AK GC: baz       302.4 Tp       212.4 Tm       32.4 // CT:       33.2 (       0.9)         HOM AK GC: baz       293.6 Tp       203.6 Tm       23.6 // CT:       24.3 (       0.7) HL:       14.3 (       -9.3)         CCB AK GC: baz       298.0 Tp       208.0 Tm       28.0 // CT:       28.5 (       0.5)         SUCK AK GC: baz       300.9 Tp       210.9 Tm       30.9 // CT:       31.3 (       0.4)         GHO AK GC: baz       296.5 Tp       206.5 Tm       26.5 // CT:       26.0 (       -0.4)         NICH AK GC: baz       300.8 Tp       210.8 Tm       30.8 // CT:       30.5 (       -0.3)	BGLC	AK	GC:	baz	301.4 Tp	211.4 Tm	31.4 // CT:	30.4 (	-1.0)		
ISLE AK GC: baz       302.4 Tp       212.4 Tm       32.4 // CT:       33.2 (       0.9)         HOM AK GC: baz       293.6 Tp       203.6 Tm       23.6 // CT:       24.3 (       0.7) HL:       14.3 (       -9.3)         CCB AK GC: baz       298.0 Tp       208.0 Tm       28.0 // CT:       28.5 (       0.5)         SUCK AK GC: baz       300.9 Tp       210.9 Tm       30.9 // CT:       31.3 (       0.4)         GHO AK GC: baz       296.5 Tp       206.5 Tm       26.5 // CT:       26.0 (       -0.4)         NICH AK GC: baz       300.8 Tp       210.8 Tm       30.8 // CT:       30.5 (       -0.3)	BAGL	AK	GC:	baz	302.6 Tp	212.6 Tm	32.6 // CT:	33.5 (	0.9)		
HOM AK GC: baz       293.6 Tp       203.6 Tm       23.6 // CT:       24.3 (       0.7) HL:       14.3 (       -9.3)         CCB AK GC: baz       298.0 Tp       208.0 Tm       28.0 // CT:       28.5 (       0.5)         SUCK AK GC: baz       300.9 Tp       210.9 Tm       30.9 // CT:       31.3 (       0.4)         GHO AK GC: baz       296.5 Tp       206.5 Tm       26.5 // CT:       26.0 (       -0.4)         NICH AK GC: baz       300.8 Tp       210.8 Tm       30.8 // CT:       30.5 (       -0.3)	ISLE	AK	GC:	baz	302.4 Tp	212.4 Tm	32.4 // CT:	33.2 (	0.9)		
CCB AK GC: baz       298.0 Tp       208.0 Tm       28.0 // CT:       28.5 (       0.5)         SUCK AK GC: baz       300.9 Tp       210.9 Tm       30.9 // CT:       31.3 (       0.4)         GHO AK GC: baz       296.5 Tp       206.5 Tm       26.5 // CT:       26.0 (       -0.4)         NICH AK GC: baz       300.8 Tp       210.8 Tm       30.8 // CT:       30.5 (       -0.3)	НОМ	AK	GC:	baz	293.6 Tp	203.6 Tm	23.6 // CT:	24.3 (	0.7) HL:	14.3 ( -	-9.3)
SUCK AK GC: baz       300.9 Tp       210.9 Tm       30.9 // CT:       31.3 (       0.4)         GHO AK GC: baz       296.5 Tp       206.5 Tm       26.5 // CT:       26.0 (       -0.4)         NICH AK GC: baz       300.8 Tp       210.8 Tm       30.8 // CT:       30.5 (       -0.3)	CCB	AK	GC:	baz	298.0 To	208.0 Tm	28.0 // CT:	28.5 (	0.5)	- •	
GHO AK GC: baz 296.5 Tp 206.5 Tm 26.5 // CT: 26.0 (-0.4) NICH AK GC: baz 300.8 Tp 210.8 Tm 30.8 // CT: 30.5 (-0.3)	SUCK	AK	GC:	baz	300.9 To	210.9 Tm	30.9 // CT:	31.3 (	0.4)		
NICH AK GC: baz 300.8 Tp 210.8 Tm 30.8 // CT: 30.5 (-0.3)	GHO	AK	GC:	baz	296.5 Tr	206.5 Tm	26.5 // CT:	26.0 (	-0.4)		
	NICH	AK	GC:	baz	300.8 Tp	210.8 Tm	30.8 // CT:	30.5 (	-0.3)		

Table 9: Comparison between "top 10" measured misalignments for each version of this report. The list changes because the station metadata for the epoch containing 2012-04-11 changes with time, as newly detected corrections are applied retroactively to earlier time periods. (The notation for Version 1 was different from the following versions.)

