

NASA Technical Memorandum 83²742
FAA-EE-83-12

Tabulations of Ambient Ozone Data Obtained by GASP Airliners; March 1975 to July 1979

William H. Jasperson
Control Data Corporation
Minneapolis, Minnesota

and

James D. Holdeman
Lewis Research Center
Cleveland, Ohio

January 1984



Page intentionally left blank

PREFACE

This report contains part of the data, either obtained by the Global Air Sampling Program (GASP) or analyzed from existing ozonesonde measurements since the publication of Federal Aviation Administration (FAA) Report Number FAA-EQ-78-03, "Guidelines for Flight Planning During Periods of High Ozone Occurrence," in 1978.

The FAA has published Advisory Circular 120-38, "Transport Category Airplanes Cabin Ozone Concentrations" dated October 10, 1980. (Copies of this advisory circular may be obtained free of charge from the United States Department of Transportation, Publications Section M-443.1, Washington, D.C. 20590.) In this advisory circular, examples are presented for acceptable (but not the only) means for an air carrier to demonstrate compliance with the maximum permissible cabin ozone concentrations established by Section 121.578 of the Federal Aviation Regulations (FAR). In paragraph 6 and Appendix 2 of the advisory circular, it is stated that any ozone data set used to show compliance must have, as a minimum, a resolution on a monthly basis of 2,000 feet in altitude and 5 degrees in latitude.

The data in this report have not been statistically compared with those published in the FAA Report Number FAA-EQ-78-03 to determine whether they are comparable. Hence, use of the data tabulated in this report, to show compliance with Section 121.578 of the FAR, is not acceptable.

Since the data sets have been compiled, however, the FAA would like to disseminate them at this time as information to the scientific community and other interested groups.

John E. Wesler
Director of Environment and Energy
Federal Aviation Administration

TABULATIONS OF AMBIENT OZONE DATA OBTAINED BY GASP AIRLINERS:

MARCH 1975 TO JULY 1979

William H. Jasperson
Control Data Corporation
Minneapolis, Minnesota

and

James D. Holdeman
National Aeronautics and Space Administration
Lewis Research Center
Cleveland, Ohio

SUMMARY

Tabulations are given of GASP ambient ozone mean, standard deviation, median, 84th percentile, and 98th percentile values, by month, flight level, and geographical region. These data are tabulated to conform to the temporal and spatial resolution required by FAA Advisory Circular 120-38 (monthly by 2000 ft in altitude by 5° in latitude) for climatological data used to show compliance with cabin ozone regulations. In addition seasonal x 10° latitude tabulations are included which are directly comparable to and supersede the interim GASP ambient ozone tabulations given in appendix B of FAA-EE-80-43. Selected probability variations are highlighted to illustrate the spatial and temporal variability of ambient ozone and to compare results from the coarse and fine grid analyses.

INTRODUCTION

From March 1975 to July 1979, the NASA Global Atmospheric Sampling Program (GASP) obtained atmospheric trace-constituents data in the upper troposphere and lower stratosphere using fully automated sampling systems on several Boeing 747 airplanes in routine commercial service (ref. 1). GASP systems were operated on a United Airlines B747, two Pan American World Airways B747's, and a Qantas Airways of Australia B747. Data from the United airliner were over the contiguous United States and between the U.S. West Coast and Hawaii. Global coverage was provided by the Pan American and Qantas airliners on routes between U.S.A. and Europe, U.S.A. and South America, U.S.A. and Japan, U.S.A. and Australia, Australia and Africa, and Australia and Europe. The complete GASP dataset consists of 667 385 trace constituent and/or meteorological observations made on 6945 flights of these airliners between March 11, 1975, and July 12, 1979.

In response to government and public concern because of reports attributing illness of some people on long duration flights to excessive ozone exposure, measurements of ozone concentration in the cabins of two GASP-equipped B747's were made from March 1977 to June 1979. Results from these measurements are reported in references 2 to 7.

In addition to the simultaneous cabin and ambient ozone measurements, GASP acquired over 160 000 ambient ozone observations around the world at airliner cruise altitudes from March 1975 to June 1979. These have added considerably to the climatological data base over what was previously available from ozonesondes, and have provided data in geographical regions where none were previously extant.

Early GASP ambient ozone tabulations and ozonesonde ambient ozone tabulations were published in 1978 (ref. 8). Considerably expanded, but still interim

GASP ambient ozone tabulations were published in reference 9. This report includes all available GASP ambient ozone data, tabulated to conform to the temporal and spatial resolution specified in reference 10, for climatological data used to show compliance with cabin ozone regulations. In addition, tabulations are included for a coarser temporal and spatial grid; these data are directly comparable to and supercede the interim tables in appendix B of reference 9.

INSTRUMENTATION

Ozone was measured on all aircraft by commercially available ultraviolet absorption photometers modified and repackaged to operate in the airborne environment (ref. 11). Readings are continuous, updating every 20 seconds, with data recorded nominally eight times per hour. The instrument range is from 0.003 to 20 ppmv (parts per million by volume). Operational procedures, set up to insure the integrity of the data, included in-flight instrument health checks, instrument calibration techniques, measurement of ozone loss in the GASP air sample inlet line and pressurization system and periodic instrument maintenance.

All flight instruments were calibrated before installation in the aircraft and periodically thereafter using a secondary transfer standard. This standard is a laboratory-type ultraviolet (UV) photometer which was initially calibrated using a 1 percent neutral buffered potassium iodide (KI) method. Later in the GASP program, the standard was calibrated at the NASA Jet Propulsion Laboratory (JPL). This calibration is traceable to the JPL 5-meter UV photometer described in reference 12. The KI calibration was found to be 9 percent higher than the UV photometer calibration. Thus, all published GASP ozone data are 9 percent higher than the JPL calibrations. This is a systematic difference and the tabulated data can be easily corrected if the KI method is determined to be incorrect and another method, such as the UV photometer, is adopted as the standard.

The random error of the GASP ozone measuring system was found to be less than 4 percent of reading or 0.003 ppmv, whichever is greater. A complete description of the ozone measurement system is given in reference 11.

PRESENTATION OF DATA

Availability

All GASP data are available to the public on magnetic computer tape from the National Climatic Center, Federal Building, Asheville, North Carolina 28801. The data tabulated here are from GASP tapes VLO001 to VLO031. These tapes include all data obtained by GASP-equipped aircraft (March 11, 1975, to July 12, 1979). Flight routes and dates, instrumentation, data processing procedures, data tape specifications, and selected analysis are reported in references 13 to 24.

Explanation of Data Tables

In this report ozone amounts are expressed as a volumetric mixing ratio, parts per million by volume (ppmv). Since ozone levels in the literature may be expressed in any of several commonly used units, the inter-relationship among these is given in appendix A (p. 103). Note that several of these relations require that temperature and/or pressure be known or assumed and that the conversion of averaged values will be an approximation because of the non-linearity of the conversion.

The GASP data are summarized by month for 2000-ft altitude increments (from FL290 to FL430) in geographical regions of 5° latitude by 45° longitude in tables I to XII (pp. 4 to 99). The geographical grid used is shown in figure 1 (p. 100). This grid was selected so that regions, or combinations of adjacent regions, coincide with major flight routes as nearly as possible (e.g., contiguous States = 27.5° to 47.5° N, 75° to 120° W; and U.S.A. to Europe = 37.5° to 57.5° N, 15° E to 75° W). For each region the tabulation includes mean, standard deviation, median (50th percentile), 84th percentile, and 98th percentile ozone amounts, in addition to the number of observations. For applications in which a coarser spatial and temporal grid is acceptable, seasonal x 10° latitude tabulations are provided in appendix B (p. 104). Note that, because the number of observations in the tabulated regions is greater here than in tables I to XII, the statistical confidence level is greater in most intervals.

Selected Graphical Presentations

It is well known that ozone levels increase with latitude and altitude, that they are maximum in the spring, and that the probability of encountering high ozone levels follows the same trends (e.g., refs. 2, 6, and 9). These variations are quantified in the tables herein, with selected empirical probability variations highlighted in figures 2 to 5 (pp. 101 and 102). These figures are examples of the types of curves that can readily be plotted from, and that might be appropriate in specific analyses of, the tabulated data.

In figure 2 the variation of the mean ozone mixing ratio with latitude is shown for low, medium, and high cruise altitudes in the spring (part (a)), and for each spring month at flight level 370 (part (b)). The seasonal variation in mean ambient ozone near 45° N is shown in figure 3 for flight levels 370 and 410.

In figure 4 four-point cumulative frequency distributions (cfd's) for the spring have been plotted from the tabulated data for Northern Hemisphere latitudes at flight level 370 (part (a)) and for flight levels 290 to 430 at 40° to 50° N latitude (part (b)). These curves show the fraction of observations (on the ordinate) in which the ozone level exceeded any given ozone level (on the abscissa). For example, at flight level 370 and 40° to 50° N latitude, the probability of encountering ambient ozone greater than 0.3 ppmv would be about 37 percent.

Figure 5 shows the zonal latitude-flight level cross section of the 84th percentile ozone values for spring. The constant mixing ratio contours define regions where the probability is greater than 16 percent that the ozone will exceed the contour value on any independent observation; that is, the probability of encountering ozone above, say 0.2 ppmv, is greater than 16 percent in all regions where the 84th percentile value is greater than 0.2 ppmv. In figure 6, the same data used in figure 5 are crossplotted to show the vertical distributions of the 84th percentile values at selected latitudes.

CONCLUDING REMARKS

Tabulations are given of GASP ambient ozone mean, standard deviation, median, 84th percentile, and 98th percentile values, by month, flight level, and geographical region. These data are tabulated to conform to the temporal and spatial resolution specified in FAA-AC-120-38, and supersede those in appendix B of FAA-EQ-78-03 (ref. 8) and appendix B of FAA-EE-80-45 (ref. 9). Selected probability variations are shown herein to highlight the spatial and temporal variability of ambient ozone and to illustrate and compare the results from the coarse and fine grid analyses.

TABLE I. - Continued. GASP AMBIENT OZONE DATA BY LATITUDE FOR JANUARY

(b) Flight level 310

JANUARY
FL 310

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

		MEAN												LAT								
70N															70N							
65															65							
60															60							
55												.081	.056	22	55							
												.062	.140	.190								
50								.145	.085	11			.071	.071	26	50						
								.167	.240	.276			.039	.158	.242							
45	.127	.066	7					.073	.077	18	.095	.067	28	.073	.069	24	45					
	.101	.142	.265					.030	.139	.249	.069	.149	.267	.036	.175	.210						
40	.086	.038	25					.071	.093	13	.077	.063	36	.083	.064	8	40					
	.093	.123	.159					.026	.112	.302	.047	.127	.251	.064	.124	.207						
35	.080	.033	31			.068	.035	19									35					
	.079	.122	.137			.055	.103	.145														
30	.061	.035	39	.039	.007	10					.032	.013	30				30					
	.052	.081	.156	.040	.046	.050	.042	.037	20		.028	.045	.065	.041	.005	2						
25	.086	.032	17	.060	.025	12					.033	.010	13				25					
	.075	.114	.156	.054	.061	.124	.019	.013	16		.032	.037	.056									
20				.043	.011	31					.045	.019	23				20					
				.043	.051	.064	.018	.009	13	.052	.012	18										
15				.046	.017	23	.022	.005	6		.016	.009	12	.059		1	15					
				.046	.064	.071	.021	.027	.028		.015	.023	.033									
10										.028	.004	15	.020	.006	6	.040	.005	6	10			
										.029	.031	.033	.019	.027	.029	.045	.048	.049				
5		.039	.017	13						.019	.006	29							5			
		.042	.060	.064						.018	.023	.033										
0										.014	.003	21							0			
										.014	.017	.018										
5										.012	.002	15							5			
										.012	.014	.016										
10										.020	.006	7							10			
										.018	.026	.032				.020	.006	7				
15																.049	.003	5	15			
					.041	.005	6				.041	.045	.048				.048	.052	.053			
20	.011		1	.055		1	.100		1	.017	.010	5				.031	.013	3	20			
										.022	.025	.029				.039	.040	.041				
25	.048	.024	15	.070	.012	8				.042		1							25			
	.041	.078	.093	.070	.083	.084										.055	.023	24				
30							.064	.021	27	.025	.009	3				.044	.084	.092				
							.065	.082	.096	.022	.032	.036				.060	.023	30				
35							.132	.099	12	.036	.010	4				.061	.081	.096				
							.081	.275	.288	.031	.043	.052				.108	.095	16				
40																.076	.257	.287				
45S																			45S			
	15E	60E	105E	150E	165W	120W	75W	30W	15E													
	LONGITUDE																					

TABLE I. - Continued. GASP AMBIENT OZONE DATA BY LATITUDE FOR JANUARY

(c) Flight level 330

JANUARY
FL 330

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

													MEAN			LAT															
70N																70N															
65																65															
60													.282	.098	25	.163	.055	20	.289	.101	.45	60									
													.304	.381	.422	.163	.220	.241	.199	.352	.404										
55													.302	.081	41	.243	.085	25	.192	.110	60	.098	.063	60	.193	.116	.186	55			
													.285	.384	.452	.239	.317	.366	.215	.287	.417	.079	.164	.253	.151	.311	.429				
50													.298	.056	27	.092	.091	14	.233	.164	12	.126	.097	48	.075	.086	38	.151	.126	.139	50
													.318	.346	.390	.038	.198	.272	.226	.421	.517	.032	.215	.290	.115	.303	.395				
45	.137	.090	4			.268	.118	7	.358	.091	17	.041	.010	7	.191	.112	9	.069	.054	51	.084	.091	20	.137	.133	.115	45				
	.099	.212	.278		.168	.393	.424		.374	.418	.524	.036	.049	.059	.145	.321	.380	.041	.154	.181	.030	.193	.293	.064	.309	.428					
40	.104	.077	34			.198	.096	21	.087	.061	11	.067	.062	10	.144	.119	45	.043	.034	23			.117	.101	.144	40					
	.068	.185	.291		.227	.272	.389		.057	.115	.232	.052	.084	.213	.136	.289	.403	.036	.043	.152			.060	.230	.370						
35	.101	.034	17			.128	.094	26	.111	.087	17	.065	.053	87	.139	.115	17					.091	.076	.164	35						
	.084	.136	.163		.096	.191	.341		.088	.181	.255	.045	.124	.210	.105	.259	.389					.050	.141	.315							
30	.096	.056	10	.095	.029	6	.051	.011	9			.050	.028	92	.070	.030	23					.059	.034	.140	30						
	.076	.105	.233	.088	.131	.135	.053	.062	.064			.043	.072	.128	.065	.096	.140					.048	.082	.152							
25	.044	1		.074	.042	7	.028	.004	7			.042	.023	66	.052	.015	24					.046	.024	.105	25						
				.062	.072	.161	.029	.031	.034			.036	.058	.113	.049	.066	.089					.041	.062	.114							
20				.065	.025	5	.011	1		.039	.025	27	.055	.038	16	.043	.010	24					.045	.027	.73	20					
				.056	.090	.103				.026	.068	.085	.041	.072	.155	.041	.053	.063					.040	.066	.118						
15				.057	.011	9									.047	.012	17					.050	.013	.26	15						
				.060	.065	.073									.045	.055	.068					.049	.063	.072							
10				.074	.008	11									.038	.018	2	.029	.004	2			.063	.020	.15	10					
				.069	.082	.088									.038	.049	.054	.029	.031	.032			.069	.080	.087						
5				.047	.018	22									.013	1		.019	.007	11			.037	.021	.34	5					
				.047	.071	.078												.018	.027	.028			.034	.058	.077						
0				.027	.007	13													.018	.003	7			.024	.007	.20	0				
				.029	.032	.038												.018	.019	.023			.022	.032	.037						
5				.027	.005	14			.012	.002	14											.019	.008	.28	5						
				.028	.031	.035			.012	.013	.015											.016	.028	.034							
10				.032	.014	18			.014	.005	28											.021	.013	.46	10						
				.030	.049	.061			.013	.021	.025											.016	.031	.052							
15				.042	.010	17			.020	.013	15											.032	.016	.32	15						
				.040	.052	.063			.013	.034	.037											.034	.046	.060							
20	.071	.017	8	.042	.003	10	.058	.014	8	.031	.009	38					.044	1					.041	.018	.65	20					
	.079	.086	.089	.041	.045	.046	.062	.069	.077	.031	.041	.045											.038	.057	.085						
25	.067	.023	13	.106	.020	3	.056	.018	19	.042	.021	47											.051	.025	.82	25					
	.069	.096	.107	.106	.122	.129	.059	.068	.096	.033	.063	.093											.038	.077	.111						
30				.081	.020	20	.069	.029	21	.042	.025	67											.051	.027	.108	30					
				.059	.083	.096	.073	.094	.123	.034	.069	.101											.038	.078	.113						
35							.091	.076	7	.026	.017	20											.042	.050	.27	35					
							.104	.122	.230	.023	.039	.067											.027	.075	.178						
40							.041	1		.039	.011	25											.039	.011	.26	40					
										.036	.049	.063											.036	.049	.063						
45S																45S															
15E	60E	105E	150E	165W	120W	75W	30W	15E																							
									LONGITUDE																						

TABLE I. - Continued. GASP AMBIENT OZONE DATA BY LATITUDE FOR JANUARY

(f) Flight Level 390

JANUARY
FL 390

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

		MEAN												LAT									
70N																		70N					
65					.556	.064	5	.497	.200	.80								.501	.195	.85	65		
					.536	.620	.654	.486	.652	.938								.492	.653	.933			
60					.458	.125	58	.416	.136	.30	.440	1	.432	.040	6	.467	.072	.12	.446	.122	.107	60	
					.432	.583	.750	.381	.570	.642					.426	.471	.495	.445	.537	.623	.431	.573	.700
55					.568	.251	71	.423	.112	.17			.449	.137	.16	.417	.195	.26	.504	.225	.130	55	
					.497	.884	.066	.424	.549	.581			.435	.583	.712	.422	.655	.716	.378	.736	.050		
50					.401	.090	7	.366	.126	.19			.328	.188	.26	.317	.061	.29	.339	.133	.81	50	
					.353	.523	.554	.378	.486	.555			.378	.512	.564	.318	.387	.415	.351	.461	.563		
45	.090	1			.255	.118	27	.086	.049	.12	.439	.235	.102	.187	.205	.50	.364	.164	.23	.326	.236	215	45
					.304	.342	.479	.065	.116	.197	.425	.573	.185	.078	.430	.625	.357	.535	.566	.333	.549	819	
40				.455	.036	5	.212	.096	.15	.144	.131	7	.321	.181	.462	.180	.125	.11	.313	.180	500	40	
				.468	.478	.487	.147	.357	.365	.085	.231	.406	.310	.510	.719	.240	.295	.360	.307	.500	.718		
35				.237	.055	8	.188	.138	.61	.169	.082	.140	.189	.128	.97				.181	.111	306	35	
				.213	.310	.329	.130	.316	.568	.179	.214	.342	.141	.319	.492				.162	.267	.510		
30				.037	.016	12	.142	.098	.124	.142	.098	.124	.197	.082	.21				.141	.099	157	30	
				.032	.041	.077	.115	.265	.354	.228	.262	.308	.228	.262	.308				.114	.262	.351		
25	.104	1			.029	.002	3	.098	.105	.47	.023	.003	.9	.023	.024	.029			.083	.097	50	25	
					.029	.031	.032	.069	.142	.474	.023	.024	.029	.023	.024	.029			.049	.126	.445		
20				.015	.014	3		.054	.028	.18	.026	.005	.4	.026	.005	.030	.033		.045	.029	25	20	
				.005	.025	.034		.053	.085	.090	.025	.030	.033	.025	.030	.033			.040	.083	.090		
15				.009	.003	7		.049	.022	.20									.039	.026	27	15	
				.008	.012	.014		.051	.074	.076									.048	.073	.076		
10	.009	.003	.9	.015	.002	7	.038	.012	.6	.045	.016	.23							.032	.020	45	10	
	.007	.012	.016	.015	.018	.018	.035	.053	.055	.049	.057	.076							.028	.054	.075		
5	.020	1		.019	.008	8	.019	.008	.8	.038	.006	.8							.026	.011	17	5	
				.020	.026	.029	.020	.026	.029	.038	.042	.047							.030	.040	.046		
0				.037	.007	3	.023	.005	.4	.045	.011	.8							.038	.013	15	0	
				.036	.043	.046	.024	.026	.028	.051	.053	.055							.036	.053	.054		
5				.032	.014	7		.035	.015	.23									.035	.015	30	5	
				.037	.040	.044		.033	.053	.062									.032	.051	.050		
10				.014		1	.022	.007	.15	.025	.008	.9							.022	.008	25	10	
							.020	.029	.033	.028	.031	.032							.024	.030	.033		
15							.022	.007	.20										.022	.007	20	15	
							.019	.026	.037										.019	.028	.037		
20							.019	.005	.20										.019	.005	20	20	
							.019	.024	.026										.019	.024	.026		
25							.034	.020	.18										.034	.020	18	25	
							.028	.043	.087										.028	.043	.087		
30							.080	.040	.15										.080	.040	15	30	
							.062	.107	.178										.062	.107	.178		
35							.074	.034	.20										.074	.034	20	35	
							.056	.108	.150										.056	.108	.150		
40							.033	.001	.3										.033	.001	3	40	
							.034	.034	.034										.034	.034	.034		
45S																						45S	

LONGITUDE

TABLE II. - GASP AMBIENT OZONE DATA BY LATITUDE FOR FEBRUARY

(a) Flight level 290

FEBRUARY
FL 290

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

		MEAN												LAT							
70N																	70N				
65																	65				
60																	60				
55									.059	.016	6		.052	.004	3	.056	.014	9	55		
									.051	.068	.091		.054	.055	.055		.059	.069			
50								.032	1				.078		1		.061	.010	4	50	
										.057	.004	2					.057	.070	.077		
										.057	.060	.061									
45										.224		1					.224		1	45	
40		.053	.014	3						.054	.045	10	.071	.035	4		.058	.039	17	40	
		.050	.054	.070						.036	.106	.134		.054	.096	.127		.080	.104	.137	
35		.047	.043	2		.106	.072	6		.092	.087	6		.049	.014	8		.078	.066	24	35
		.047	.076	.088		.068	.152	.243		.060	.139	.281		.050	.064	.072		.044	.101	.282	
30					.051	1								.092		1		.077	.016	2	30
																		.077	.087	.091	
25		.115	.052	5		.050		1		.049	.014	17					.063	.038	23	25	
		.107	.158	.198						.063	.054	.071					.054	.075	.172		
20					.046	1	.044	.014	7		.032	.016	16				.036	.016	21	20	
							.036	.060	.069		.025	.050	.064				.029	.052	.069		
15										.030	.009	22					.030	.009	22	15	
										.030	.037	.049					.029	.037	.049		
10			.021	.005	3	.040		1	.078	.006	2	.056		1			.045	.024	7	10	
			.018	.025	.028				.078	.082	.084						.040	.072	.083		
5			.028	.002	6												.026	.002	6	5	
			.025	.027	.031												.025	.027	.031		
0			.026		1												.026		1	0	
5						.014	.002	3									.014	.008	3	5	
						.018	.020	.021									.018	.020	.021		
10						.019	.003	6									.019	.003	6	10	
						.020	.021	.023									.019	.021	.023		
15						.025	.011	7	.024	.004	2						.024	.010	9	15	
						.022	.033	.045	.024	.026	.027						.022	.031	.045		
20						.027	.004	3									.027	.004	3	20	
						.025	.030	.033									.025	.030	.033		
25									.031		1						.031		1	25	
30		.054		1	.054	.017	6	.058	.009	10							.056	.013	17	30	
					.054	.064	.082	.056	.068	.076							.056	.067	.082		
35					.035	.030	2	.063	.020	16							.060	.023	16	35	
					.035	.055	.064	.061	.083	.105							.061	.079	.104		
40					.152		1										.152		1	40	
45S																					45S

15

15E 60E 105E 150E 165W 120W 75W 30W 15E

LONGITUDE

TABLE II. - Continued. GASP AMBIENT OZONE DATA BY LATITUDE FOR FEBRUARY

(c) Flight level 330

FEBRUARY
FL 330

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

LAT	MEAN												LAT						
	15E	60E	105E	150E	165W	120W	75W	30W	15E	60E	105E	150E							
70N						.273	.032	2	.150	.116	18				.162	.116	20		
						.273	.234	.303	.092	.314	.342				.125	.311	.341		
65						.151	.045	8	.116	.039	6	.188	.041	6	.151	.051	20		
						.143	.199	.236	.117	.159	.166	.178	.240	.241	.123	.205	.241		
60						.105	.041	6				.185	.056	5	.141	.063	11		
						.101	.143	.169				.217	.236	.241	.125	.223	.240		
55					.475	.019	2					.106	.035	8	.180	.151	10		
					.475	.437	.492					.094	.140	.175	.096	.335	.486		
50					.327	.132	9		.201	.072	10	.162	.143	56	.137	.144	75		
					.361	.453	.467		.236	.256	.286	.081	.335	.421	.119	.362	.466		
45	.095	.040	21		.217	.112	16		.199	.083	3	.189	.151	77	.172	.130	123		
	.080	.153	152		.167	.362	.410		.212	.267	.290	.053	.136	.221	.132	.300	.359		
40	.088	.072	14		.110	.055	46	.066	.026	29	.114	.095	33	.181	.089	16	120		
	.049	.155	252	.232	.109	16	.110	.107	.145	.261	.068	.090	.122	.209	.264	.305	.067	.083	156
35	.104	.061	24		.072	.003	4	.079	.078	115	.101	.093	32	.317			.082	.083	168
	.079	.179	227	.112	.109	12	.072	.051	.123	.318	.067	.175	.374				.054	.151	351
30	.094	.021	8	.057	.011	19	.068	.052	.026	96	.065	.060	2				.058	.029	150
	.106	.114	114	.055	.070	.077	.050	.047	.076	.127	.085	.125	.142				.017	.082	142
25	.081	.059	19	.078	.030	17	.034	.021	.025	105							.036	.037	162
	.061	.113	152	.056	.105	135	.041	.052	.055	.157	.021	.051	.091				.036	.076	157
20				.040	.012	35	.039	.061	.042	31							.048	.032	78
				.036	.049	.072	.029	.055	.106	.134	.055	.116	.134				.025	.081	122
15				.038	.006	15	.021	.021	.022	5							.033	.009	21
				.037	.044	.048	.021	.022	.023								.036	.042	047
10				.025	.008	10											.025	.008	10
				.020	.034	.040											.020	.034	.040
5		.015	1	.023	.007	11	.116										.030	.026	13
				.020	.029	.035											.023	.033	.037
0				.020	.013	14											.020	.025	032
				.020	.025	.052											.020	.025	.032
5				.030	.005	16	.029	.034	.008	5							.030	.005	21
				.031	.039	.045	.029	.034	.035	.035							.032	.038	.044
10				.030	.017	17	.024	.024	.009	17							.026	.014	34
				.024	.046	.064	.024	.028	.039	.039							.019	.038	.063
15				.040	.007	8	.026	.026	.014	19							.030	.014	27
				.041	.048	.049	.026	.026	.042	.055							.028	.045	.054
20	.075		1	.034	.002	4	.025	.020	.020	41							.028	.020	46
				.033	.035	.037	.020	.039	.080	.080							.022	.039	.078
25	.048	.013	14	.038	.009	7	.048	.042	.034	62							.047	.030	83
	.046	.066	.070	.036	.039	.056	.042	.094	.110	.110							.042	.076	109
30		.077	.017	.074	.005	3	.062	.062	.027	88							.064	.026	99
		.063	.089	.075	.078	.080	.062	.062	.085	.118							.066	.085	115
35				.080	.025	10	.077	.075	.030	68							.077	.029	78
				.074	.107	.125	.074	.075	.109	.123							.072	.108	126
40				.044		1	.081	.077	.038	34							.080	.038	35
							.077	.120	.162	.162							.076	.117	162
45S																			

LONGITUDE

TABLE II. - Continued. GASP AMBIENT OZONE DATA BY LATITUDE FOR FEBRUARY

(d) Flight level 350

FEBRUARY
FL 350

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

15

		MEAN												LAT						
70N										.331	1	.211 .085 13			.219 .088 14	70N				
												.236 .253 .361			.237 .280 .372					
65										.419 .057 8		.336 .141 16			.363 .126 24	65				
										.439 .461 .498		.280 .470 .631			.340 .475 .613					
60										.200 .112 13		.408 .150 75			.377 .162 88	60				
										.182 .288 .457		.434 .538 .658			.397 .508 .655					
55										.363 .070 22		.372 .152 100		.422 .044 3	.178 1	.375 .130 159	55			
										.350 .480		.390 .456 .563		.404 .501 .650	.396 .490 .606					
50										.442 .169 33		.301 .133 47		.393 .169 84	.257 .098 25	.178 .150 41	.329 .176 230	50		
										.476 .605 .715		.337 .415 .501		.423 .559 .682	.275 .367 .412	.123 .354 .481	.316 .510 .677			
45	.260 .104 35									.442 .042 7		.259 .213 24		.337 .136 56	.126 .104 47	.194 .067 4	.240 .169 251	45		
	.271 .342 .395									.453 .485 .487		.173 .497 .660		.107 .289 .529	.380 .504 .565	.194 .261 .271	.238 .433 .560			
40	.273 .131 62									.105 .087 13		.246 .128 19		.201 .157 74	.151 .120 207	.135 .144 8	.085 .012 2	.183 .139 395	40	
	.292 .405 .463									.063 .244 .269		.281 .376 .423		.196 .397 .451	.101 .285 .438	.089 .155 .454	.065 .072 .075	.142 .362 .453		
35	.159 .100 71									.133 .095 33		.143 .084 44		.093 .100 232	.096 .075 43	.227 .168 9		.115 .103 432	35	
	.120 .276 .367									.082 .253 .329		.140 .254 .273		.060 .139 .421	.067 .171 .272	.156 .427 .545		.068 .205 .303		
30	.079 .046 79	.057 .017 19								.061 .011 18		.111 .041 12		.077 .050 403				.077 .056 531	30	
	.064 .103 .250	.054 .073 .096								.058 .075 .080		.104 .158 .184		.063 .108 .286				.063 .106 .279		
25	.060 .012 17	.056 .013 23								.039 .009 23		.065 .001 7		.063 .043 361				.062 .040 431	25	
	.059 .072 .083	.059 .067 .078								.036 .043 .061		.065 .066 .066		.054 .098 .171				.054 .093 .169		
20		.050 .016 16								.048 .017 14		.050 .010 10		.042 .024 87				.044 .022 127	20	
		.042 .066 .077								.043 .063 .083		.056 .059 .060		.041 .067 .092				.043 .066 .085		
15		.042 .005 11								.030 .019 11		.012 .015 39		.027 .020 22				.022 .019 83	15	
		.042 .046 .047								.040 .046 .048		.003 .032 .039		.020 .057 .063				.021 .044 .061		
10		.026 .007 12								.020 .005 9		.030 .007 3		.028 .014 16				.026 .011 40	10	
		.024 .033 .039								.018 .025 .029		.027 .036 .039		.028 .038 .054				.020 .036 .054		
5		.022 .008 4								.030 .003 9		.034 .023 14		.032 .014 14				.029 .017 41	5	
		.020 .028 .033								.019 .023 .025		.029 .041 .095		.037 .045 .050				.026 .040 .063		
0										.024 .019 22		.044 .033 29		.038 .005 4				.036 .028 55	0	
										.019 .038 .069		.029 .103 .112		.038 .042 .043				.028 .047 .110		
5										.022 .009 29		.026 .006 24						.024 .008 53	5	
										.025 .030 .035		.026 .031 .037						.025 .031 .038		
10										.018 .008 15		.021 .008 47						.020 .008 62	10	
										.018 .022 .033		.023 .027 .031						.020 .025 .035		
15										.033 .011 22		.023 .012 75						.026 .012 97	15	
										.031 .047 .054		.021 .033 .056						.024 .036 .058		
20		.028 1								.036 .010 38		.042 .026 80						.040 .022 119	20	
										.035 .048 .054		.034 .072 .103						.035 .059 .098		
25		.027 .005 12								.056 .023 37		.048 .021 88						.049 .022 137	25	
		.029 .032 .035								.045 .082 .106		.049 .054 .099						.045 .068 .101		
30		.031 1								.072 .017 27		.070 .030 77						.070 .027 105	30	
										.069 .090 .102		.072 .099 .124						.069 .095 .119		
35										.080 .038 41		.092 .047 58						.087 .044 99	35	
										.077 .099 .137		.080 .140 .217						.080 .121 .222		
40										.168 .092 11		.080 .031 63						.093 .055 74	40	
										.108 .278 .305		.076 .112 .139						.082 .115 .279		
45S																				45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E											
	LONGITUDE																			

TABLE II. - Continued. GASP AMBIENT OZONE DATA BY LATITUDE FOR FEBRUARY

(e) Flight level 370

FEBRUARY
FL 370

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

16

		MEAN												LAT										
		15E			10E			15W			20W			30W			15E							
70N													.311	1			.311	1						
65								.576	.100	.62	.546	.091	.13	.360	.004	2	.330	.019	5	.551	.115	.82		
								.571	.649	.786	.530	.632	.725	.360	.362	.363	.321	.339	.364	.555	.646	.736		
60								.291	.115	.17	.530	.141	.72	.482	.213	.38	.186	.106	.8	.466	.191	.135		
								.295	.430	.468	.544	.672	.746	.525	.703	.745	.155	.310	.332	.507	.668	.742		
55								.360	.182	.111	.401	.193	.51	.410	.125	.20	.460	.029	.16	.520	.168	.69		
								.339	.543	.710	.404	.566	.850	.401	.556	.607	.467	.490	.495	.576	.660	.702		
50								.464	.238	.60	.426	.168	.46	.439	.084	.15	.063	.096	.112	.340	.217	.126		
								.475	.678	.907	.442	.550	.837	.426	.498	.608	.034	.037	.444	.298	.605	.775		
45	.388	1	.218	.006	.3	.411	.156	.59	.406	.218	.68	.373	.143	.11	.078	.107	.126	.259	.174	.92	.252	.212	.360	
			.214	.223	.226	.377	.623	.686	.390	.654	.822	.441	.481	.503	.050	.062	.506	.311	.436	.517	.133	.476	.699	
40	.338	.042	.49	.343	.159	.28	.401	.138	.40	.239	.163	.48	.264	.152	.634	.132	.151	.64	.328	.161	.46	.269	.158	.909
	.314	.354	.398	.287	.577	.618	.359	.535	.664	.232	.443	.518	.251	.441	.548	.038	.342	.469	.384	.481	.559	.264	.445	.576
35	.254	.152	.65	.266	.074	.89	.169	.117	.191	.137	.131	.280	.162	.120	.213	.548	.052	.11	.311	.436	.517	.178	.136	.849
	.274	.440	.456	.279	.324	.394	.147	.293	.478	.082	.308	.487	.147	.246	.514	.524	.587	.664				.134	.319	.509
30	.066	.020	.36	.049	.007	.23	.101	.095	.35	.101	.065	.287	.174	.133	.479	.029	.001	.2				.139	.115	.862
	.060	.080	.119	.046	.056	.065	.057	.211	.345	.078	.153	.250	.115	.351	.424	.029	.029	.029				.065	.301	.406
25	.074	1	.060	.007	.58	.061	.008	.18	.117	.052	.108	.095	.064	.397								.095	.059	.582
			.057	.069	.076	.059	.068	.077	.087	.201	.226	.092	.155	.271								.073	.151	.250
20			.044	.017	.30	.084	.090	.5				.084	.063	.58	.044	.021	.2					.071	.058	.95
			.046	.059	.069	.040	.123	.246				.078	.125	.242	.044	.057	.063					.055	.104	.243
15			.027	.005	.17	.011	.014	.22				.030	.022	.61								.025	.020	.100
			.026	.031	.035	.005	.029	.042				.024	.049	.095								.019	.038	.093
10			.017	.011	.3	.016	1		.018	.006	.25	.024	.015	.40								.022	.012	.69
			.011	.026	.032				.017	.024	.031	.021	.033	.069								.020	.031	.064
5			.019	.005	.5				.021	.011	.52	.046	.015	.5								.023	.013	.62
			.015	.025	.026				.020	.030	.051	.038	.061	.070								.020	.032	.055
0									.020	.010	.55	.032	.013	.8								.021	.011	.63
									.020	.028	.038	.029	.036	.058								.023	.031	.039
5									.022	.012	.61	.038	.008	.8								.023	.012	.67
									.022	.032	.045	.039	.044	.048								.024	.034	.048
10			.023	.007	.8	.020	.012	.41	.054	.014	.4	.052	.067	.073								.023	.015	.53
			.022	.031	.036	.015	.030	.048	.052	.067	.073											.022	.036	.059
15			.031	.012	.13	.028	.014	.17	.085		1											.031	.016	.31
			.031	.039	.055	.025	.046	.052														.027	.048	.058
20	.034	.005	.8	.024	.005	.3	.048	.013	.18	.075	.016	.2										.044	.016	.31
	.035	.038	.040	.024	.028	.030	.047	.059	.079	.075	.085	.089										.041	.058	.086
25			.030	.005	.18	.047	.010	.14	.048	.010	.6											.039	.012	.38
			.030	.034	.042	.048	.054	.061	.044	.058	.067											.029	.053	.063
30			.048	.016	.9	.091	.049	.17	.040	.003	.7											.068	.043	.33
			.042	.045	.085	.095	.148	.166	.042	.043	.043											.043	.124	.160
35			.088	.029	.32	.088	.029	.32	.097	.055	.9											.090	.037	.41
			.084	.118	.153	.064	.118	.153	.075	.116	.222											.084	.122	.193
40			.126	.032	.2	.126	.032	.2	.107	.027	.3											.115	.030	.5
			.126	.148	.157	.102	.129	.140														.102	.148	.157
45S																								