VERSION	1													
COLD	٨ĸ	(Tn	206	1 Tm	26	1)	58.5	( 32.4)	HI.	43.5 (	17.4)			
0010	DC	(Tm	200	0 Tm	20	0)	21 /	( 21 E)	ш.	61 / (	21 E)			
FSIZ	ro 	(IP	209	.9 11	29	. 9)	51.4	( 31.5)	пь:	01.4 (	31.5)			
PAX	AK	(Tp	209	.9 Tm	29	.9)	3.1	(-26.7)	HL:	21.1 (	-8.7)			
TRF	AK	(Tp	205	.5 Tm	25	.5)	49.3	( 23.9)	HL:	27.3 (	1.9)			
CAST	AK	(Tp	203	.8 Tm	23	.8)	2.1	(-21.7)	HL:	14.1 (	-9.7)			
DC10	ъø	(Tr	200	7 Tm	20	7)	10 7	( 20 0)	шт.	10 7 (	20 0)			
1510	10	(IP	203	. / 11	23		13.1	( 20.0)		43.1 (	20.0)			
MCK	AK	(Tp	206	.8 Tm	26	.8)	45.0	( 18.2)	HL:	35.0 (	8.2)			
MLY	AK	(Tp	205	.3 Tm	25	.3)	7.4	(-17.9)	HL:	7.4 (	-17.9)			
SCM	٨ĸ	(Tn	207	9 Tm	27	9)	44.2	( 16.2)	HI.	44.2 (	16.2)			
DNI	A 12	(Tm	014	0 Tm	24	0)	10 0	( _16 0)	ш.	10 0 (	-16 0)			
FNL	AL	(IP	214	.9 11	34	. 9)	10.9	( -10.0)	пь:	10.9 (	-10.0)			
PS06	PS	(Tp	206	.3 Tm	26	.3)	42.3	( 15.9)	HL:	42.3 (	15.9)			
WRH	AK	(Tp	207	.7 Tm	27	.7)	12.4	( -15.3)	HL:	30.4 (	2.7)			
UNV	AK	(Tp	190	.1 Tm	10	.1) 1	75.0	(-15.2)	HL:	187.0 (	-3.2			
CON	AV	(Tm	204	7 Tm	24	7)	0.0	(-14.0)	ш.	60(	-17 0)			
221	AL	(IP	204	. / 1Ш	24	. / )	9.9	( -14.9)	nL.	0.9 (	-17.9)			
KTH	AK	(Tp	204	.9 Tm	24	.9)	39.6	( 14.7)	HL:	39.6 (	14.7)			
VERSION	2													
MENT	ΑТ	GC	haz	301.5	Tn	211.5	Tm	31.5 //	CT	354.4 (	-37.2)			
VIZIO	ATT	00.	1	204 6	- P T	014 6	T	24 6 //	OT.	0.2 (	20.2)			
YKU2	AI	GC:	baz	304.6	Ip	214.6	Im	34.6 //	CI:	2.3 (	-32.3)			
COLD	AK	GC:	baz	296.1	Тр	206.1	Tm	26.1 //	CT:	58.3 (	32.3)	HL:	43.3 (	17.3)
PS12	PS	GC:	baz	299.9	Tρ	209.9	Tm	29.9 //	CT:	61.4 (	31.5)			
DAY	٨V	cc.	haz	200 0	Tn	200 0	Tm	20 0 //	CT.	31(	-26 7)	нт.	21 1 (	-87)
TAA	AIX	uc.	vaz	233.3	TP m	203.5		23.3 //	or.	3.1 (	20.7)		21.1 (	0.77
IRF	AK	GC:	baz	295.5	Ip	205.5	Im	25.5 //	CI:	49.3 (	23.9)	HL:	27.3 (	1.9)
CAST	AK	GC:	baz	293.8	Тр	203.8	Tm	23.8 //	CT:	2.1 (	-21.7)	HL:	14.1 (	-9.7)
PS10	PS	GC:	baz	299.7	Тр	209.7	Tm	29.7 //	CT:	49.7 (	20.0)			
MCK	AK	GC ·	ha7	296 8	Tr	206 8	Tm	26 8 //	СТ٠	45 0 (	18 2)	нι・	35.0 (	8.2)
MT V	A77	cc.	ba-	200.0	1 P Tr	200.0	т	20.0 //	OT.	7 4 /	_17 0		00.0 (	0.2)
P1L 1	AU	uu:	Daz	200.3	тр	200.3	тщ	20.3 //	01:	1.4 (	-11.9)			
SCM	AK	GC:	baz	297.9	Тр	207.9	Τm	27.9 //	CT:	44.2 (	16.2)			