LONGITUDE

TABLE II. - Continued. GASP AMBIENT OZONE DATA BY LATITUDE FOR FEBRUARY

(f) Flight level 390

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

FEBRUARY
FL 390

		MEAN												LAT												
70N																	70N									
65					.646	.310	2	.630	.184	105	.597	.024	2					.630	.186	109	65					
					.646	.856	.943	.618	.796	1.018	.597	.612	.619					.618	.797	1.015						
60					.624	.190	100	.545	.182	69				.515	.025	4	.452	.055	17	.578	.185	190	60			
					.623	.829	.923	.516	.718	.920				.526	.535	.535	.465	.514	.521	.445	.794	.926				
55					.608	.227	144	.565	.172	36				.509	.096	13	.472	.082	23	.580	.207	216	55			
					.594	.829	1.114	.551	.715	.866				.534	.603	.624	.458	.538	.654	.469	.799	1.048				
50					.708	.270	57	.497	.312	40				.474	.171	18	.364	.213	78	.504	.280	193	50			
					.784	1.004	1.096	.385	.833	1.241				.526	.614	.692	.448	.573	.727	.463	.817	1.102				
45	.924	.081	78		.791	.213	14	.509	.289	73	.366	.185	59	.368	.102	17	.666	.256	16	.427	.054	14	.493	.224	271	45
	.549	.601	.657		.850	.973	1.040	.427	.794	1.181	.351	.841	.821	.339	.474	.571	.639	.930	1.088	.423	.488	.498	.458	.693	1.054	
40	.499	.088	79		.664	.212	44	.555	.320	226	.186	.173	25	.274	.188	352	.596		1	.349	.037	14	.409	.275	741	40
	.514	.572	.592		.730	.840	.967	.507	.782	1.343	.096	.343	.626	.219	.473	.739				.347	.385	.424	.386	.634	1.296	
35					.367	.160	35	.182	.119	135	.147	.133	98	.302	.259	177							.236	.207	445	35
					.364	.442	.782	.140	.316	.465	.090	.273	.476	.217	.653	.756							.140	.437	.741	
30					.105	.047	21	.062	.013	9	.129	.103	166	.052	.001	2							.122	.097	198	30
					.078	.168	.182	.057	.065	.092	.091	.218	.372	.052	.053	.053							.082	.209	.367	
25					.051	.018	7	.110	.046	16	.081	.052	107										.083	.051	130	25
					.059	.065	.070	.096	.167	.186	.079	.140	.187										.076	.142	.189	
20					.017	.013	22				.056	.039	24										.037	.036	46	20
					.015	.035	.043				.052	.092	.138										.016	.081	.135	
15					.016	.013	31				.024	.016	7										.017	.014	38	15
					.012	.037	.043				.021	.034	.053										.011	.037	.049	
10					.040	.006	15				.059	.002	2										.043	.008	17	10
					.042	.048	.048				.059	.060	.061										.043	.048	.060	
5	.040	.011	4		.037	.011	6				.002	.002	4										.028	.019	14	5
	.035	.049	.057		.036	.048	.050				.001	.003	.005										.018	.047	.056	
0	.039		1								.040		1										.040	.001	2	0
																							.040	.040	.040	
5	.030		1		.024	.004	5	.038	.007	4	.031	.009	4										.030	.008	14	5
					.023	.026	.030	.039	.044	.047	.031	.040	.040										.026	.040	.045	
10					.012	.007	5	.054	.003	2	.029	.008	6										.026	.016	13	10
					.010	.018	.023	.054	.056	.057	.026	.034	.045										.024	.047	.056	
15					.016	.006	2				.058	.010	11										.051	.018	13	15
					.016	.020	.022				.057	.065	.078										.053	.064	.078	
20					0.000		1				.057	.014	15										.054	.019	16	20
											.053	.072	.083										.051	.072	.082	
25					.013	.018	7	.039	.015	16													.031	.020	23	25
					.008	.014	.051	.041	.052	.058													.033	.052	.058	
30	.056	.024	11		.093	.005	5	.091	.054	16	.053		1										.079	.044	33	30
	.044	.089	.093		.095	.098	.098	.084	.112	.226													.084	.098	.203	
35					.086	.027	32	.107	.058	32													.096	.047	64	35
					.076	.109	.162	.093	.174	.225													.071	.141	.204	
40					.122		1																.122		1	40
45S																										45S

15E 60E 105E 150E 165W 120W 75W 30W 15E

LONGITUDE

TABLE II. - Continued. GASP AMBIENT OZONE DATA BY LATITUDE FOR FEBRUARY

(g) Flight level 410

CODE: MEAN ST. DEV. N
50% 84% 98%

FEBRUARY
FL 410

		MEAN												LAT								
70N																	70N					
65						.760	.318	11	.747	.015	3				.757	.282	14	65				
						.693	1.174	1.288	.752	.759	.763				.678	1.116	1.284					
60				.562	1	.722	.229	20	.700	.168	22	.724	.069	6	.709	.188	49	60				
						.699	.929	1.154	.752	.789	1.037	.743	.773	.815	.748	.868	1.145					
55				.775	.256	65			.664	.164	52	.784	.118	10	.730	.221	127	55				
				.807	.997	1.315			.658	.805	1.054	.804	.857	.970	.722	.938	1.214					
50				.647	.244	117	.494	.087	5	.763	.221	57	.755	.243	30	.480	.149	17	50			
				.610	.907	1.148	.476	.567	.618	.761	.938	1.254	.695	.872	1.475	.486	.589	.794				
45			.589	.172	17	.633	.305	61	.418	.234	51	.546	.278	95	.697	.315	19	.564	.041	2	45	
			.608	.749	.837	.638	.900	1.492	.426	.660	.849	.599	.804	1.015	.564	.592	.603	.573	.805	1.167		
40	.378	.179	13	.419	.195	91	.411	.197	66	.453	.196	121	.364	.246	61	.286	.065	2	.425	.112	9	40
	.307	.648	.716	.406	.599	.828	.514	.553	.692	.465	.630	.833	.259	.633	.955	.286	.329	.347	.362	.569	.603	
35	.349	.184	64	.293	.115	72	.157	.027	8	.272	.205	40	.163	.006	2	.400	.167	186	.347	.459	.702	35
	.385	.500	.792	.300	.389	.541	.154	.188	.197	.185	.519	.706	.163	.167	.169	.297	.459	.702				
30	.103	.069	30	.102	.060	5				.081	.068	25	.098		1	.086	.070	61				30
	.084	.109	.335	.082	.142	.208				.044	.122	.215				.078	.121	.322				
25	.063	.008	2							.035	.025	18	.092	.005	5	.049	.031	25				25
	.063	.068	.071							.046	.060	.062	.092	.097	.100	.055	.086	.098				
20				.045	.026	8				.014	.015	12				.027	.025	20				20
				.044	.063	.091				.006	.036	.038				.012	.050	.083				
15				.035	.020	12				.018	.012	8				.028	.019	20				15
				.033	.050	.071				.016	.032	.035				.018	.050	.067				
10	.050		1	.039	.015	11				.008	.002	5				.030	.019	17				10
				.041	.051	.068				.008	.010	.010				.029	.049	.066				
5		.042	.005	2	.033	.006	7									.035	.006	9				5
		.042	.045	.047	.032	.037	.042									.036	.041	.046				
0																						0
5																						5
10																						10
15																						15
20																						20
25																						25
30						.074	.038	9	.074		1					.074	.036	10				30
						.056	.105	.154								.065	.100	.153				
35						.153	.058	27								.163	.058	27				35
						.190	.211	.236								.190	.211	.236				
40																						40
45S																						45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E													
	LONGITUDE																					

18

TABLE II. - Concluded. GASP AMBIENT OZONE DATA BY LATITUDE FOR FEBRUARY

(h) Flight level 430

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

FEBRUARY
FL 430

		MEAN												LAT				
70N																70N		
65																65		
60																60		
55																55		
50					1.009	.354	6				.735	.117	7		.862	.290	13	50
					1.170	1.330	1.339				.764	.839	.844		.825	1.276	1.337	
45		.796	.278	10	.751	.353	30			.742	.059	6		.760	.315	46	45	
		.904	.993	1.191	.738	1.195	1.377			.745	.791	.831		.724	1.035	1.376		
40		.591	.195	53				.213	.188	12				.521	.243	65	40	
		.573	.812	.927				.157	.215	.698				.553	.805	916		
35		.578	.305	7				.594	.066	10				.587	.202	17	35	
		.447	.684	1.187				.566	.666	.710				.563	.665	1.086		
30		.052	.017	24				.311	.103	8				.117	.124	32	30	
		.044	.074	.081				.309	.402	.460				.057	.262	.429		
25		.040	.017	29										.040	.017	29	25	
		.031	.061	.070										.031	.061	.070		
20		.028	.013	6										.028	.013	6	20	
		.025	.038	.050										.025	.038	.050		
15		.020	.007	2										.020	.007	2	15	
		.020	.024	.026										.020	.024	.026		
10		.023	.006	6										.023	.006	6	10	
		.024	.029	.030										.024	.029	.030		
5		.031	.002	7										.031	.002	7	5	
		.031	.032	.035										.031	.032	.035		
0																	0	
5																	5	
10																	10	
15																	15	
20																	20	
25																	25	
30																	30	
35					.168	.028	10							.168	.028	10	35	
					.166	.199	.201							.166	.199	.201		
40																	40	
45S																	45S	
	15E	60E	105E	150E	165W	120W	75W	30W	15E									

LONGITUDE

TABLE III. - GASP AMBIENT OZONE DATA BY LATITUDE FOR MARCH

(a) Flight level 290

MARCH
FL 290

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

		MEAN												LAT								
70N																	70N					
65																	65					
60								.162	.053	11	.254	.107	.29	.286	.112	11	.241	.108	.51	60		
								.156	.216	.245	.266	.336	.501	.340	.372	.391	.250	.347	.487			
55								.156	.103	6				.202	.090	22	.192	.095	.28	55		
								.150	.264	.271				.215	.269	.363	.213	.269	.381			
50								.056	.013	14	.099	.053	17	.101	.100	26	.089	.076	.57	50		
								.058	.063	.083	.073	.153	.210	.073	.117	.438	.064	.117	.402			
45	.055	.011	4				.137	1	.008	1	.176	.101	8	.053	1	.122	.097	.15	45			
	.050	.062	.072								.160	.271	.350			.085	.212	.339				
40	.070	.022	21	.060	.020	6	.049	1	.003	1	.079	.086	17	.136	.105	12	.083	.074	.59	40		
	.057	.096	.109	.050	.074	.098					.055	.078	.324	.076	.282	.344	.057	.099	.348			
35	.095	.064	15	.114	.082	12	.172	1	.050	.021	13	.114	.096	10	.090	.102	7	.092	.078	.58	35	
	.082	.171	.229	.063	.185	.289			.043	.057	.103	.075	.167	.333	.041	.105	.306	.054	.166	.331		
30	.058	.006	4	.058	.006	4	.061	.016	12	.071	.030	13	.098	.069	10	.036	.001	3	.070	.041	.46	30
	.059	.064	.065	.057	.063	.066	.057	.070	.097	.063	.093	.134	.058	.173	.231	.036	.037	.038	.056	.032	.186	
25		.052	.002	3	.084	.030	13	.084	.030	13	.037	.006	7	.040	.000	3	.050	.031	40	25		
		.051	.053	.054	.022	.046	.050	.087	.102	.140	.036	.038	.048	.040	.041	.041	.042	.087	.114			
20			.030	.005	3	.057	.019	9	.026	.007	4	.026	.007	4			.044	.021	18	20		
			.026	.033	.037	.056	.069	.094	.023	.031	.036						.033	.059	.090			
15		.062	1	.059	.017	5											.059	.015	6	15		
				.069	.073	.073											.050	.073	.073			
10																					10	
5									.035	1							.035	1		5		
0																					0	
5																					5	
10																					10	
15																					15	
20	.013	1	.027	1										.017	1		.019	.006	3	.027	20	
																	.017	.024	.027			
25	.043	1															.043		1		25	
30			.025	1													.025		1		30	
35			.039	.005	6	.055	1										.041	.007	7	.054	35	
			.038	.043	.047												.040	.048				
40																					40	
45S																					45S	
	15E	60E	105E	150E	165W	120W	75W	30W	15E													

LONGITUDE

TABLE III. - Continued. GASP AMBIENT OZONE DATA BY LATITUDE FOR MARCH

(b) Flight level 310

MARCH
FL 310

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

		MEAN												LAT									
70N														.218	.121	8	.218	.121	8	70N			
														.278	.318	.364	.278	.318	.364				
65														.168	.074	12	.168	.074	12	65			
														.173	.245	.260	.173	.245	.260				
60														.152	.069	12	.152	.069	12	60			
														.165	.225	.237	.165	.225	.237				
55										.387	.052	4		.146	.125	16	.194	.149	20	55			
										.379	.431	.461		.102	.303	.417	.118	.374	.454				
50										.341	.137	8		.190	.139	26	.217	.150	38	50			
										.405	.440	.444		.128	.410	.441	.170	.413	.445				
45	.107	.038	2							.095	.118	10					.173	.152	62	45			
	.107	.132	.143							.073	.097	.377					.098	.409	.491				
40	.090	.063	6							.207	.072	11					.094	.100	120	40			
	.054	.134	.211							.166	.284	.333					.055	.166	.445				
35	.137	.122	6							.119	.105	14					.129	.133	42	35			
	.051	.266	.348							.079	.159	.391					.044	.228	.479				
30										.050	.003	3					.059	.030	21	30			
										.049	.052	.054					.070	.093	.097				
25										.086	.010	10					.077	.055	20	25			
										.090	.094	.099					.060	.094	.232				
20										.072	.021	9					.060	.055	20	20			
										.058	.064	.067					.064	.094	.106				
15										.049	.011	11					.046	.028	36	15			
										.047	.059	.063					.030	.073	.104				
10										.068	.022	13					.037	.018	24	10			
										.059	.095	.107					.026	.062	.069				
5										.049	.022	4					.061	.063	.064				
										.038	.005	2					.038	.041	.043				
0										.038	.041	.043					.038	.041	.043				
5																							
10																							
15																							
20	.033	.009	6											.065	1				.037	.014	7	20	
	.035	.039	.043																	.036	.044	.062	
25	.050	.008	16																	.050	.008	16	25
	.051	.058	.060																	.051	.058	.060	
30																							30
35										.050	1								.058	.017	11	35	
										.057	.069	.094								.057	.067	.094	
40										.034	1								.034	1		40	
45S																							45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E														

TABLE III. - Continued. GASP AMBIENT OZONE DATA BY LATITUDE FOR MARCH

(c) Flight level 330

MARCH
FL 330

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

LAT	MEAN												LAT						
	15E	60E	105E	150E	165W	120W	75W	30W	15E	60E	105E	150E							
70N							.115	1	.247	.136	8	.233	.135	9	70N				
									.224	.395	.428	.152	.392	.427					
65							.287	.088	8	.494	.045	15	.419	.110	27	65			
							.255	.360	.447	.498	.535	.553	.422	.442	.442	.455	.529	.551	
60							.417	.103	29	.304	.223	16	.310	.146	23	.354	.162	68	60
							.433	.527	.509	.226	.577	.629	.340	.471	.500	.313	.519	.604	
55							.456	.056	7	.339	.150	23	.215	.155	69	.220	.167	173	55
							.473	.513	.517	.374	.509	.573	.094	.351	.508	.169	.419	.573	
50							.079	.046	10	.244	.141	9	.128	.131	129	.167	.161	278	50
							.062	.109	.185	.226	.451	.544	.104	.423	.634	.065	.384	.568	
45	.234	.105	7				.131	.119	37	.276	.211	14	.123	.119	155	.143	.131	246	45
	.179	.354	.386				.063	.323	.362	.150	.525	.591	.064	.210	.484	.075	.265	.496	
40	.162	.077	22				.053	.005	5	.096	.072	20	.250	.172	35	.150	.127	188	40
	.147	.224	.356				.053	.057	.060	.106	.248	.470	.074	.094	.309	.079	.275	.490	
35	.178	.119	28				.208	.186	15	.527		1	.111	.113	91	.137	.130	189	35
	.203	.327	.351				.097	.411	.583	.074	.034	.172	.081	.166	.478	.075	.248	.567	
30	.097	.061	10				.162	.012	3	.074	.034	71	.051	.015	22	.075	.041	125	30
	.069	.127	.242				.164	.172	.176	.059	.100	.172	.049	.069	.076	.061	.100	.185	
25							.074	.014	3	.081	.053	53	.037	.010	14	.071	.057	75	25
							.070	.085	.091	.064	.132	.251	.036	.046	.057	.055	.099	.233	
20							.056	.015	2	.073	.040	29	.041	.016	18	.060	.033	87	20
							.056	.066	.070	.069	.110	.162	.040	.055	.068	.054	.084	.150	
15							.012	.002	4	.035	.018	19	.043	.024	16	.037	.019	74	15
							.012	.014	.014	.034	.051	.063	.035	.036	.037	.035	.059	.077	
10							.045	.002	4	.031	.002	3	.050	.004	5	.041	.010	28	10
							.046	.047	.047	.038	.054	.060	.031	.032	.033	.049	.051	.059	
5							.027	.002	4	.031	.003	4	.034	.003	2	.035	.008	19	5
							.027	.029	.030	.031	.034	.036	.034	.035	.036	.032	.043	.053	
0							.029	.002	7	.027	.003	6	.023	.012	8	.026	.008	21	0
							.028	.032	.032	.027	.029	.030	.024	.032	.043	.027	.032	.040	
5							.038	.005	5	.025	.007	7	.026	.004	3	.030	.008	15	5
							.036	.044	.045	.024	.028	.038	.028	.029	.030	.028	.038	.044	
10							.043	.018	2	.025	.010	5				.030	.015	7	10
							.043	.055	.060	.024	.032	.042				.025	.045	.059	
15							.033	.005	5	.033	.005	5				.033	.005	5	15
							.031	.037	.040							.031	.037	.040	
20	.025	.016	6				.025	.002	6	.025	.002	6	.028	.013	14	.028	.013	14	20
	.018	.046	.049				.025	.027	.027	.025	.027	.027	.023	.044	.053	.023	.044	.053	
25	.015	.008	10				.041	.016	8	.035	.062	.068				.033	.016	32	25
	.017	.023	.026				.035	.062	.068							.030	.046	.067	
30							.045	.008	21	.046	.012	4	.045	.010	26	.045	.010	26	30
							.044	.050	.064	.045	.065	.062	.044	.052	.071	.044	.052	.071	
35							.051	.010	3	.119	.048	25	.112	.050	28	.112	.050	28	35
							.057	.059	.060	.123	.174	.188	.115	.172	.188	.051	.172	.188	
40							.045	.008	2	.082	.063	7	.074	.058	9	.074	.058	9	40
							.045	.050	.053	.051	.112	.213	.051	.095	.208	.051	.095	.208	
45S																			45S