PNL	AK	GC:	baz	304.9	Tp	214.9	Tm	34.9 //	CT:	18.9 (	-16.0)			
PS06	PS	GC·	baz	296.3	Tn	206.3	Tm	26.3 //	CT·	42.3 (	15.9)			
1 000		aa.	1	200.0	- P	200.0		20.0 //	or.	42.0 (	10.0)			0.7)
WRH	AK	GC:	baz	297.7	Ip	207.7	Im	21.1 //	CI:	12.4 (	-15.3)	HL:	30.4 (	2.7)
UNV	AK	GC:	baz	280.1	Тр	190.1	Tm	10.1 //	CT:	175.0 (	-15.2)	HL:	187.0 (	-3.2)
VERSION	3													
MENT	٨T	cc.	haz	301 5	Tn	211 5	Tm	31 5 //	CT.	354 4 (	-37 2)			
PILLINI		uc.	vaz.	001.0		211.0		51.5 //	or.	334.4 (	51.2)			
YKU2	AI	GC:	baz	304.6	Ip	214.6	Im	34.6 //	CI:	2.3 (	-32.3)			
COLD	AK	GC:	baz	296.1	Тр	206.1	Tm	26.1 //	CT:	58.3 (	32.3)			
PS12	PS	GC:	baz	299.9	Tρ	209.9	Tm	29.9 //	CT:	61.4 (	31.5)			
TDE	٨V	cc.	haz	205 5	Tn	205 5	Tm	25 5 //	CT.	103(	23 0)	нт.	273 (	1 0)
110	AIX	uc.	vaz	230.0	TP m	200.0		20.0 //	or.	43.5 (	23.3)		21.5 (	1.3)
CAST	AK	GC:	baz	293.8	Тр	203.8	Tm	23.8 //	CT:	2.1 (	-21.7)	HL:	14.1 (	-9.7)
PS10	PS	GC:	baz	299.7	Тр	209.7	Tm	29.7 //	CT:	49.7 (	20.0)			
MCK	AK	GC:	baz	296.8	Τ̈́́́́́́́́́́́́́́́́́́́́́́́́́́́́́́́́́́́́	206.8	Tm	26.8 //	CT:	45.0 (	18.2)	HL:	35.0 (	8.2)
MUV	AV	cc.	hog	205 2	-r Tn	205 2	Tm	05 2 //	CT.	7 4 (	-17 0)		、	,
PIL I	AL	60.	Daz	290.0	1p	205.5	-	20.3 //	CI.	7.4 (	-17.9)			
SCM	AK	GC:	baz	297.9	Тр	207.9	Tm	27.9 //	CT:	44.2 (	16.2)			
PS06	PS	GC:	baz	296.3	Тр	206.3	Tm	26.3 //	CT:	42.3 (	15.9)			
WRH	٨ĸ	GC	haz	297.7	Tn	207.7	Tm	27.7 //	CT	12.4 (	-15.3)	HI.	30.4 (	2.7)
TIMA	A 12	cc.	hog	200 1	To	100 1	T	10 1 //	CT.	175 0 (	-15 2)	шт.	197 0 (	-2 2)
UNV	AL	60.	Daz	200.1	1p	190.1	-	10.1 //	CI.	1/5.0 (	-13.2)	пь.	107.0 (	-3.2)
SKN	AK	GC:	baz	294.1	Тр	204.1	Tm	24.1 //	CT:	39.1 (	15.0)			
KTH	AK	GC:	baz	294.9	Тр	204.9	Tm	24.9 //	CT:	39.6 (	14.7)			
					-									
VERSION	14													
VIZIO	1	00.	h	204 6	<b>T</b>	014 6	<b>T</b>	24 6 11	OT .	0 2 (	20.2)			
IKUZ	A I	60.	Daz	304.0	1p	214.0	-	34.0 //	CI.	2.3 (	-32.3)			
COLD	AK	GC:	baz	296.1	Тр	206.1	Tm	26.1 //	CT:	49.3 (	23.3)			
CAST	AK	GC:	baz	293.8	Тр	203.8	Tm	23.8 //	CT:	2.1 (	-21.7)	HL:	14.1 (	-9.7)
MCK	AK	GC:	baz	296.8	Τp	206.8	Tm	26.8 //	CT:	45.0 (	18.2)	HL:	35.0 (	8.2)
MUV	AV	cc.	hog	205 2	-r Tn	205 2	Tm	05 2 //	CT.	7 4 (	-17 0)		、	,