22

LONGITUDE

TABLE III. - Continued. GASP AMBIENT OZONE DATA BY LATITUDE FOR MARCH

(d) Flight level 350

CODE: MEAN ST. DEV. N
50% 84% 98%

MARCH
FL 350

		MEAN												LAT								
70N										.597	.056	13			.597	.056	13	70N				
										.593	.649	.686			.593	.649	.686					
65									.516	.035	8			.570	.074	16		.536	.068	31	65	
									.516	.554	.563			.570	.655	.661		.521	.600	.659		
60									.177	.111	4			.475	.131	42		.345	.146	15	60	
									.166	.265	.319			.503	.599	.675		.266	.415	.455		
55									.378	.189	35			.398	.211	38		.304	.226	24	55	
									.392	.557	.683			.463	.637	.680		.216	.524	.744		
50									.498	.149	32			.298	.102	14		.125	.126	58	50	
									.473	.621	.844			.279	.407	.462		.058	.252	.465		
45									.271	.158	16			.549	.009	2		.211	.195	54	45	
									.298	.418	.482			.549	.554	.557		.100	.483	.551		
40									.230	.176	23			.544	.119	27		.388	.149	5	40	
									.148	.429	.528			.575	.644	.727		.244	.047	.335		
35									.244	.137	33			.243	.203	18		.263	.047	4	35	
									.183	.387	.452			.150	.457	.638		.107	.354	.620		
30									.157	.064	21			.050	.031	17		.100	.067	390	30	
									.147	.209	.299			.033	.089	.099		.079	.159	.271		
25									.054	.016	40			.060	.005	2		.080	.045	257	25	
									.053	.071	.090			.060	.063	.065		.072	.121	.200		
20									.055	.017	20			.032	.003	4		.066	.046	70	20	
									.055	.069	.088			.032	.035	.037		.049	.093	.196		
15									.014	.015	4			.034	.020	43		.042	.028	104	15	
									.009	.027	.036			.029	.056	.066		.035	.059	.110		
10									.041	.002	5			.033	.003	8		.035	.006	33	10	
									.041	.042	.044			.033	.035	.038		.032	.036	.040		
5																		.036	.004	6	5	
																		.035	.041	.042		
0																		.040	.005	5	0	
																		.038	.044	.048		
5																		.031	.006	8	5	
																		.030	.036	.040		
10																		.032	.013	14	10	
																		.035	.042	.054		
15																		.050	.009	14	15	
																		.049	.058	.067		
20																		.047	.022	5	20	
																		.042	.066	.083		
25																		.052	.026	14	25	
																		.047	.069	.096		
30																		.100	.024	7	30	
																		.094	.108	.147		
35																		.065	.050	10	35	
																		.045	.084	.184		
40																		.029	.001	2	40	
																		.029	.030	.030		
45S																		.251	.085	13	45S	
																		.256	.281	.294		
	15E	60E	105E	150E	165W	120W	75W	30W	15E													

LONGITUDE

TABLE III. - Continued. GASP AMBIENT OZONE DATA BY LATITUDE FOR MARCH

(e) Flight level 370

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

MARCH
FL 370

	MEAN												LAT									
70N										.693	.068	2							.693	.068	2	70N
										.693	.739	.758							.693	.739	.758	
65										.288	.097	3							.565	.089	58	65
										.275	.368	.407							.574	.638	.701	
60										.355	.213	11							.543	.123	52	60
										.351	.617	.697							.586	.658	.722	
55										.518	.150	68							.649	.091	25	55
										.523	.661	.810							.673	.726	.781	
50										.466	.243	35							.420	.194	57	50
										.427	.710	.919							.461	.634	.719	
45										.518	.113	24							.610	.055	2	45
										.505	.623	.760							.610	.647	.663	
40										.543	.094	7							.493	.137	14	40
										.528	.644	.661							.500	.650	.664	
35										.389	.135	11							.334	.224	60	35
										.447	.480	.490							.305	.604	.680	
30										.345	.198	29							.237	.198	43	30
										.308	.572	.695							.154	.534	.683	
25										.181	.131	11							.076	.020	13	25
										.130	.226	.501							.074	.099	.106	
20										.073	.016	63							.091	.015	7	20
										.071	.085	.105							.095	.100	.103	
15										.048	.027	79							.048	.028	19	15
										.045	.080	.092							.032	.085	.089	
10										.022	.014	22							.029	.005	17	10
										.023	.030	.056							.029	.034	.036	
5																						
0																						
5																						
10																						
15																						
20																						
25																						
30																						
35																						
40																						
45S																						45S

24

TABLE III. - Continued. GASP AMBIENT OZONE DATA BY LATITUDE FOR MARCH

(f) Flight level 390

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

MARCH
FL 390

		MEAN												LAT															
LAT		15E			60E			105E			150E			165W			120W			75W			30W			15E			LAT
70N																												70N	
65					.844	.000	2	.711	.125	52																		65	
					.844	.844	.844	.741	.826	.910																			
60					.695	.124	66	.651	.169	59	.644	.154	32	.377	.025	21												60	
					.703	.805	.900	.630	.800	.099	.699	.781	.885	.371	.396	.437													
55					.632	.152	119	.599	.143	39	.614	.124	33	.361	.098	70	.541	.098	27									55	
					.633	.785	.935	.635	.729	.791	.563	.771	.860	.333	.473	.601	.520	.655	.748										
50					.571	.255	122	.461	.263	42	.674	.202	18	.178	.185	106	.382	.108	45									50	
					.610	.778	1.041	.404	.721	.984	.560	.947	1.016	.136	.250	.826	.396	.519	.551										
45	.184	.105	14		.644	.198	21	.543	.227	95	.383	.209	59	.680	.193	68	.159	.133	190	.293		1						45	
	.225	.278	.329		.716	.792	.923	.613	.753	.843	.446	.597	.683	.682	.888	1.004	.137	.222	.597										
40	.079	.048	23		.472	.256	93	.402	.236	43	.209	.196	55	.432	.202	687	.128	.191	26									40	
	.074	.088	.210		.457	.756	.873	.450	.631	.798	.105	.462	.649	.488	.616	.786	.030	.509	.532										
35	.063	.005	2		.110	.102	9	.155	.061	15	.328	.202	86	.357	.241	354											35		
	.063	.066	.067		.065	.127	.350	.146	.228	.243	.326	.531	.684	.312	.655	.734													
30					.015	.004	4				.171	.136	359	.206	.230	47											30		
					.014	.019	.021				.131	.262	.599	.076	.631	.652													
25	.157		1		.023	.016	20				.099	.062	286	.078	.039	26											25		
					.014	.046	.054				.084	.160	.268	.076	.094	.191													
20					.037	.023	14	.092	.003	5	.088	.018	25	.075	.033	16											20		
					.026	.073	.075	.092	.094	.097	.091	.105	.109	.094	.099	.102													
15					.049	.018	10	.032	.003	8																	15		
					.045	.070	.079	.032	.036	.037																			
10					.036	.006	5							.032		1											10		
					.035	.040	.045																						
5					.028	.002	6							.043	.003	2	.034	.005	6									5	
					.028	.029	.029							.043	.045	.046	.033	.036	.044										
0					.030	.005	6								.049	.014	8										0		
					.029	.033	.039								.044	.063	.074												
5					.044	.008	4								.058	.012	6										5		
					.049	.049	.049								.060	.067	.075												
10					.040	.001	2																				10		
					.040	.041	.041																						
15																											15		
20																											20		
25																											25		
30																											30		
35					.060	.008	7																				35		
					.058	.067	.075																						
40																											40		
45S																											45S		

25

TABLE III. - Continued. GASP AMBIENT OZONE DATA BY LATITUDE FOR MARCH

(g) Flight level 410

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

MARCH
FL 410

		MEAN										LAT													
70N														70N											
65														65											
60						.580	1	.838	.261	.9		.961	.106	.6	.868	.227	.16		60						
								.794	1.133	1.329		.966	1.074	1.086	.737	1.081	1.316								
55								.729	.174	.15	.616	.127	.11	.964	.136	.9	.751	.190	.43		55				
								.726	.912	1.011	.585	.720	.884	.939	1.126	1.157	.740	.940	1.140						
50								.679	.235	.11	.719	.126	.15	.411	.085	.9	.627	.206	.35		50				
								.647	.930	.953	.759	.855	.883	.445	.489	.519	.607	.864	.946						
45	.325	.086	7			.660	.333	2	.676	.054	.5	.636	.126	.17	.405	.049	.3	.561	.181	.8	.559	.187	.42		45
	.323	.411	.441			.660	.886	.979	.655	.706	.773	.622	.771	.815	.422	.444	.453	.583	.793	.801	.522	.741	.849		
40	.437	.315	12			1.039	.443	5				.468	.201	.130				.814	.198	.8	.471	.261	.175		40
	.300	.805	.835			1.348	1.404	1.476				.445	.697	.795				.859	.977	1.009	.431	.722	.999		
35	.580	.260	6									.264	.211	.36							.334	.255	.45		35
	.627	.783	.932			.687	.071	2	.698	1		.152	.550	.673							.232	.615	.766		
30	.184	.078	6									.090	.016	.3							.153	.078	.9		30
	.145	.267	.318									.085	.103	.110							.129	.224	.313		
25																									25
20																									20
15																									15
10																									10
5																									5
0																									0
5																									5
10																									10
15																									15
20																									20
25																									25
30																									30
35																									35
40																									40
45S																									45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E																

LONGITUDE

TABLE III. - Concluded. GASP AMBIENT OZONE DATA BY LATITUDE FOR MARCH

(h) Flight level 430

MARCH
FL 430

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

		MEAN										LAT			
70N													70N		
65													65		
60													60		
55													55		
50					.738	.027	3					.738	.027	3	50
45					.751	.758	.762					.751	.758	.762	45
40			.705	.047	7	.741	.069	10				.726	.063	17	40
35			.717	.742	.759	.725	.770	.898				.717	.765	.877	35
30			.660	.202	15							.660	.202	15	30
25			.750	.852	.866							.750	.852	.866	25
20															20
15															15
10															10
5															5
0															0
5															5
10															10
15															15
20															20
25															25
30															30
35															35
40															40
45S															45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E						
	LONGITUDE														

TABLE IV. - Continued. GASP AMBIENT OZONE DATA BY LATITUDE FOR APRIL

(e) Flight level 370

APRIL
FL 370

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

LAT	MEAN												LAT																			
	15E	60E	105E	150E	165W	120W	75W	30W	15E	60E	105E	150E																				
70N										.585	.092	8	.616	.065	12					.603	.078	20	70N									
										.565	.614	.776	.611	.698	.709					.585	.694	.767										
65										.485	.227	81	.631	.078	29	.434	.118	20	.518	.080	6	.510	.196	136	65							
										.542	.712	.792	.637	.690	.777	.443	.559	.606	.553	.589	.597	.381	.695	.792								
60										.408	.223	21	.513	.234	125	.496	.155	77	.579	.153	28	.388	.160	24	.495	.206	275	60				
										.379	.631	.827	.561	.780	.853	.531	.648	.714	.606	.716	.807	.436	.539	.599	.537	.688	.839					
55										.573	.173	68	.448	.197	60	.413	.202	37	.317	.239	11	.352	.224	72	.443	.221	248	55				
										.581	.767	.864	.485	.646	.746	.429	.616	.789	.203	.556	.780	.347	.596	.768	.281	.675	.826					
50										.477	.262	46	.278	.199	72	.435	.248	29	.395	.125	50	.279	.179	69	.352	.217	266	50				
										.565	.727	.827	.204	.502	.698	.591	.645	.703	.402	.505	.625	.296	.441	.633	.235	.597	.740					
45										.367	.074	10	.261	.219	111	.230	.230	93	.240	.196	64	.320	.163	31	.286	.230	383	45				
										.397	.421	.456	.654	.678	.689	.141	.547	.699	.144	.550	.700	.153	.497	.633	.369	.449	.603	.191	.594	.753		
40										.452	.012	2	.175	.130	34	.231	.198	151	.230	.205	142	.246	.201	594	.239	.199	939	40				
										.452	.460	.464	.116	.263	.558	.156	.471	.719	.137	.430	.696	.157	.474	.753	.381	.423	.423	.152	.465	.747		
35										.075	.002	4	.184	.145	86	.347	.198	37	.163	.153	459	.237	.213	78				.184	.169	564	35	
										.076	.077	.077	.107	.308	.601	.357	.505	.793	.096	.348	.608	.145	.528	.755				.103	.374	678		
30										.127	.030	5	.101	.007	4	.102	.048	29	.110	.078	515							.110	.076	553	30	
										.131	.159	.159	.104	.107	.107	.090	.126	.235	.089	.138	.330							.090	.138	329		
25										.087	.031	17	.087	.031	17	.059	.080	108	.105	.050	398							.103	.050	434	25	
										.103	.111	.124	.059	.080	.108				.099	.146	.225							.098	.139	223		
20										.040	.012	6	.006	.004	7	.031	.034	46	.082	.062	61	.053	.015	20				.055	.052	140	20	
										.039	.050	.059	.005	.007	.013	.012	.076	.118	.075	.105	.275	.049	.067	.089				.030	.096	187		
15										.029	.004	4	.022	.023	36				.023	.015	34	.060	.021	38				.035	.027	112	15	
										.029	.034	.035	.009	.052	.063				.019	.037	.062	.059	.079	.101				.027	.061	094		
10										.042	.002	4	.015	.007	10	.013	.019	.030	.018	.011	28	.059	.013	28	.054	.013	26	.040	.022	96	10	
										.043	.045	.045							.013	.032	.039	.060	.072	.084	.058	.067	.074	.043	.064	.075		
5													.011	.004	28	.011	.013	.019	.028	.004	8				.027	.005	13	.018	.009	49	5	
													.011	.013	.019	.028	.029	.036	.028	.029	.036				.028	.031	.032	.014	.028	.032		
0										.033	.002	3	.016	.015	17	.033	.005	15	.033	.005	15	.035	.011	16				.028	.014	51	0	
										.032	.035	.036	.012	.017	.057	.032	.037	.042	.032	.037	.042	.034	.042	.060				.030	.038	.061		
5										.022	.004	8	.017	.011	27	.028	.003	11	.028	.003	11	.048	.026	17				.028	.020	63	5	
										.022	.024	.028	.016	.028	.040	.028	.029	.034	.028	.029	.034	.040	.060	.117				.026	.040	.061		
10										.026	.007	7	.013	.009	25	.024	.004	3	.024	.004	3	.037	.003	18				.023	.013	50	10	
										.024	.033	.036	.017	.020	.024	.022	.027	.029	.022	.027	.029	.014	.042	.043				.014	.037	.042		
15										.026		1										.039	.008	18				.027	.015	36	15	
										.019	.022	.026	.019	.022	.026				.039	.046	.055	.039	.046	.055				.015	.043	.054		
20										.045	.008	4	.010	.004	6				.041	.013	12	.041	.013	12				.033	.018	22	20	
										.047	.051	.053	.012	.012	.013				.042	.053	.062	.042	.053	.062				.030	.052	.061		
25										.042	.002	5	.017	.007	7														.027	.013	12	25
										.041	.044	.045	.013	.020	.031				.013	.020	.031							.026	.042	.045		
30										.035		1																	.035		1	30
35										.026	.008	4	.026	.008	4				.026	.008	4							.026	.008	4	35	
										.030	.032	.034	.030	.032	.034				.030	.032	.034							.030	.032	.034		
40																																
45S																																

32

LONGITUDE

TABLE IV. - Continued. GASP AMBIENT OZONE DATA BY LATITUDE FOR APRIL

(f) Flight level 390

APRIL
FL 390

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

		MEAN												LAT				
70N																		70N
65				.619 .075 4	.588 .128 130	.611 1								.589 .126 135	.601 .713 .809			65
60			.626 .177 135	.491 .310 64	.571 .170 14	.590 .068 13	.607 .140 30							.585 .219 256	.461 .797 .914			60
55			.656 .195 143	.591 .186 40	.622 .125 17	.554 .172 55	.497 .151 70	.497 .635 .866						.595 .189 325	.612 .778 .965			55
50			.643 .170 66	.311 .189 43	.367 .232 32	.506 .175 36	.443 .192 19							.482 .230 198	.344 .715 .877			50
45	.513 .068 3		.576 .283 14	.422 .239 138	.374 .232 110	.436 .322 129	.436 .164 47							.421 .262 441	.416 .730 .927			45
40	.566 .578 .583		.397 .270 46	.375 .234 80	.386 .235 176	.282 .212 545	.461 .136 6							.320 .228 853	.225 .594 .821			40
35			.298 .187 11	.342 .171 8	.189 .114 129	.245 .182 121								.223 .158 269	.184 .355 .729			35
30			.067 .009 5	.119 .031 22	.135 .064 129	.120 .031 16								.129 .059 172	.110 .198 .266			30
25	.049 1		.076 .007 17		.167 .100 112	.081 .031 14								.147 .097 144	.115 .238 .417			25
20			.083 .015 7	.083 .007 4	.147 .058 22	.100 .022 8	.051 .007 5							.113 .055 46	.099 .170 .245			20
15		.047 .013 2				.052 .017 3	.052 .002 5							.051 .012 10	.045 .058 .074			15
10		.047 .056 .059			.045 .006 10		.044 .008 3							.045 .006 13	.045 .049 .055			10
5	.017 1		.038 .007 7	.037 .010 5	.038 .010 5	.038 .006 6								.037 .009 19	.037 .047 .051			5
0			.050 .007 3	.024 .001 3		.035 .003 7								.036 .010 13	.035 .042 .056			0
5				.066 .026 7		.043 .002 4								.058 .024 11	.045 .083 .086			5
10			.072 .004 5	.051 .026 5		.041 .003 6								.054 .019 16	.041 .075 .084			10
15			.069 .004 5	.038 .011 5		.036 .003 2								.050 .017 12	.049 .066 .074			15
20	.049 .004 2			.025 .002 8		.025 .027 .028								.030 .010 10	.026 .038 .052			20
25		.045 1	.019 .004 6	.024 .003 2										.023 .009 3	.019 .027 .042			25
30		.040 .001 2	.018 .002 4											.025 .010 6	.020 .039 .040			30
35			.056 .051 22											.056 .051 22	.040 .114 .141			35
40																		40
45S																		45S