PIL I	AL	60.	baz	290.0	1p	205.5	1111	20.3 //	CI.	1.4 (	-17.9)			
SCM	AK	GC:	baz	291.9	ıp	207.9	ım	21.9 //	CT:	44.2 (	16.2)			
PS06	PS	GC:	baz	296.3	Тр	206.3	Tm	26.3 //	CT:	42.3 (	15.9)			
WRH	AK	GC:	baz	297.7	Тр	207.7	Tm	27.7 //	CT:	12.4 (	-15.3)	HL:	30.4 (	2.7)
TINV	AK	GC	baz	280 1	Tr	190 1	Τm	10.1 //	СТ•	175 0 (	-15.2)	HL	187 0 (	-3.2)
CKN	A 12	00.	1	004 4	- P T	004 1	T	04 1 //	OT.	20 1 (	15 0)		10110 (	0.2/
DVIN	AL	uu:	Jaz	234.1	тр	204.1	тщ	24.1 //		33.1 (	10.0)			
GLM	АK	GC:	baz	298.4	Тр	208.4	Τm	28.4 //	CT:	41.8 (	13.3)			
COLA	IU	GC:	baz	298.0	Тр	208.0	Tm	28.0 //	CT:	40.5 (	12.5)			
PPD	AK	GC:	baz	300.3	Тр	210.3	Tm	30.3 //	CT:	222.7 (	12.5)			
RND	٨٧	cc.	haz	206 8	Tn	206.8	Tm	26.8 //	CT.	38 7 (	11 0)			
RND	AL	60.	Daz	290.0	1p	200.0	-	20.0 //	CI.	30.7 (	11.9)			
KTH	AK	GC:	baz	294.9	Тр	204.9	Tm	24.9 //	CT:	36.6 (	11.7)			
VERSION	5													
YKU2	ΑТ	GC:	baz	304.6	Tp	214.6	Tm	34.6 //	CT:	2.3 (	-32.3)			
QI/M	ΔV	CC.	har.	201 4	т'n	201 1	Tm	24 1 //	Ст.	51 1 /	27 0			
2VIN	AU	uu:	Daz	234.1	тр	204.1	тщ	24.1 //	01:	51.1 (	21.0)			
MDM	AK	GC:	baz	297.6	Тр	207.6	Τm	27.6 //	CT:	51.2 (	23.6)			
COLD	AK	GC:	baz	296.1	Тр	206.1	Tm	26.1 //	CT:	49.3 (	23.3)			
MCK	AK	GC:	baz	296.8	Tp	206.8	Tm	26.8 //	CT:	45.0 (	18.2)	HL:	35.0 (	8.2)
MTV	A.1/	cc.	har	20F 2	- r' Tr	20F 2	 Tr-	25 2 //	<u>ст.</u>	7 / /	=17 0			/
PIL Í	AL	uu:	Jaz	200.3	тр	200.3	тщ	20.3 //		1.4 (	-11.9)			
SCM	АK	GC:	baz	297.9	Тр	207.9	Τm	27.9 //	CT:	44.2 (	16.2)			
WRH	AK	GC:	baz	297.7	Тр	207.7	Tm	27.7 //	CT:	12.4 (	-15.3)	HL:	30.4 (	2.7)
UNV	AK	GC:	baz	280.1	Τp	190.1	Tm	10.1 //	CT:	175.0 (	-15.2)	HL:	187.0 (	-3.2)
CIM	۵v	CC.	har	298 /	Tr	208 /	Tm	28 / //	CT.	41 8 (	13 3)			
GLPI	лі\ тт	00.	ba2	200.4	т	200.4	т	20.7 //	011		10.0)			
CULA	τU	GC:	baz	298.0	ıp	208.0	ım	28.0 //	CT:	40.5 (	12.5)			
PPD	AK	GC:	baz	300.3	Тр	210.3	Tm	30.3 //	CT:	222.7 (	12.5)			
RND	AK	GC:	baz	296.8	Tp	206.8	Tm	26.8 //	CT:	38.7 (	11.9)			
VTU	۸K	CC.	har	29/ 0	Tr	204 0	Tm	24 0 //	ст.	36.6.(	11 7			
hin .	AT.	ao:	baz	201.9	тР Т	201.3	тщ	10 5 //	01: 0m	000.0 (	11.1)			
AKRB	ΑV	GC:	baz	280.5	Тр	190.5	Τm	10.5 //	CT:	202.2 (	11.6)			