LONGITUDE

33

TABLE IV. - Concluded. GASP AMBIENT OZONE DATA BY LATITUDE FOR APRIL

(h) Flight level 430

APRIL
FL 430

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

LAT	MEAN												LAT															
	15E			105E			150E			75W				15E														
70N																	70N											
65																	65											
60																	60											
55						.530	.099	9							.530	.099	9	55										
50						.515	.577	734						.378	.074	4	.620	.171	17	50								
45						.695	.114	13						.345	.130	.497	.633	.786	900	45								
40						.667	.803	.901						.384	.105	.42	.294	.038	9	.487	.195	81	40					
35						.675	.127	15						.401	.486	.562	.308	.326	.340	.469	.718	906	35					
30						.490	.156	41						.260	.127	.45	.236	.404	.543	.356		1	.373	.174	97	30		
25						.511	.654	.765						.270	.067	4	.295	.434	.461				.248	.345	.499	9	25	
20						.289	.127	5						.315	.097	10	.190	.011	2				.218	.236	.250	24	20	
15						.248	.374	.506						.190	.197	.201	.190	.197	.201				.078	.005	8	15		
10																							.080	.082	.083	8	10	
5																												5
0																												0
5																												5
10																												10
15																												15
20																												20
25																												25
30																												30
35																												35
40																												40
45S																												45S

35

TABLE V. - Continued. GASP AMBIENT OZONE DATA BY LATITUDE FOR MAY

(d) Flight level 350

MAY
FL 350

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

													MEAN			LAT								
70N																	.604	.603	.6		.604	.603	.6	70N
																	.605	.643	.655		.605	.643	.655	
65																	.584	.009	4		.636	.010	2	65
																	.585	.592	.594		.636	.643	.646	
60																	.552	.185	9		.500	.110	19	60
																	.646	.673	.690		.485	.627	.658	
55																	.299	.167	21		.337	.195	18	55
																	.303	.509	.577		.465	.504	.543	
50																	.267	.225	38		.193	.162	23	50
																	.253	.541	.636		.126	.374	.577	
45																	.101	.097	10		.129	.097	33	45
																	.062	.146	.323		.087	.249	.364	
40																	.315	.064	3		.152	.137	218	40
																	.340	.384	.401		.080	.102	.262	
35																	.059	.045	16		.139	.109	36	35
																	.044	.115	.148		.088	.252	.433	
30																	.075	.051	16		.090	.005	2	30
																	.067	.128	.161		.077	.102	.261	
25																	.008	.005	10		.037	.005	10	25
																	.006	.014	.017		.036	.041	.044	
20																	.006	.002	3		.067	.033	61	20
																	.005	.008	.009		.040	.013	.072	
15																	.042	.011	6		.027	.027	.042	15
																	.041	.054	.056		.013	.027	.042	
10																	.024	.008	5		.012	.006	16	10
																	.028	.031	.032		.015	.017	.021	
5																	.016	.001	6		.013	.006	5	5
																	.015	.016	.018		.014	.017	.019	
0																	.018	.007	10		.015	.004	6	0
																	.017	.021	.034		.014	.018	.022	
5																	.025	.005	8		.021	.008	8	5
																	.023	.030	.033		.022	.030	.031	
10																	.024	.004	6		.022	.010	16	10
																	.024	.027	.029		.018	.031	.040	
15																	.027	.005	6		.017	.006	15	15
																	.026	.031	.031		.045	.046	.046	
20																	.031	.005	7		.013	.008	9	20
																	.029	.037	.040		.015	.021	.025	
25																	.029	.008	8					25
																	.028	.033	.042					
30																	.025	.005	4					30
																	.024	.029	.032					
35																	.033	.010	8		.053		1	35
																	.032	.039	.053					
40																								40
45S																								45S

LONGITUDE

39

TABLE V. - Continued. GASP AMBIENT OZONE DATA BY LATITUDE FOR MAY

(f) Flight level 390

MAY
FL 390

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

LAT	MEAN												LAT											
	15E	60E	105E	150E	165W	120W	75W	30W	15E															
70N						.724 .727	.034 .757	6 .766					.724 .727	.034 .757	6 .766	70N								
65				.560	1	.706 .726	.096 .768	13 .842	.624 .621	.041 .654	11 .704	.596 .631	.107 .710	27 .751	.502	1	.626 .632	.102 .727	53 .783					
60				.620 .634	.119 .749	24 .819	.594 .617	.148 .706	38 .765	.672 .630	.099 .793	18 .874	.412 .416	.054 .457	4 .479	.483 .500	.082 .523	8 .599	.598 .601	.139 .721	92 .837			
55				.647 .649	.096 .754	63 .809	.256 .248	.084 .341	6 .363	.644 .642	.018 .660	6 .673	.444 .456	.104 .548	43 .586	.569 .591	.146 .695	28 .750	.556 .520	.152 .686	146 .769			
50				.485 .537	.173 .660	53 .708	.345 .345	.019 .359	4 .369	.626		1	.341 .328	.154 .519	81 .622	.566 .621	.133 .668	21 .702	.432 .400	.179 .628	140 .697			
45	.110 .060	.079 .186	5 .239	.311 .329	.225 .581	16 .651	.342 .339	.227 .620	106 .708	.386 .388	.233 .627	80 .711	.385 .404	.203 .619	103 .754	.253 .141	.213 .533	71 .649	.425 .408	.197 .641	13 .654	.345 .220	.225 .614	394 .738
40				.125 .085	.128 .269	26 .458	.127 .067	.118 .295	39 .413	.249 .137	.235 .627	30 .702	.286 .223	.181 .505	270 .683	.114 .067	.148 .091	17 .526		.248 .183	.188 .488	382 .680		
35				.126 .096	.094 .143	15 .371	.074 .062	.019 .089	18 .102	.143 .102	.094 .237	40 .376	.182 .165	.103 .263	98 .473	.164 .164	.047 .195	2 .208		.157 .117	.100 .244	173 .444		
30				.081 .067	.035 .101	5 .144	.078 .063	.027 .107	6 .125	.128 .093	.115 .191	142 .528	.147 .094	.122 .264	49 .479	.066 .061	.041 .104	6 .129		.128 .082	.114 .192	208 .505		
25				.069 .082	.027 .089	3 .093				.097 .085	.062 .163	91 .261	.042 .043	.030 .059	38 .101	.025 .032	.012 .035	3 .036		.079 .067	.060 .135	135 .239		
20				.041 .030	.024 .060	25 .105				.053 .039	.033 .087	23 .127	.028 .028	.019 .050	33 .070	.029 .026	.016 .026	9 .065		.038 .031	.026 .062	80 .103		
15				.029 .033	.011 .039	9 .046	.036 .038	.009 .043	8 .047	.033 .031	.012 .037	24 .067	.027 .026	.009 .034	10 .043	.057 .050	.031 .096	6 .098		.034 .031	.017 .043	57 .092		
10										.029 .030	.008 .038	29 .044			.035 .028	.025 .065	16 .085		.031 .029	.017 .040	45 .078			
5		.030	1	.054 .054	.009 .059	2 .062	.033 .032	.012 .046	26 .053				.018 .009	.019 .048	28 .057				.026 .027	.018 .047	57 .060			
0				.022 .019	.015 .033	5 .044	.031 .030	.010 .037	28 .053				.011 .008	.010 .024	28 .032				.021 .022	.014 .033	61 .046			
5				.062		1	.035 .031	.016 .049	38 .078				.014 .010	.013 .034	20 .039				.028 .028	.018 .044	59 .076			
10				.037 .035	.010 .044	31 .062	.031 .028	.007 .038	17 .044				.023 .020	.012 .038	14 .047				.032 .027	.011 .044	62 .059			
15				.040 .035	.018 .060	34 .072	.040 .044	.008 .046	6 .048				.023 .016	.012 .031	13 .047				.036 .033	.018 .053	53 .070			
20				.048 .051	.017 .064	31 .083	.047 .049	.004 .049	6 .051				.015 .018	.006 .020	6 .021				.043 .046	.018 .059	43 .082			
25				.056 .037	.052 .086	43 .203	.081 .058	.005 .064	4 .068				.025		1				.055 .039	.049 .080	48 .191			
30				.084 .058	.072 .124	49 .308													.084 .058	.072 .124	49 .308			
35				.133 .095	.100 .231	81 .397													.133 .095	.100 .231	81 .397			
40																								
45S																								

41

LONGITUDE

TABLE V. - Concluded. GASP AMBIENT OZONE DATA BY LATITUDE FOR MAY

(h) Flight level 430

MAY
FL 430

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

43

	MEAN												LAT								
70N																					
65																					
60																					
55												.463		1		.463	1				
50										.954	.055	5	.388	.065	10	.577	.277	15			
										.978	1.005	1.011	.339	.459	.555	.444	.960	1.009			
45			.527	.032	2	.499	.027	7	.241	.073	6	.575	.107	12	.491	.116	9	.481	.145	36	
			.527	.549	.558	.498	.517	.580	.249	.285	.359	.582	.673	.724	.503	.611	.640	.449	.619	710	
40			.589	.065	7				.193	.131	17	.367	.212	50				.348	.214	74	
			.571	.682	.690				.129	.311	.515	.309	.594	.980				.285	.580	907	
35			.539		1				.316	.124	12	.299	.129	30				.309	.131	43	
									.298	.358	.602	.277	.404	.604				.295	.403	660	
30			.054	.012	5				.217	.021	12							.169	.077	17	
			.053	.066	.066				.222	.233	.251							.203	.230	249	
25			.054	.004	8				.137	.032	10							.100	.048	19	
			.055	.057	.059				.131	.171	.193							.100	.152	191	
20			.065	.009	4				.039	.019	3							.054	.019	7	
			.065	.072	.077				.031	.054	.064							.064	.066	076	
15			.049	.017	8				.027	.003	3							.043	.017	11	
			.046	.068	.078				.025	.029	.031							.037	.060	077	
10			.040	.008	14													.040	.008	14	
			.040	.050	.053													.040	.050	053	
5		.048	.001	3														.047	.004	8	
		.049	.049	.049	.047	.005	5											.045	.050	053	
0						.032	1											.032		1	
5						.023	.017	3										.023	.017	3	
						.031	.036	.038										.031	.036	038	
10						.042	.017	5										.042	.017	5	
						.030	.063	.065										.030	.063	065	
15						.038	.008	8	.043	.022	30							.042	.020	38	
						.039	.044	.048	.037	.061	.102							.036	.051	102	
20																					
25																					
30																					
35						.187	.068	22										.187	.068	22	
						.154	.269	.332										.154	.269	332	
40																					
45S																					

LONGITUDE

TABLE VI. - GASP AMBIENT OZONE DATA BY LATITUDE FOR JUNE

(a) Flight level 290

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

JUNE
FL 290

		MEAN												LAT												
70N															70N											
65															65											
60															60											
55												.072	.015	12	.072	.015	12	55								
50								.079	1	.001	1				.104	.092	19	.098	.090	21	50					
45	.066	.021	13												.068	.152	346	.068	.144	346	45					
	.081	.085	.105				.050	.010	6						.080	.006	5	.075	.019	6	.068	.050	7	.066	.028	39
40							.048	.063	.064						.082	.085	.085	.079	.095	.098	.060	.109	.157	.062	.092	.121
	.118	.041	21				.082	.037	6						.065	.037	5	.090	.068	15	.060	.035	9	.091	.052	62
	.112	.153	.207				.071	.106	.150						.046	.092	.129	.079	.139	243	.076	.088	.096	.065	.135	.222
35																										
	.103	.050	11				.083	.045	15						.063	.020	6	.059	.019	13				.078	.041	47
	.095	.160	.178				.072	.098	.198						.058	.081	.097	.056	.074	.102				.066	.106	.183
30																										
	.083	.016	11	.079	.014	10	.050	.004	7						.063	.053	.054							.073	.019	28
	.089	.097	.105	.080	.092	.096	.053	.053	.054															.063	.095	.103
25																										
	.057	.011	7	.059	.025	8	.056	.016	12						.050	.018	5							.056	.019	32
	.055	.066	.074	.055	.089	.102	.052	.073	.079						.060	.065	.070							.049	.073	.097
20																										
				.041	.010	12	.059	.026	4						.042	.017	17							.044	.017	33
				.038	.045	.064	.069	.080	.082						.037	.055	.081							.038	.059	.086
15																										
				.024		1																		.024		1
10																										
				.026	.001	7																		.026	.001	7
				.026	.027	.028																		.026	.027	.028
5																										
				.025	.002	6																		.025	.002	6
				.026	.027	.027																		.026	.027	.027
0																										
				.026		1	.009		1															.018	.009	2
																								.018	.023	.026
5																								.019		1
10																										
							.026	.006	2						.026	.029	.031							.026	.006	2
							.026	.029	.031															.026	.029	.031
15																										
							.034	.005	2						.034	.037	.039							.034	.005	2
							.034	.037	.039															.034	.037	.039
20																										
				.029	.006	4	.038	.001	2	.035		1			.032	.006	7							.032	.006	7
				.029	.033	.037	.038	.039	.039						.035	.037	.039							.035	.037	.039
25																										
							.036	.002	7	.045		1			.037	.003	8							.036	.039	.044
							.036	.035	.039						.036	.039	.044							.036	.039	.044
30																										
							.047	.007	4	.047	.011	10			.047	.010	14							.047	.010	14
							.049	.053	.055	.044	.058	.067			.044	.056	.067							.044	.056	.067
35																										
							.054	.025	21	.039	.006	4			.051	.024	25							.051	.024	25
							.043	.072	.118	.041	.043	.043			.042	.071	.117							.042	.071	.117
40																										
45S																										

44

TABLE VI. - Continued. GASP AMBIENT OZONE DATA BY LATITUDE FOR JUNE

(c) Flight level 330

JUNE
FL 330

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

		MEAN												LAT					
70N																		70N	
65						.486	1	.327	1	.490	.113	.22				.483	.113	.24	65
						.216	.239	.606	8	.324	.148	.10				.377	.153	.37	
60						.407	.448	.483		.420	.067	.12				.456	.037	.7	60
						.092	.410	.618	9	.444	.611	.628				.467	.486	.506	
55										.299	.131	.7				.069	.014	.15	55
										.307	.397	.484				.068	.064	.091	
50										.068	.075	.9				.103	.092	.71	50
										.038	.112	.233				.135	.139	.68	
45	.144	.054	8			.119	.077	.35		.071	.037	.29				.132	.148	.80	45
	.118	.189	.254			.098	.183	.318		.069	.104	.155				.072	.255	.539	
40										.084	.060	.13				.048	.005	.7	40
										.123	.117	.32				.085	.021	.2	
35	.103	.065	30			.053	.015	.20		.039	.047	.17				.100	.100	.16	35
	.091	.151	.260			.050	.072	.078		.051	.068	.183				.060	.221	.300	
30										.072	.067	.29				.085	.099	.105	30
										.061	.105	.202				.073	.044	.197	
25	.075	.034	33			.072	.067	.29		.074	.043	.86				.061	.093	.192	25
	.061	.113	.155			.057	.084	.250		.061	.105	.202				.085	.099	.105	
20										.064	.107	.221				.046	.053	.054	20
										.044	.015	.7				.091	.053	.203	
15	.066	.026	18			.089	.018	.34		.068	.108	.295				.066	.103	.280	15
	.054	.106	.110			.066	.089	.108		.057	.031	.120				.085	.099	.105	
10										.072	.096	.102				.085	.099	.105	10
	.054	.004	6			.054	.018	.31		.050	.083	.109				.060	.028	.185	
	.051	.059	.059			.050	.061	.109		.077	.093	.098				.056	.084	.108	
5										.058	.026	.23				.052	.021	.65	5
										.062	.075	.117				.050	.073	.082	
0										.048	.015	.12				.045	.014	.34	0
										.040	.064	.076				.040	.031	.075	
45S										.027	.018	.3				.030	.010	.12	45S
										.016	.041	.052				.032	.035	.049	
40										.022	.001	.4				.026	.009	.13	40
										.022	.023	.024				.027	.028	.029	
35										.025	.007	.22				.024	.033	.043	35
										.027	.032	.038				.026	.034	.041	
30										.025	.009	.25				.025	.041	.046	30
										.028	.005	.17				.031	.009	.42	
25										.028	.033	.036				.025	.041	.046	25
										.047	.048	.053				.033	.009	.31	
20										.048	.018	.25				.033	.043	.050	20
										.048	.060	.065				.030	.013	.27	
15										.048	.020	.15				.042	.018	.49	15
										.040	.051	.102				.040	.058	.070	
10										.084	.009	.6				.070	.043	.48	10
										.088	.092	.093				.058	.090	.205	
5										.066	.033	.10				.064	.032	.45	5
										.062	.090	.133				.054	.090	.145	
0																			0
45S																			45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E										
	LONGITUDE																		