Figure 1: Love waves from the April 11, 2012  $M_{\rm w}$  8.6 Sumatra earthquake in Alaska. Horizontal displacement field in Alaska at the origin time of the  $M_{\rm w}$  3.9 Nenana earthquake in central Alaska (*Tape et al.*, 2013). The epicenter of this event is marked by the white dot at the center of the thick gray lines. The grid lines represent increments of 1° in  $\alpha$  and 1° in  $\Delta$  from the Nenana epicenter. Large deviations from the transverse direction are suggestive of station misalignments.





Figure 2: Love waves for all 86 stations used for scientific analysis. (See following page for second half.) Waveforms are plotted as displacement with no relative amplitude scaling. The waveforms are sorted by azimuth, the first number following the station label; the epicentral distance is the second number. Each seismograms has been shifted in time according to its distance from  $\Delta = 99.6^{\circ}$  (Nenana earthquake distance from Sumatra) along its great circle and using a velocity of 4.5 km/s. (They are not aligned by cross correlation, though cross correlation was used to estimate the velocity.) The time shift is labeled as "DT"; for a station on the Sumatra side of  $\Delta = 99.6^{\circ}$ , the time shift is negative.

#### time aligned on 2012–04–11 09:21:57; TABL max –2.72e+07 nm at t = 45.1 s BHT HHT SHT [ nm, --] event 201204110838A (2012–04–11, M8.6, 92.8, 2.2, z = 40.0 km) 43 / 86 seismograms (86 stations) ordered by azimuth, norm --> none