46

TABLE VI. - Continued. GASP AMBIENT OZONE DATA BY LATITUDE FOR JUNE

(f) Flight level 390

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

JUNE
FL 390

		MEAN												LAT										
70N									.590	.094	.40	.562	.114	.97	.477	.103	.6	.566	.111	.143	70N			
									.628	.667	.683	.603	.658	.691	.521	.556	.568	.549	.601	.659	.691			
65				.603	.162	5	.549	.064	108	.558	.092	109	.552	.094	111	.431	.152	46	.539	.105	379	65		
				.698	.739	.746	.531	.623	.724	.577	.636	.697	.571	.636	.682	.493	.581	.606	.549	.630	.708			
60				.533	.106	47	.562	.092	89	.535	.113	137	.529	.117	56	.381	.161	69	.513	.133	398	60		
				.523	.664	.699	.587	.630	.681	.550	.643	.691	.545	.637	.673	.434	.541	.614	.519	.635	.686			
55				.432	.216	52	.299	.134	22	.529	.124	104	.484	.224	3	.434	.108	43	.465	.167	224	55		
				.484	.650	.699	.306	.476	.494	.579	.633	.669	.626	.647	.656	.450	.523	.611	.426	.626	.689			
50				.463	.191	33	.177	.104	41	.365	.168	55	.110	.040	16	.425	.131	12	.315	.194	157	50		
				.532	.675	.729	.151	.294	.397	.381	.544	.620	.105	.145	.194	.465	.550	.594	.290	.546	.690			
45			.445	.177	8	.335	.163	67	.328	.198	69	.270	.159	70	.082	.039	28	.117	.035	20	.275	.183	262	45
			.492	.590	.647	.343	.515	.633	.328	.526	.648	.224	.410	.592	.075	.100	.199	.113	.144	.194	.174	.503	.644	
40			.294	.176	25	.136	.130	75	.330	.167	50	.196	.171	527	.172	.112	5	.458	.047	2	.203	.173	684	40
			.326	.439	.577	.088	.243	.491	.395	.497	.592	.118	.359	.667	.125	.256	.367	.458	.490	.503	.121	.411	.659	
35			.108	.127	28	.082	.026	31	.082	.073	61	.112	.075	284							.103	.078	404	35
			.082	.146	.486	.056	.085	.118	.061	.096	.307	.086	.187	.295							.076	.159	.310	
30			.074	.021	6	.042	.023	55	.108	.117	96	.051	.007	7							.083	.096	164	30
			.079	.094	.096	.036	.054	.116	.075	.155	.458	.049	.057	.061							.038	.096	.451	
25			.078	.004	7	.021	.008	4	.084	.075	82	.051	.006	7							.078	.070	100	25
			.075	.081	.086	.020	.026	.031	.058	.126	.366	.051	.058	.060							.057	.118	.355	
20	.006	.006	3	.084	.002	3	.084	.042	22	.024	.007	6									.067	.045	34	20
	.004	.011	.015	.085	.086	.086	.081	.134	.163	.026	.029	.034									.056	.108	.162	
15	.070		1				.041	.017	26	.012	.005	2									.040	.019	29	15
							.037	.064	.073	.012	.015	.016									.037	.065	.073	
10				.037	.002	3	.030	.009	31	.028	.039	.048									.030	.009	34	10
				.037	.039	.040	.037	.045	.069												.029	.039	.048	
5				.039		1	.037	.014	26												.037	.014	27	5
							.037	.045	.069												.038	.045	.068	
0				.019	.005	3	.031	.013	29												.030	.013	32	0
				.018	.023	.026	.029	.043	.055												.027	.042	.055	
5				.029		1	.039	.011	22												.038	.010	23	5
				.040	.049	.058	.040	.049	.058												.039	.049	.057	
10				.029	.012	27	.031	.005	7												.030	.011	34	10
				.027	.037	.060	.030	.035	.039												.027	.037	.056	
15	.031	.004	5	.036	.013	37															.035	.013	42	15
	.031	.034	.037	.032	.047	.069															.032	.045	.069	
20	.030	1	.027	.001	2	.049	.015	21													.047	.016	24	20
			.027	.028	.028	.049	.062	.079													.047	.061	.079	
25				.057	.010	8															.057	.010	8	25
				.055	.056	.078															.055	.056	.078	
30				.064	.022	10															.064	.022	10	30
				.058	.086	.106															.058	.086	.106	
35			.181	.025	4	.174	.086	79													.172	.084	83	35
			.132	.156	.159	.166	.250	.381													.176	.248	.380	
40																								40
45S																								45S

15E 60E 105E 150E 165W 120W 75W 30W 15E

LONGITUDE

49

TABLE VI. - Concluded. GASP AMBIENT OZONE DATA BY LATITUDE FOR JUNE

(h) Flight level 430

JUNE
FL 430

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

		MEAN												LAT							
70N																70N					
65																65					
60									.613	.104	.23	.643	.004	.2		.615	.100	.25	60		
									.641	.710	.791	.643	.646	.647		.641	.703	.790			
55				.454	.075	.31			.405	.159	.15					.438	.112	.46	55		
				.472	.505	.509			.455	.566	.663					.457	.507	.621			
50				.375	.111	.45	.434	.147	.8	.345	.196	.6				.380	.129	.59	50		
				.431	.459	.471	.405	.396	.617	.254	.614	.618				.425	.462	.617			
45			.213	.174	.17	.200	.151	.44		.322	.179	.13	.476	.105	.8	.249	.179	.82	45		
			.096	.442	.558	.118	.338	.569		.236	.544	.677	.476	.583	.605	.140	.456	.622			
40			.164	.176	.57	.105	.007	.9	.213	.095	.4	.256	.110	.27	.139	.006	.2	.185	.154	.99	40
			.079	.488	.539	.100	.115	.116	.215	.300	.334	.238	.356	.488	.139	.142	.144	.098	.351	.541	
35			.101	.047	.13	.094		.1	.059	.003	.5	.122	.049	.11		.101	.048	.30	35		
			.082	.094	.227				.059	.062	.064	.129	.171	.185		.074	.134	.214			
30									.188	.110	.13	.475		.1		.209	.128	.14	30		
									.167	.211	.440					.171	.393	.469			
25																			25		
20			.094	.002	.2											.094	.002	.2	20		
			.094	.095	.096											.094	.095	.096			
15	.074	1	.078	.010	.8											.078	.009	.9	15		
			.075	.085	.097											.074	.084	.097			
10																			10		
5																			5		
0																			0		
5																			5		
10																			10		
15																			15		
20																			20		
25				.096	.1											.096	.1		25		
30			.101	.012	.7	.103	.109	.118								.101	.012	.7	30		
																.103	.109	.118			
35			.115	.012	.3	.108	.124	.131								.115	.012	.3	35		
																.108	.124	.131			
40																			40		
45S																			45S		
	15E	60E	105E	150E	165W	120W	75W	30W	15E												

51

LONGITUDE

TABLE VII. - GASP AMBIENT OZONE DATA BY LATITUDE FOR JULY

(a) Flight level 290

JULY
FL 290

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

52

		MEAN												LAT											
70N																	70N								
65					.097	1				.086	.016	6	.082	.015	4	.085	.015	11	65						
										.080	.093	.116	.079	.095	.103	.080	.100	.116							
60										.130	.013	2	.068	.004	3	.092	.031	5	60						
										.130	.138	.142	.066	.071	.073	.073	.126	.140							
55													.095	.022	4	.095	.022	4	55						
													.093	.116	.126	.093	.116	.126							
50													.093	.089	18	.093	.089	18	50						
													.072	.089	.344	.072	.089	.344							
45	.078	.026	20						.055	.029	4	.079	.006	2	.110	.004	2	.074	.016	8	45				
	.080	.095	.132						.042	.076	.101	.079	.083	.085	.110	.112	.113	.070	.082	.104	.066	.103	.123		
40	.082	.030	15						.082	.028	4	.079	.018	13	.083	.043	6	.081	.029	38	.067	.122	.135	40	
	.067	.122	.135						.094	.100	.105	.076	.095	.113	.103	.114	.126	.056	.111	.131					
35	.061	.030	37			.081	1		.058	.018	8	.077	.035	11				.064	.030	57	.054	.067	.144	35	
	.054	.067	.144						.059	.076	.082	.066	.120	.135				.055	.076	.136					
30	.068	.004	4															.068	.004	4	.067	.072	.075	30	
	.067	.072	.075															.067	.072	.075					
25	.056	.019	7	.045	.013	2	.056	.005	3	.040	.013	7						.049	.017	19	.048	.076	.089	25	
	.048	.076	.089	.045	.053	.057	.055	.060	.063	.042	.014	12						.050	.058	.085					
20				.033	.008	19				.042	.014	12						.037	.012	31				20	
				.032	.041	.044				.044	.056	.063						.039	.046	.060					
15				.022	.003	4	.040	.006	10	.027	1		.019	1				.033	.010	16				15	
				.022	.025	.025	.041	.044	.050										.036	.043	.049				
10				.028	.006	9	.026	.012	7									.027	.039	16				10	
				.027	.032	.040	.033	.040	.040										.027	.037	.041				
5				.023	.004	6	.013	.001	6									.018	.005	12				5	
				.025	.025	.027	.013	.014	.014									.015	.025	.027					
0				.029		1	.013	.003	8									.014	.006	9				0	
							.012	.016	.017									.012	.017	.027					
5							.016	.002	18									.016	.002	18				5	
							.017	.018	.020									.017	.018	.020					
10							.019	.004	8									.019	.004	8				10	
							.018	.023	.026									.018	.023	.026					
15							.027	.004	7	.019	1							.026	.005	8				15	
							.026	.026	.036									.024	.026	.035					
20																								20	
25							.052	.007	13									.052	.007	13				25	
							.052	.060	.063									.052	.060	.063					
30							.048	.019	12									.048	.019	12				30	
							.049	.053	.092									.049	.053	.092					
35							.045	.009	2	.076	.019	4						.065	.022	6				35	
							.045	.051	.054	.083	.091	.093						.061	.089	.093					
40																								40	
45S																								45S	
	15E	60E	105E	150E	165W	120W	75W	30W	15E																
	LONGITUDE																								

TABLE VII. - Continued. GASP AMBIENT OZONE DATA BY LATITUDE FOR JULY

(c) Flight level 330

JULY
FL 330

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

		MEAN												LAT								
70N										.417	.163	9				.417	.163	9	70N			
										.504	.584	.590				.504	.584	.590				
65										.196	.153	3	.188	.015	2	.193	.119	5	65			
										.107	.314	.400	.188	.198	.202	.173	.278	.395				
60									.150	.061	11	.220	.056	8	.147	.105	19	.163	.090	38	60	
									.135	.182	.289	.214	.276	.317	.089	.237	.392	.132	.232	.375		
55							.193	.165	3	.082	1	.056	.001	2	.211	.130	40	.239	.170	60	55	
							.077	.314	.412			.150	.397	.457	.134	.464	.565	.109	.422	.546		
50							.088	.025	14			.088	.013	5	.160	.109	75	.193	.118	44	50	
							.077	.106	.147			.092	.100	.105	.148	.346	.427	.112	.311	.432		
45	.092	1					.110	.065	26	.071	.022	6	.090	.039	24	.129	.029	36	.110	.048	93	45
							.087	.174	.263	.058	.100	.105	.083	.102	.197	.127	.153	.188	.101	.146	.249	
40	.093	.048	31				.070	.039	28	.123	.040	9	.090	.048	34	.102	.018	10	.090	.046	121	40
	.083	.130	.216				.065	.089	.178	.112	.169	.183	.081	.113	.197	.098	.117	.140	.073	.125	.213	
35	.060	.025	28				.069	.043	14	.067	.042	99	.077	.034	14				.067	.039	157	35
	.054	.081	.125				.062	.112	.164	.056	.095	.162	.078	.105	.145				.056	.099	161	
30	.057	.010	23				.055	.011	43	.058	.039	145	.121	.021	14				.061	.036	225	30
	.055	.064	.072				.056	.062	.078	.044	.089	.166	.127	.136	.152				.053	.090	159	
25							.040	.009	39	.051	.033	120	.109	.017	14				.053	.033	174	25
							.038	.050	.056	.042	.078	.141	.107	.125	.144				.041	.089	142	
20							.037	.005	10	.049	.016	17	.100	.016	8				.043	.027	88	20
							.038	.040	.042	.050	.062	.074	.102	.114	.124				.030	.065	111	
15							.030	.006	7	.025	.009	11	.063	.012	5				.037	.021	64	15
							.030	.034	.041	.026	.033	.043	.030	.054	.100				.026	.055	094	
10							.025	.006	17	.018	.001	3				.041	1		.025	.007	21	10
							.025	.029	.037	.017	.018	.019							.024	.029	034	
5							.027	.006	8	.019	.005	5							.024	.007	13	5
							.028	.033	.034	.019	.024	.027							.026	.029	034	
0							.025	.007	13	.017	.002	10	.024	.005	4				.022	.006	27	0
							.025	.033	.034	.017	.019	.021	.024	.029	.031				.019	.030	034	
5							.029	.006	7	.022	.004	9	.018	.002	8				.023	.006	24	5
							.025	.036	.038	.019	.026	.026	.019	.019	.019				.019	.026	037	
10							.029	.005	9	.024	.005	12	.024	.008	10				.025	.007	31	10
							.029	.032	.035	.025	.030	.033	.021	.034	.037				.026	.032	036	
15							.028	.004	5	.025	.005	8	.028	.005	5				.027	.005	18	15
							.029	.031	.033	.023	.031	.034	.031	.031	.032				.027	.031	034	
20							.031	.007	12	.038	.014	18	.030	.009	8				.034	.012	38	20
							.033	.035	.041	.035	.055	.065	.024	.041	.044				.029	.042	063	
25							.055	.022	26	.050	.017	15							.053	.020	41	25
							.056	.068	.111	.051	.069	.078							.053	.070	109	
30							.076	.019	24	.069	.029	25							.072	.025	49	30
							.072	.098	.114	.057	.102	.131							.066	.101	122	
35							.071	.027	32	.148	.148	8							.087	.077	40	35
							.062	.097	.138	.081	.220	.464							.059	.106	288	
40							.091	.026	2										.091	.026	2	40
							.091	.109	.116										.091	.109	.116	
45S																						45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E													

LONGITUDE

TABLE VII. - Continued. GASP AMBIENT OZONE DATA BY LATITUDE FOR JULY

(d) Flight level 350

JULY
FL 350

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

		MEAN												LAT																	
70N														.559	.051	.11				.559	.051	.11	70N								
														.555	.626	.637				.555	.626	.637									
65						.117		1	.388	.084	.28		.309	.182	.13				.306	.133	.14	.317	.192	.13	.339	.150	.89	65			
									.413	.451	.461		.422	.496	.501				.346	.428	.461	.424	.509	.548	.411	.466	.522				
60						.377	.145	.12	.075	.008	.6		.385	.183	.62				.212	.080	.6	.231	.159	.63	.300	.185	.149	60			
						.375	.533	.576		.073	.083	.088		.454	.561	.600				.222	.278	.315	.158	.396	.608	.268	.529	.604			
55						.173	.078	.15	.219	.195	.17		.323	.168	.72				.297	.177	.22	.135	.101	.75	.230	.168	.201	55			
						.140	.261	.326		.101	.458	.567		.297	.514	.589				.404	.453	.490	.101	.185	.497	.154	.464	.561			
50						.071	.067	.14	.280	.179	.12		.178	.145	.73				.225	.156	.84	.205	.156	.93	.200	.156	.276	50			
						.050	.125	.234		.232	.523	.532		.103	.380	.489				.139	.448	.510	.143	.429	.554	.118	.428	.546			
45	.157	.129	.60						.068	.054	.38		.203	.176	.22				.106	.081	.78	.136	.083	.47	.299	.160	.6	.131	.115	.251	45
	.097	.294	.535						.047	.097	.208		.137	.445	.538				.077	.113	.231	.114	.144	.219	.318	.456	.468	.091	.200	.505	
40	.098	.058	.93					.061	.017	.13		.126	.084	.11				.086	.053	.152	.117	.047	.11				.099	.069	.379	40	
	.083	.137	.278					.057	.076	.094		.083	.225	.78				.095	.185	.423	.103	.144	.219				.081	.141	.319		
35	.054	.017	.43					.075	.034	.10		.055	.007	.9				.079	.050	.198	.078	.037	.39				.075	.045	.299	35	
	.050	.074	.087					.087	.104	.123		.051	.063	.068				.068	.120	.233	.084	.115	.147				.063	.113	.223		
30	.074	.016	.13	.062	.013	.9		.091	.002	.8		.078	.026	.15				.055	.038	.311							.058	.037	.356	30	
	.071	.089	.107	.057	.075	.088		.091	.093	.094		.072	.111	.122				.047	.081	.164							.052	.085	.181		
25	.038	.003	.5	.080	.008	.9		.073	.026	.12		.068	.037	.24				.050	.030	.265	.131	.011	.6				.055	.032	.321	25	
	.037	.041	.043	.061	.088	.092		.077	.093	.108		.052	.106	.151				.044	.077	.115	.128	.137	.150				.047	.087	.131		
20				.034	.018	.16		.042	.036	.7		.044	.020	.60				.040	.020	.62	.088	.033	.10				.044	.025	.155	20	
				.026	.046	.076		.025	.093	.100		.039	.067	.084				.032	.056	.098	.105	.119	.121				.036	.067	.118		
15				.031	.007	.26		.034	.013	.62		.029	.009	.34				.042	.020	.22	.049	.007	.19				.035	.014	.163	15	
				.030	.038	.044		.036	.045	.062		.028	.042	.046				.037	.056	.092	.048	.057	.064				.034	.047	.068		
10				.026	.006	.22		.022	.007	.11		.018	.002	.9				.033	.004	.11	.052	.006	.8				.032	.013	.65	10	
				.026	.031	.042		.021	.030	.034		.018	.020	.021				.033	.036	.043	.053	.058	.060				.044	.056	.079		
5				.026	.004	.21		.023	.003	.9		.019	.002	.4				.056	.017	.7							.024	.002	.45	5	
				.027	.029	.032		.023	.025	.029		.019	.020	.021				.084	.069	.072							.024	.026	.028		
0				.027	.008	.18		.020	.007	.19		.019	.002	.7				.029	.006	.7							.026	.004	.54	0	
				.027	.032	.045		.018	.030	.033		.020	.020	.021				.029	.035	.039							.024	.029	.031		
5				.022	.006	.21		.015	.003	.22		.018	.003	.6				.030	.004	.2							.019	.006	.51	5	
				.023	.028	.034		.016	.019	.021		.018	.020	.022				.030	.033	.034							.018	.025	.034		
10				.021	.003	.12		.018	.004	.26		.021	.000	.3													.019	.004	.41	10	
				.021	.023	.027		.017	.022	.028		.021	.021	.021													.019	.022	.028		
15				.028	.008	.16		.027	.006	.29		.048	.028	.12													.031	.016	.57	15	
				.026	.032	.047		.028	.033	.034		.048	.067	.094													.028	.035	.091		
20				.033	.006	.14		.033	.013	.17		.059	.037	.17													.042	.026	.48	20	
				.033	.035	.047		.028	.044	.065		.057	.094	.191													.031	.062	.116		
25								.052	.015	.20		.046	.030	.26													.049	.025	.46	25	
								.053	.066	.079		.047	.083	.107													.031	.068	.103		
30								.097	.042	.17		.081	.064	.41													.086	.059	.58	30	
								.090	.135	.199		.078	.145	.230													.062	.142	.229		
35								.098	.082	.73		.172	.084	.21													.114	.091	.94	35	
								.065	.130	.391		.141	.305	.335													.069	.189	.385		
40								.111	.025	.3																	.111	.025	.3	40	
								.114	.132	.140																	.114	.132	.140		
45S																														45S	