TABL.AK.BHT (24, 105 deg) DT 132.5					$\sim$	$\sim\sim$	$\sim$		$\sim\sim\sim$
PS12.PS.BHT (25, 103 deg) DT 78.0					$\sim$	$\sim \sim$	$\sim$	~~~~	$\sim\sim\sim$
PNL.AK.BHT (25, 106 deg) DT 161.1			$\frown$	$\sim$	$\sim$	$\sim\sim$	$\sim$	~~~~	~~~~
SAMH.AK.BHT (25, 105 deg) DT 140.4			$\frown$	$\sim$	$\sim$	$\sim\sim$	$\sim$	~~~~	~~~~
RKAV.AK.BHT (25, 105 deg) DT 132.3			$\frown$	$\sim$	$\sim$	$\sim\sim$	$\sim$		~~~~
ISLE.AK.BHT (25, 104 deg) DT 118.0			$\frown$	$\sim$	$\sim$	$\sim\sim$	$\sim$		~~~~
BAGL.AK.BHT (25, 104 deg) DT 122.1			$\frown$	$\sim$	$\sim$	$\sim\sim$	$\sim$	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~
KLU.AK.BHT (25, 102 deg) DT 69.8				$\sim$	$\sim$	$\sim\sim$	$\sim$	~~~~	$\sim\sim\sim$
SCM.AK.BHT (25, 102 deg) DT 51.2				$\sim$	$\sim$	$\sim\sim$	$\sim$		$\sim\sim\sim$
PPLA.AK.BHT (25, 99 deg) DT -10.6					$\sim$	$\sim\sim$	~	$\sim$	$\sim\sim\sim$
YKU2.AT.BHT (25, 106 deg) DT 160.5				$\sim$	$\sim$	$\sim\sim$	$\sim$	~~~~	~~~~
MESA.AK.BHT (25, 105 deg) DT 127.7				<u> </u>	$\sim$	$\sim\sim$	$\sim$	~~~~	$\sim\sim\sim$
WRAK.US.BHT (25, 111 deg) DT 283.4			$\frown$	$\sim$	$\sim$	$\sim$	$\sim\sim$	~~~~	~~~~~
BMR.AK.BHT (25, 103 deg) DT 89.9				$\sim$	$\sim$	$\sim\sim$	$\sim$		$\sim\sim\sim$
KHIT.AK.BHT (25, 104 deg) DT 110.7		~		$\sim$	$\sim$	$\sim\sim$	$\sim$	~~~~	$\sim\sim\sim$
SAW.AK.BHT (25, 101 deg) DT 41.1				$\sim$	$\sim$	$\sim\sim$	$\sim$	$\sim$	$\sim\sim\sim$
KULT.AK.BHT (25, 104 deg) DT 118.7				$\sim$	$\sim$	$\sim\sim$	$\sim$	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	$\sim\sim\sim$
GHO.AK.BHT (25, 101 deg) DT 35.3				$\sim$	$\sim$	$\sim\sim$	$\sim$	$\sim\sim$	$\sim\sim\sim$
VMT.PS.BHT (25, 102 deg) DT 70.1				$\sim$	$\sim$	$\sim\sim$	$\sim$	$\sim\sim$	$\sim\sim\sim$
BGLC.AK.BHT (25, 104 deg) DT 114.5				$\sim$ /	$\sim$	$\sim\sim$	$\sim\sim$	$\sim \sim \sim$	$\sim\sim\sim$
NICH.AK.BHT (25, 104 deg) DT 105.8		~~~~		$\sim$ /	$\sim$	$\sim\sim$	$\sim \sim$	$\sim \sim \sim$	$\sim\sim\sim$
PMR.AT.BHT (25, 101 deg) DT 35.1				$\sim$	$\sim$	$\sim$	$\sim$	$\sim\sim$	$\sim\sim\sim$
KNK.AK.BHT (25, 101 deg) DT 44.2				$\checkmark$	$\sim$	$\sim\sim$	$\sim$	$\sim\sim$	$\sim$
RAG.AK.BHT (25, 103 deg) DT 96.4		~~~~		× /	$\sim$	$\sim\sim$	$\sim$	$\sim \sim$	$\sim$
SUCK.AK.BHT (25, 104 deg) DT 109.9		~~~~~		$\checkmark$	$\sim$	$\sim$	$\sim\sim$	$\sim \sim$	$\sim$
SKN.AK.BHT (25, 100 deg) DT 5.5 -				$\searrow$	$\sim$	$\sim$	~~~~	$\sim\sim$	$\sim$
EYAK.AK.BHT (25, 103 deg) DT 83.0		~~~~		<u> </u>	$\sim$	$\sim$	$\sim$	$\sim \sim$	$\sim$
KAI.AK.BHT (26, 104 deg) DT 104.9		~~~~~		$\checkmark$	$\sim$	$\sim$	$\sim\sim$	$\sim\sim$	$\sim$
SSN.AK.BHT (26, 100 deg) DT 19.2				$\checkmark$	$\sim$	$\sim\sim$	$\sim\sim$	$\sim$	$\sim$
CRAG.AT.BHT (26, 111 deg) DT 290.4			$\frown$	Ŭ/		$\sim$	$\sim$	~~~~	~~~~~
RC01.AK.BHT (26, 101 deg) DT 34.0				$\overline{)}$	$\sim$	$\sim$	$\sim\sim$	$\sim$	$\sim$
FIB.AK.BHT (26, 101 deg) DT 28.5				$\checkmark$	$\frown$	$\sim$	$\sim\sim$	$\sim$	$\sim$
SPCP.AV.BHT (26, 100 deg) DT 5.9-				Ň		$\sim$	$\sim$	~~~~	
BBB.CN.BHT (26, 116 deg) DT 399.1						$\sim$	~~~~		
SVW2.AT.BHT (27, 98 deg) DT -31.1-				$\searrow$	$\frown$		~~~	~~~~	
NCT.AV.BHT (27, 100 deg) DT 4.2-				$\searrow$	$\sim$		~~~~		
BRLK.AK.BHT (27, 101 deg) DT 35.1				$\searrow$		$\frown$	$\sim\sim$		~~~~~
HOM.AK.BHT (28, 101 deg) DT 27.5						$\sim$	$\sim$		~~~~~
KDAK.II.SHT (30, 101 deg) DT 34.6						~~~	~~~~	~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
AKRB.AV.BHT (35, 95 deg) DT –119.3				$\checkmark$	$\sim$		~~~~		~~~~~
MSW.AV.BHT (36, 94 deg) DT –128.6				$\sim$	~~~~				
UNV.AK.BHI (36, 94 deg) DT –124.2				$\smile$	~~~			~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
SMY.AI.BHI (37, 83 deg) DT -409.4				$\sim$					
-40	0 –300	-200	-100 0	) 1	100 T <b>ime (s)</b>	200	300	400	500