55

TABLE VII. - Continued. GASP AMBIENT OZONE DATA BY LATITUDE FOR JULY

(e) Flight level 370

JULY
FL 370

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

LAT	MEAN												LAT												
	15E	60E	105E	150E	165W	120W	75W	30W	15E	60E	105E	150E													
70N						.507	.102	17	.428	.144	28							.458	.135	45	70N				
						.533	.581	.612	.463	.585	.635							.507	.586	.630					
65						.322	.167	55	.528	.086	21	.382	.129	43	.322	.164	30	.368	.163	149	65				
						.320	.522	.573	.545	.696	.620	.408	.513	.582	.315	.518	.551	.377	.534	.604					
60					.394	.153	20	.353	.168	70	.452	.106	33	.374	.145	33	.305	.192	33	.370	.165	189	60		
					.465	.509	.620	.369	.532	.570	.476	.564	.614	.433	.502	.549	.314	.490	.616	.414	.531	.613			
55					.262	.167	59	.176	.149	26	.454	.111	45	.389	.143	67	.302	.139	45	.331	.169	242	55		
					.247	.460	.535	.105	.381	.469	.494	.527	.572	.433	.519	.554	.292	.460	.522	.254	.516	.355			
50					.205	.160	75	.249	.201	49	.196	.137	44	.268	.153	46	.197	.106	24	.224	.162	238	50		
					.129	.373	.554	.137	.511	.616	.167	.311	.534	.211	.466	.527	.225	.316	.327	.112	.432	.564			
45			.090	1	.178	.155	79	.168	.157	29	.144	.081	73	.159	.121	68	.112	.022	8	.160	.127	258	45		
					.109	.426	.517	.096	.382	.493	.116	.228	.343	.127	.247	.528	.118	.123	.143	.094	.269	.510			
40	.128	.069	12	.047	1	.070	.032	37	.130	.102	27	.097	.081	52	.092	.064	395	.142	.099	14	.095	.069	538	40	
	.096	.194	.282			.069	.095	.139	.095	.153	.407	.071	.138	.340	.083	.121	300	.109	.185	.402	.081	.124	.339		
35	.088	.029	5			.117	.064	17	.077	.025	12	.072	.044	238	.098	.068	57				.090	.051	329	35	
	.105	.112	.116			.114	.158	.263	.074	.103	.122	.066	.100	.175	.092	.142	.286				.071	.113	.270		
30	.081	.006	5	.071	.007	3			.066	.031	16	.065	.047	447	.050	.017	3				.065	.046	474	30	
	.079	.087	.088	.070	.077	.080			.062	.076	.146	.053	.090	.235	.047	.065	.072				.054	.086	.228		
25				.043	.012	14	.049	.012	4	.084	.059	12	.048	.030	387						.048	.031	417	25	
				.047	.053	.057	.047	.061	.064	.053	.175	.191	.040	.075	.129						.041	.074	.146		
20				.037	.016	19	.042	.006	15	.069	.037	54	.048	.028	66	.082	.022	5			.054	.032	159	20	
				.036	.048	.077	.042	.049	.050	.060	.097	.139	.044	.071	.098	.068	.102	.119			.048	.081	.122		
15				.026	.007	7	.039	.012	39	.041	.016	4	.034	.014	13	.055	.010	18	.030	.007	3	.040	.014	84	15
				.024	.034	.038	.038	.050	.066	.034	.053	.067	.042	.047	.056	.054	.065	.075	.030	.036	.039	.033	.055	.070	
10				.016		1				.023	.007	3	.025	.013	25	.066	.013	11	.063	.022	14	.043	.025	54	10
										.022	.029	.032	.027	.037	.051	.062	.077	.093	.060	.085	.105	.023	.067	.096	
5				.021	.002	13				.027	.008	13	.043	.019	24							.033	.017	50	5
				.021	.023	.024				.022	.034	.041	.041	.057	.082							.023	.051	.068	
0										.032	.008	6	.048	.016	15							.043	.016	21	0
										.037	.038	.041	.040	.066	.077							.037	.065	.077	
5										.034	.004	6	.028	.012	26							.029	.012	32	5
										.035	.037	.040	.028	.036	.055							.029	.036	.054	
10										.042	.014	21	.038	.013	7							.041	.014	28	10
										.048	.055	.058	.042	.053	.055							.041	.054	.058	
15										.038	.012	17										.039	.012	17	15
										.043	.048	.061										.043	.048	.061	
20							.025	.003	2	.042	.008	11										.040	.010	13	20
							.025	.027	.028	.045	.049	.053										.043	.047	.053	
25							.025	.004	6	.051	.004	6										.038	.013	12	25
							.024	.027	.032	.051	.054	.058										.034	.051	.068	
30							.063	.030	6	.158		1										.077	.043	7	30
							.053	.034	.113													.054	.118	.153	
35							.139	.063	64	.264	.188	40										.187	.140	104	35
							.127	.204	.281	.184	.337	.720										.115	.270	.695	
40							.103	.042	4													.103	.042	4	40
							.082	.132	.170													.082	.132	.170	
45S																									45S

56

LONGITUDE

TABLE VII. - Continued. GASP AMBIENT OZONE DATA BY LATITUDE FOR JULY

(f) Flight level 390

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

JULY
FL 390

		MEAN												LAT						
70N									.577	.093	9	.574	.074	12		.575	.083	21	70N	
									.578	.674	.679	.584	.652	.665		.581	.664	.678		
65					.414	.016	3	.399	.165	95	.540	.106	41	.441	.171	29	.593	.004	3	65
					.418	.428	.431	.469	.549	.602	.564	.626	.680	.517	.801	.629	.593	.596	.598	
60					.419	.146	92	.355	.155	65	.509	.103	62	.476	.129	89	.370	.174	30	60
					.460	.555	.620	.338	.534	.608	.504	.602	.698	.503	.614	.670	.342	.582	.610	
55					.364	.155	66	.315	.115	36	.448	.166	81	.326	.163	49	.280	.107	100	55
					.366	.534	.614	.311	.417	.557	.529	.585	.641	.315	.526	.633	.292	.373	.485	
50					.255	.185	128	.333	.182	95	.315	.185	45	.182	.128	51	.292	.111	48	50
					.180	.494	.562	.348	.540	.594	.287	.545	.588	.153	.316	.517	.315	.403	.443	
45					.099	.021	4	.184	.145	96	.197	.135	52	.252	.190	14	.163	.120	62	45
					.104	.118	.121	.115	.378	.539	.157	.340	.476	.135	.491	.554	.127	.226	.542	
40	.062	.009	10		.085	.024	17	.106	.063	55	.140	.101	24	.124	.080	167	.154	.048	5	40
	.064	.067	.078		.083	.114	.118	.089	.179	.268	.077	.253	.313	.097	.180	.370	.137	.211	.213	
35	.092	.011	4		.098	.068	19	.082	.086	28	.082	.034	23	.097	.052	62	.119	.023	6	35
	.086	.100	.110		.086	.107	.282	.069	.081	.290	.061	.128	.136	.085	.158	.225	.127	.136	.145	
30	.085	.011	3	.065	.017	5					.107	.093	87	.129	.016	14	.078	.002	3	30
	.081	.094	.099	.057	.079	.094					.078	.179	.411	.127	.143	.159	.078	.079	.080	
25				.051	.005	8	.045	.008	8		.073	.089	46	.133	.008	8				25
				.051	.052	.061	.046	.046	.061		.052	.076	.436	.134	.139	.144				
20				.067	.002	2	.042	.008	16		.031	.018	11	.117		1				20
				.067	.068	.069	.041	.050	.057		.018	.052	.060							
15							.030	.006	8		.055	.022	15							15
							.029	.037	.040		.054	.064	.103							
10											.041	.011	23							10
											.038	.049	.066							
5											.049	.010	25							5
											.049	.058	.070							
0											.035	.025	31							0
											.027	.062	.090							
5											.035	.018	26							5
											.042	.050	.053							
10							.026	.017	23		.038	.020	5							10
							.026	.045	.053		.049	.055	.058							
15							.026	.015	17		.028	.035	.058							15
							.046	.038	12		.031	.066	.125							
20							.061	.070	11		.011	.151	.161							20
							.031	.066	.125											
25							.061	.070	11		.011	.151	.161							25
							.011	.151	.161											
30							.139	.027	16	.045	.037	7								30
							.144	.162	.176	.050	.069	.109								
35							.210	.119	6	.116	.091	22								35
							.147	.350	.403	.098	.231	.252								
40																				40
45S																				45S

57

TABLE VIII. - GASP AMBIENT OZONE DATA BY LATITUDE FOR AUGUST

(a) Flight level 290

AUGUST
FL 290

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

		MEAN												LAT																		
70N																		70N														
65																		65														
60																		60														
55													.071		1		.071	1	55													
50								.037	.002	2	.067	.025	10			.081	.010	18	.078	.020	47	.076	.091	.115	.077	.030	.110	50				
45	.082	.013	20					.046	.008	6	.060	.008	7	.054	.002	3	.064	.005	10	.083	.003	3	.081	.085	.087	.069	.016	49	.067	.085	.101	45
40	.099	.038	26					.049	.011	5	.058	.005	2	.073	.017	4	.071	.035	7	.067	.015	11				.081	.035	55	.076	.111	.127	40
35	.067	.015	54					.042	.009	5				.064	.038	8	.066	.016	8	.079	.012	5				.066	.020	30	.060	.083	.106	35
30	.067	.028	34	.062	.013	26		.050		1				.058	.002	2	.087	.013	4							.066	.023	67	.059	.081	.135	30
25	.072	.028	5	.024	.013	14	.047	.002	3			.031		1	.104		1									.040	.028	24	.026	.056	.110	25
20				.034	.010	20	.039	.009	4			.035	.012	10	.063		1									.036	.011	35	.037	.047	.056	20
15				.022	.010	18	.022	.008	3			.025		1	.060		1									.024	.012	23	.025	.034	.051	15
10				.029	.007	17	.013		1						.044		1									.029	.008	19	.031	.035	.043	10
5				.026	.007	23									.041		1									.027	.008	24	.025	.034	.042	5
0				.032	.009	10	.019	.004	6																	.027	.010	16	.024	.040	.041	0
5							.018	.003	8																	.018	.003	8	.017	.022	.023	5
10							.025	.006	2	.018		1														.022	.005	3	.019	.026	.030	10
15				.072	.014	5	.018		1	.027	.003	5														.047	.025	11	.031	.076	.091	15
20				.047	.008	6	.040		1	.019		1						.048	.014	2						.043	.012	10	.042	.057	.062	20
25							.063	.024	11	.049	.067	.104	.025	.001	4											.053	.027	15	.042	.081	.103	25
30							.085	.028	15	.056	.092	.112														.065	.028	15	.056	.092	.112	30
35							.054	.017	7	.058	.067	.079	.050	.010	8											.052	.014	15	.057	.064	.077	35
40																																40
45S																																45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E																							

LONGITUDE

TABLE VIII. - Continued. GASP AMBIENT OZONE DATA BY LATITUDE FOR AUGUST

(b) Flight level 310

AUGUST
FL 310

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

61

		MEAN												LAT			
70N																	70N
65																	65
60																	60
55								.134 .050 9			.097 .034 14	.096 .040 14	.106 .044 37				55
50						.044 1	.196 .033 10			.076 .002 3	.084 .043 54	.100 .057 68				50	
45	.075 .018 17									.048 .005 3		.083 .018 10	.075 .020 30				45
40	.069 .017 75				.053 .007 3	.045 .006 6	.072 .026 7	.063 .021 14	.085 .013 7	.091 .096 .098	.085 .010 3	.068 .019 115				40	
35	.064 .017 32				.055 .016 13			.067 .036 32		.057 .010 4		.064 .026 81				35	
30	.066 .013 21	.047 .010 50			.052 .004 3			.065 .026 9	.066 1			.054 .016 84				30	
25	.047 .008 15	.034 .009 26			.043 .008 8	.042 .002 4	.041 .004 2					.040 .010 55				25	
20		.027 .006 31			.041 .003 5	.038 .009 12	.032 .012 14					.031 .010 62				20	
15		.026 .008 35			.020 .008 7	.017 .009 13	.026 .007 18	.067 1				.024 .010 74				15	
10		.030 .006 27				.022 1	.019 .003 8	.041 .010 2	.042 1			.028 .008 39				10	
5		.025 .007 21				.014 .006 6						.023 .009 27				5	
0		.041 .003 7			.031 .008 8				.066 1			.038 .010 16				0	
5		.034 .005 10			.024 .006 22				.062 .002 4			.031 .013 35				5	
10		.033 .008 11			.023 .006 25	.036 1			.071 .002 4			.031 .015 41				10	
15					.027 .005 16	.032 1			.066 .001 5			.036 .017 22				15	
20	.042 1				.028 .004 19	.056 1			.057 .005 7			.037 .014 28				20	
25					.042 .022 40	.027 1			.055 .060 .066			.042 .022 42				25	
30					.059 .022 35				.061 1			.059 .022 35				30	
35					.099 .088 8	.085 .031 8						.092 .066 16				35	
40					.070 .108 294	.083 .102 144						.060 .108 272				40	
45S																45S	
	15E	60E	105E	150E	165W	120W	75W	30W	15E								
	LONGITUDE																

TABLE VIII. - Continued. GASP AMBIENT OZONE DATA BY LATITUDE FOR AUGUST

(f) Flight level 390

AUGUST
FL 390

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

65

		MEAN												LAT								
70N										.529	.016	6	.513	.047	2			.525	.028	8	70N	
										.536	.541	.546	.513	.545	.558			.536	.546	.558		
65										.270	.118	96	.380	.106	38			.321	.132	153	65	
										.292	.393	.455	.377	.489	.521			.340	.462	.539		
60										.291	.115	54	.294	.129	76			.323	.125	217	60	
										.306	.397	.475	.323	.432	.481			.360	.444	.518		
55										.304	.097	59	.328	.133	19			.322	.106	170	55	
										.302	.394	.483	.273	.468	.500			.300	.371	.431		
50										.194	.140	148	.172	.116	111			.190	.127	342	50	
										.144	.382	.499	.142	.287	.458			.129	.190	.272		
45	.213	.088	8							.102	.004	2	.125	.110	125			.171	.063	27	45	
	.171	.329	.348							.102	.105	.106	.158	.421	.515			.157	.215	.340		
40	.060	.009	13							.113	.051	13	.106	.036	27			.085	.057	406	40	
	.060	.067	.078							.093	.140	.244	.096	.151	.184			.063	.121	.278		
35	.037	.003	2							.065	.032	36	.081	.043	19			.066	.029	182	35	
	.037	.039	.040							.066	.097	.121	.078	.119	.173			.056	.093	.139		
30										.057	.024	62	.082	.027	28			.068	.030	111	30	
										.055	.073	.112	.086	.108	.135			.063	.096	.133		
25	.071	.009	7	.076	1					.043	.019	30	.067	.025	26			.059	.026	70	25	
	.068	.083	.086							.037	.068	.081	.076	.092	.101			.044	.063	.112		
20		.053	.008	9						.060	.024	14	.029	.015	24			.043	.023	47	20	
		.055	.060	.064						.065	.087	.096	.027	.048	.055			.046	.064	.091		
15			.027	.014	18					.027	.014	18	.029	.015	28			.028	.015	44	15	
			.028	.038	.057					.030	.045	.060	.030	.045	.060			.023	.039	.061		
10		.017	.008	16						.030	.009	4	.030	.017	31			.024	.014	66	10	
		.019	.025	.029						.028	.037	.044	.029	.047	.070			.015	.034	.057		
5		.020	.004	9						.035	.005	3	.019	.010	9	.047	.011	.030	.024	28	5	
		.022	.023	.024						.035	.039	.041	.010	.025	.030	.048	.056	.060	.056	.086		
0		.023		1	.024	1				.035	.015	24	.035	.052	.062			.078	.003	4	0	
										.035	.052	.062						.078	.081	.083		
5										.032	.015	24	.029	.052	.061			.032	.015	24	5	
										.029	.052	.061						.029	.052	.061		
10										.027	.010	23	.031	.005	4			.028	.009	27	10	
										.023	.038	.050	.028	.035	.039			.024	.039	.049		
15			.016	.002	5					.016	.002	5	.035	.013	14			.030	.014	19	15	
			.017	.018	.020					.035	.041	.062	.035	.041	.062			.026	.041	.061		
20			.018	.002	8					.018	.002	8	.031	.009	5			.023	.009	13	20	
			.017	.020	.020					.037	.039	.040	.037	.039	.040			.019	.037	.040		
25			.022	.002	7					.022	.002	7						.022	.002	7	25	
			.022	.023	.025					.022	.023	.025						.022	.023	.025		
30			.050	.021	12					.050	.021	12						.050	.021	12	30	
			.064	.067	.070					.064	.067	.070						.045	.067	.070		
35			.178	.034	3					.178	.034	3	.265	.140	43			.259	.137	46	35	
			.200	.203	.204					.200	.203	.204	.276	.424	.547			.242	.422	.546		
40																					40	
45S																					45S	
	15E	60E	105E	150E	165W	120W	75W	30W	15E													

LONGITUDE

TABLE VIII. - Concluded. GASP AMBIENT OZONE DATA BY LATITUDE FOR AUGUST

(h) Flight level 430

AUGUST
FL 430

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

		MEAN												LAT					
70N																		70N	
65																		65	
60																		60	
55					.170	.003	2						.277	.070	8	.256	.076	10	55
					.170	.172	.173						.240	.368	.403	.225	.337	.402	
50					.176	.048	12			.245	.149	5	.190	.018	4	.195	.087	21	50
					.187	.210	.219			.216	.331	.507	.191	.206	.212	.191	.215	.408	
45		.110	.083	10	.138	.069	23			.142	.087	24	.297	.056	9	.157	.095	66	45
		.096	.144	.293	.133	.202	.273			.119	.288	.321	.285	.357	.396	.088	.270	.359	
40		.076	.043	43	.084	.019	15			.118	.029	11	.313		1	.088	.048	70	40
		.066	.118	.168	.078	.093	.133			.114	.148	.167				.062	.126	.222	
35		.071	.009	6				.156	.036	7			.111	.029	4	.115	.046	17	35
		.070	.082	.085				.144	.200	.217			.101	.135	.154	.111	.151	.213	
30								.104	.019	8						.104	.019	8	30
								.096	.124	.142						.096	.124	.142	
25		.042	.009	6												.042	.009	6	25
		.039	.054	.056												.039	.054	.056	
20		.048	.014	7												.048	.014	7	20
		.044	.061	.065												.044	.061	.065	
15		.032	.014	18												.032	.014	18	15
		.032	.044	.056												.032	.044	.056	
10		.027	.015	19												.027	.015	19	10
		.026	.037	.055												.026	.037	.055	
5		.018	.004	4	.021	.007	8									.020	.006	12	5
		.018	.022	.022	.021	.027	.031									.018	.027	.031	
0																			0
5																			5
10																			10
15																			15
20																			20
25																			25
30																			30
35					.209	.025	7									.209	.025	7	35
					.202	.242	.246									.202	.242	.246	
40																			40
45S																			45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E										

67

LONGITUDE

TABLE IX. - GASP AMBIENT OZONE DATA BY LATITUDE FOR SEPTEMBER

(a) Flight level 290

MEAN	ST. DEV.	N
50%	84%	98%

SEPTEMBER
FL 290

		MEAN										LAT		
70N												70N		
65												65		
60												60		
55										.074 .014 2	.074 .014 2	55		
50										.080 .036 25	.080 .036 25	50		
45	.085 .021 20									.040 .004 3	.088 .010 6	.080 .023 29	45	
40	.081 .107 127									.039 .043 .045	.087 .100 102	.080 .102 126	40	
35	.084 .027 21									.038 .011 2	.046 .017 13	.050 .017 20	.062 .027 56	35
30	.080 .103 152									.038 .045 .049	.046 .058 .081	.046 .062 .091	.055 .085 141	30
25	.053 .012 7									.030 .011 13	.023 .012 3		.036 .017 28	25
20	.050 .065 069									.031 .037 .046	.020 .033 .038		.032 .049 .071	20
15	.055 .013 3	.065 .007 13								.043 .009 9			.056 .013 25	15
10	.063 .065 066	.064 .071 075								.042 .054 .056			.058 .069 074	10
5	.073 1									.027 .014 5			.041 .024 9	5
0										.031 .040 042			.039 .070 075	0
5		.042 .006 8								.048 .021 6			.035 .019 21	5
10		.040 .046 053								.049 .070 074			.039 .052 072	10
15		.031 .001 3									.029 .002 3		.030 .002 6	15
20		.030 .032 033									.030 .031 032		.030 .032 033	20
25		.029 .004 6									.041 1		.030 .006 7	25
30		.029 .031 035											.030 .035 040	30
35		.028 1											.028 1	35
40													.026 .003 3	40
45		.026 .003 3											.027 .029 030	45
50		.021 .002 7											.021 .002 7	50
55		.021 .022 024											.021 .022 024	55
60		.022 .000 6											.022 .000 6	60
65		.022 .022 022											.022 .022 022	65
70		.019 .001 2	.012 .012 2										.015 .009 4	70
75		.019 .019 019	.012 .020 024										.019 .022 024	75
80	.078 1		.013 .006 9										.020 .020 10	80
85			.012 .013 027										.013 .023 069	85
90		.083 .007 6	.037 .013 4								.077 1		.066 .024 11	90
95		.082 .086 094	.036 .050 052										.077 .084 090	95
100		.092 .011 2	.082 .021 11										.084 .020 13	100
105		.092 .099 103	.077 .103 119										.080 .103 118	105
110		.082 .037 8	.084 .092 4										.083 .061 12	110
115		.068 .091 164	.048 .149 229										.064 .113 226	115
120		.121 1											.121 1	120
125														125
130														130
135														135
140														140
145														145
150														150
155														155
160														160
165														165
170														170
175														175
180														180
185														185
190														190
195														195
200														200
205														205
210														210
215														215
220														220
225														225
230														230
235														235
240														240
245														245
250														250
255														255
260														260
265														265
270														270
275														275
280														280
285														285
290														290
295														295
300														300
305														305
310														310
315														315
320														320
325														325
330														330
335														335
340														340
345														345
350														350
355														355
360														360
365														365
370														370
375														375
380														380
385														385
390														390
395														395
400														400
405														405
410														410
415														415
420														420
425														425
430														430
435														435
440														440
445														445
450														450
455														455

CG

TABLE IX. - Continued. GASP AMBIENT OZONE DATA BY LATITUDE FOR SEPTEMBER

(c) Flight level 330

SEPTEMBER
FL 330

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

		MEAN												LAT									
70N																			70N				
65									.369	1	.179	.067	17	.240	.028	5	.201	.073	23	65			
											.153	.199	.351	.222	.272	.279	.174	.273	.361				
60						.107	.034	6	.120	1	.199	.132	14	.160	.032	6	.112	.098	15	60			
						.092	.124	.173			.210	.371	.383	.173	.187	.191	.063	.244	.311				
55						.123	.066	8	.095	.047	14	.084	.036	11	.107	.071	20	.100	.066	55	55		
						.095	.200	.227	.063	.147	.178	.073	.114	.157	.062	.194	.205	.069	.211	.248			
50						.097	.023	25	.221	.015	10	.076	.017	7	.086	.070	129	.080	.040	94	50		
						.098	.122	.133	.226	.232	.237	.064	.090	.093	.053	.180	.289	.066	.109	.182			
45				.055	.004	3	.100	.059	24	.064	.020	9	.056	.034	25	.036	.069	93	.077	.045	24	45	
				.052	.058	.061	.065	.183	.208	.067	.079	.088	.060	.078	.133	.057	.125	.324	.054	.145	.163		
40	.092	.018	11	.053	.016	21	.150	.055	18	.042	.012	7	.053	.030	34	.061	.021	16	.074	.048	107	40	
	.083	.112	.118	.051	.069	.087	.145	.194	.272	.037	.050	.066	.045	.079	.131	.055	.091	.102	.056	.117	.199		
35	.071	.021	13	.046	.016	19				.033	.015	34	.088	.039	11	.079	.008	6	.050	.027	83	35	
	.068	.084	.114	.047	.061	.069				.032	.042	.073	.049	.107	.134	.062	.084	.084	.043	.080	.113		
30	.053	.012	9	.043	.018	16				.043	.013	24	.050	.016	7	.092	.006	3	.051	.018	74	30	
	.047	.066	.076	.039	.063	.073				.045	.056	.062	.047	.069	.075	.088	.096	.100	.038	.068	.088		
25		.038	.007	8	.055	.017	23			.023	.012	21	.050	.015	8	.058	.009	7	.042	.020	68	25	
		.041	.042	.049	.063	.088	.078			.025	.034	.043	.055	.059	.066	.058	.067	.070	.038	.065	.076		
20		.032	.003	7	.041	.020	6			.027	.005	4	.066	.005	6	.051	.008	2	.043	.018	25	20	
		.033	.036	.036	.040	.053	.075			.028	.031	.033	.066	.070	.071	.051	.056	.058	.036	.066	.075		
15		.032	.005	9	.026	.009	6						.062	.003	4				.037	.015	19	15	
		.034	.037	.041	.029	.035	.038						.063	.064	.065				.034	.059	.064		
10		.030	.006	16	.029	.003	8												.029	.005	24	10	
		.028	.036	.040	.030	.032	.033												.028	.032	.040		
5		.025	.002	12	.012	.010	5	.035	1										.022	.009	18	5	
		.025	.028	.030	.016	.020	.024												.025	.028	.033		
0		.027	.003	10	.017	.018	6	.019	.009	4									.023	.012	20	0	
		.027	.031	.031	.012	.036	.043	.018	.028	.032									.024	.031	.040		
5		.025	.002	10	.039	.004	6	.020	.010	15									.025	.010	31	5	
		.026	.028	.028	.039	.042	.046	.024	.029	.030									.027	.032	.043		
10		.032	.004	6	.040	.005	2	.016	.009	20									.021	.011	28	10	
		.030	.037	.039	.040	.043	.044	.015	.024	.034									.019	.033	.041		
15		.041	.003	6	.018	.001	11	.012	.008	8						.059	.010	4	.027	.017	29	15	
		.040	.043	.045	.018	.020	.021	.014	.022	.024						.055	.066	.075	.019	.044	.068		
20		.050	.005	5	.024	.004	3	.020	.013	10						.076	.011	5	.039	.025	23	20	
		.050	.055	.056	.021	.027	.030	.018	.029	.048						.079	.084	.088	.033	.065	.085		
25								.041	.022	14						.064	.025	4	.046	.024	18	25	
								.035	.059	.081						.062	.088	.092	.036	.077	.089		
30					.161	1		.062	.035	18						.043	.012	5	.062	.038	24	30	
								.056	.101	.112						.041	.053	.060	.054	.101	.141		
35					.136	.071	9	.101	.034	2									.130	.067	11	35	
					.117	.152	.294	.101	.124	.134									.117	.150	.288		
40																							40
45S																							45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E														

70

LONGITUDE

TABLE IX. - Continued. GASP AMBIENT OZONE DATA BY LATITUDE FOR SEPTEMBER

(d) Flight level 350

SEPTEMBER
FL 350

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

		MEAN												LAT			
70N																	
65																	65
60																	60
55																	55
50																	50
45	.117 .045 14 .101 .175 200																45
40	.087 .037 43 .078 .117 .183																40
35	.064 .022 9 .051 .065 .100																35
30	.042 .008 3 .046 .049 .050	.041 .008 11 .042 .046 .056															30
25		.046 .009 12 .044 .050 .069															25
20		.040 .005 8 .042 .044 .047															20
15		.027 .008 7 .033 .033 .033															15
10		.031 .006 5 .028 .034 .041															10
5		.028 .003 6 .028 .031 .033															5
0		.022 1															0
5		.031 .005 4 .031 .035 .038															5
10		.030 .003 6 .029 .033 .035															10
15		.035 .014 6 .029 .037 .061															15
20		.081 .005 7 .083 .085 .086															20
25																	25
30																	30
35																	35
40																	40
45S																	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E								

71

LONGITUDE

"Page missing from available version"

TABLE IX. - Continued. GASP AMBIENT OZONE DATA BY LATITUDE FOR SEPTEMBER
(g) Flight level 410

CODE: MEAN ST. DEV. N
50% 84% 98%

SEPTEMBER
FL 410

		MEAN												LAT																				
70N																70N																		
65								.250	.024	9		.294		1		.254	.026	10	65															
								.241	.278	.282						.254	.281	.292																
60								.366	.043	27		.335	.071	38		.249	.065	30		.259	.156	21		.159	.088	13		.291	.108	129	60			
								.359	.414	.440		.333	.411	.454		.231	.318	.377		.242	.442	.518		.134	.277	.319		.298	.401	.468				
55								.278	.112	97		.113	.036	15		.271	.099	63		.292	.098	56		.288	.098	65		.273	.108	296	55			
								.286	.390	.470		.108	.146	.177		.279	.355	.450		.286	.415	.459		.304	.380	.437		.270	.382	.459				
50								.261	.128	133		.135	.095	81		.228	.109	104		.221	.104	89		.247	.113	39		.221	.120	446	50			
								.241	.403	.516		.121	.191	.414		.205	.352	.429		.180	.357	.418		.232	.378	.453		.139	.365	.475				
45		.182	.058	8		.227	.110	16		.180	.115	167		.169	.087	139		.171	.104	70		.163	.090	37		.165	.037	4		.176	.102	441	45	
		.190	.236	.265		.225	.336	.426		.150	.297	.456		.157	.264	.377		.127	.274	.411		.119	.250	.375		.163	.196	.216		.156	.282	.427		
40		.124	.033	12		.113	.065	70		.107	.089	90		.173	.105	100		.132	.083	55		.183	.090	5						.134	.092	332	40	
		.115	.130	.209		.102	.174	.274		.076	.238	.327		.134	.259	.441		.096	.210	.342		.134	.290	.301						.065	.223	.412		
35		.059	.005	6		.079	.027	38		.086	.011	3		.093	.043	17		.064	.024	19											.077	.031	83	35
		.061	.062	.065		.086	.102	.114		.080	.095	.101		.088	.124	.169		.058	.075	.126											.077	.102	.144	
30		.062	.004	5		.102	.006	7						.070	.009	8															.079	.018	20	30
		.063	.065	.067		.103	.106	.108						.069	.080	.083															.077	.103	.107	
25		.062	.007	7		.090	.005	2		.040	.030	45		.063	.017	15		.064	.071	100											.048	.028	73	25
		.060	.067	.075		.090	.093	.095		.029	.069	.107		.040	.046	.047															.063	.072	.108	
20			.075	.003	8		.052	.024	30					.026	.002	5															.053	.024	43	20
			.076	.078	.079		.047	.082	.100					.024	.027	.030															.047	.078	.099	
15							.027	.015	25					.023	.005	6															.026	.014	31	15
							.022	.048	.052					.022	.025	.031															.022	.046	.052	
10			.020	.012	5		.022	.006	25					.029	.005	5															.023	.008	35	10
			.017	.032	.036		.023	.028	.035					.026	.034	.037															.023	.030	.037	
5			.031	.016	5		.032	.014	8					.048	.002	5															.036	.015	18	5
			.037	.044	.045		.028	.043	.055					.050	.050	.051															.036	.050	.055	
0																																		0
5														.046		1															.046		1	5
10							.032	.005	8					.040		1															.034	.005	6	10
							.031	.036	.040																						.033	.040	.040	
15							.031	.002	7																						.031	.002	7	15
							.032	.033	.033																						.032	.033	.033	
20							.035	.003	6																						.035	.003	6	20
							.036	.038	.038																						.036	.038	.038	
25							.062	.024	5																						.062	.024	5	25
							.053	.090	.092																						.053	.090	.092	
30							.159	.040	4																						.159	.040	4	30
							.163	.191	.208																						.163	.191	.208	
35							.154	.082	17																						.154	.082	17	35
							.112	.252	.316																						.112	.252	.316	
40																																		40
45S																																		45S

74

LONGITUDE

TABLE IX. - Concluded. GASP AMBIENT OZONE DATA BY LATITUDE FOR SEPTEMBER

(h) Flight level 430

SEPTEMBER
FL 430

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

		MEAN												LAT								
70N															70N							
65															65							
60						.300	.073	4							.300	.073	4	60				
						.286	.366	.404							.286	.366	.404					
55						.375	.114	10					.282	.081	6	.443	.044	7	.372	.108	23	55
						.420	.479	.499					.324	.347	.363	.439	.484	.491	.405	.478	.498	
50						.258	.127	16	.134	1			.122	.035	16	.370	.105	14	.243	.139	47	50
						.281	.373	.455					.137	.150	.168	.371	.461	.525	.187	.393	.518	
45						.118	.079	12					.198	.070	19	.142	.047	25	.158	.080	140	45
						.081	.223	.270					.186	.265	.322	.130	.157	.220	.129	.250	.378	
40						.091	.055	55					.152	.092	22	.092	.018	30	.090	.062	137	40
						.084	.130	.216					.107	.301	.327	.092	.106	.129	.082	.121	.309	
35						.057	.024	30					.115	.068	3				.064	.032	41	35
						.056	.074	.107					.089	.170	.203				.066	.078	.156	
30																						
25						.090	.009	8											.089	.009	10	25
						.088	.099	.108											.088	.096	.107	
20						.042	.006	8	.037	.019	6								.040	.013	14	20
						.039	.049	.052	.039	.056	.059								.039	.052	.058	
15									.016	.009	17								.016	.009	17	15
									.017	.021	.036								.017	.021	.035	
10									.026	.011	20								.026	.011	20	10
									.024	.034	.050								.024	.034	.050	
5						.018	.003	5	.017	.004	6								.017	.004	11	5
						.016	.020	.024	.016	.020	.025								.016	.020	.026	
0																						
5																						
10																						
15																						
20																						
25																						
30																						
35																						
40																						
45S																						
	15E	60E	105E	150E	165W	120W	75W	30W	15E													

75

LONGITUDE

TABLE X. - Continued. GASP AMBIENT OZONE DATA BY LATITUDE FOR OCTOBER

(b) Flight level 310

OCTOBER
FL 310

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

77

LAT	MEAN												LAT														
	15E	60E	105E	150E	165W	120W	75W	30W	15E	60E	105E	150E															
70N										.228	.003	3	.156	.091	10						.172	.085	13				
										.229	.231	.232	.166	.252	.261						.127	.051	9				
65										.257	.028	4	.058	.009	12	.127	.051	9		.123	.188	.202	.115	.077	25		
										.268	.280	.280	.056	.071	.072								.072	.203	.280		
60													.048	.002	4	.090	.059	21		.060	.169	.212	.083	.056	25		
													.049	.049	.049								.056	.164	.209		
55									.056	.017	9		.166	.066	11	.074	.045	35		.064	.029	.49	.089	.061	55		
									.044	.074	.088		.201	.210	.224	.057	.101	.208					.058	.192	.226		
50									.072	.043	4	.213	.024	4	.109	.023	5	.064	.029	49			.055	.120	.221		
									.053	.107	.139	.213	.235	.241	.118	.130	.134								.055	.120	.221
45	.052	.005	8					.038	.005	5	.051	.017	23	.076	.049	28	.072	.035	3	.054			.062	.036	68		
	.053	.057	.057					.040	.041	.044	.049	.062	.092	.059	.112	.215	.078	.100	.110				.042	.092	.173		
40	.100	.047	10			.047	.003	5	.044	.010	12	.066	.040	23	.082	.066	31	.061	.032	11	.047	.002	3	.070	.050	95	
	.092	.148	.181			.046	.051	.051	.042	.054	.060	.058	.094	.169	.047	.156	.246	.054	.072	.137	.048	.049	.050	.051	.111	.218	
35	.049	.015	5			.063	.029	10				.044	.036	19	.035	.014	10							.047	.030	44	
	.053	.061	.070			.055	.093	.118				.033	.057	.145	.036	.049