Second half of Figure 2.



Figure 3: Peak-to-peak horizontal displacements for the Sumatra Love wave, for the 86 stations considered for scientific analysis. Note the outliers NCT.AV and SPCP.AV. Bottom is a zoom-in of the top view.



Figure 4: Angular discrepancies between the maximum horizontal displacement from Sumatra (Love wave) and the great-circle transverse component direction. See also Table 7 and Section 4. (a) Before applying corrections of *Hanna and Long* (2012) (Table 5). (b) After applying corrections of *Hanna and Long* (2012) (Table 5).



Figure 5: Angular discrepancies between the maximum horizontal displacement from Sumatra (Love wave) and the great-circle transverse component direction. No corrections have been applied. See also Table 7 and Section 4. Bottom is a zoom-in of the top view.



Figure 6: Examples of data gaps, shown at four AT stations (OHAK, SDPT, AKUT, CHGN). The gaps are present on all three components. Note that these gaps are different in character from those in Figure 7.



Figure 7: Examples of data gaps, shown at three CN stations (HYT, YUK5, YUK7) for the HHN channel. The gaps are present on all three components. None of these stations have data at IRIS DMC, so it is not (easily) possible to check AEC versions here with any other version. Note that these gaps are different in character from those in Figure 6.



Figure 8: Map of stations with data gaps. (The AEC waveforms for CN stations, HH channel, have gaps as well.)



Figure 9: Raw waveforms for KDAK.II. The borehole station 1-component (BH1) has a problem early in the record that is not visible on the horizontal components of the surface station (SH1, SH2).



Figure 10: Example polarization analysis of the Love wave from Sumatra for one station. This station, MENT.AT, shows a deviation of  $-37.2^{\circ}$  from the great-circle path (Table 7). (Figure from Version 3 report.)



Figure 11: Example polarization analysis of the Love wave from Sumatra for one station. This station, BMR.AK, shows a deviation of  $0.2^{\circ}$  from the great-circle path (Table 7).



Figure 12: History of hang and vang station metadata fields at some example stations: DOT, PNL, DIV, WRH, MDM, SKN. These time histories are needed to determine whether the alignent errors identified by *Hanna and Long* (2012) are relevant at the time of 11-April-2012 (left vertical dashed line). See Section 4.



time aligned on 2012–04–11 09:21:57; YKW1 max 2.54e+07 nm at t = 893.6 s BHT HHT SHT [ nm, --] event 201204110838A (2012–04–11, M8.6, 92.8, 2.2, z = 40.0 km) 23 / 113 seismograms (113 stations) ordered by azimuth, norm --> none

Figure 13: **PAGE 1:** Time-shifted, transverse-component Sumatra waveforms, sorted by azimuth from Sumatra. The processing involved deconvolution of instrument response over the bandpass 0.5–500 s, then detrended and integrated to displacement.



#### time aligned on 2012–04–11 09:21:57; HDA max –2.22e+07 nm at t = 25.9 s BHT HHT SHT [ nm, -–] event 201204110838A (2012–04–11, M8.6, 92.8, 2.2, z = 40.0 km) 23 / 113 seismograms (113 stations) ordered by azimuth, norm ––> none

Figure 14: **PAGE 2:** 



#### time aligned on 2012–04–11 09:21:57; BARN max –2.63e+07 nm at t = 33.3 s BHT HHT SHT [ nm, --] event 201204110838A (2012–04–11, M8.6, 92.8, 2.2, z = 40.0 km) 23 / 113 seismograms (113 stations) ordered by azimuth, norm --> none

Figure 15: **PAGE 3:** 



#### time aligned on 2012–04–11 09:21:57; KHIT max –2.84e+07 nm at t = 36.3 s BHT HHT SHT [ nm, -–] event 201204110838A (2012–04–11, M8.6, 92.8, 2.2, z = 40.0 km) 23 / 113 seismograms (113 stations) ordered by azimuth, norm ––> none

Figure 16: PAGE 4:



time aligned on 2012–04–11 09:21:57; SPCP max –1.89e+07 nm at t = 39.4 s BHT HHT SHT [ nm, --] event 201204110838A (2012–04–11, M8.6, 92.8, 2.2, z = 40.0 km)

Figure 17: **PAGE 5:** 



time aligned on 2012–04–11 09:21:57; YKW1 max –2.17e+07 nm at t = –5.9 s BHT HHT SHT [ nm, -–] event 201204110838A (2012–04–11, M8.6, 92.8, 2.2, z = 40.0 km) 23 / 113 seismograms (113 stations) ordered by azimuth, norm ––> none

Figure 18: **PAGE 1:** Time-shifted Sumatra Love waves, sorted by azimuth from Sumatra. The processing involved deconvolution of instrument response over the bandpass 0.5–500 s, then detrended and integrated to displacement.



time aligned on 2012–04–11 09:21:57; HDA max –2.19e+07 nm at t = 25.9 s BHT HHT SHT [ nm, -–] event 201204110838A (2012–04–11, M8.6, 92.8, 2.2, z = 40.0 km) 23 / 113 seismograms (113 stations) ordered by azimuth, norm ––> none

Figure 19: **PAGE 2:** 



time aligned on 2012–04–11 09:21:57; BARN max –2.62e+07 nm at t = 33.3 s BHT HHT SHT [ nm, --] event 201204110838A (2012–04–11, M8.6, 92.8, 2.2, z = 40.0 km) 23 / 113 seismograms (113 stations) ordered by azimuth, norm --> none

Figure 20: **PAGE 3:** 



time aligned on 2012–04–11 09:21:57; KHIT max –2.82e+07 nm at t = 36.3 s BHT HHT SHT [ nm, ––] event 201204110838A (2012–04–11, M8.6, 92.8, 2.2, z = 40.0 km) 23 / 113 seismograms (113 stations) ordered by azimuth, norm ––> none

Figure 21: PAGE 4:



time aligned on 2012–04–11 09:21:57; SPCP max –1.88e+07 nm at t = 39.4 s BHT HHT SHT [ nm, -–] event 201204110838A (2012-04-11, M8.6, 92.8, 2.2, z = 40.0 km)

Figure 22: PAGE 5: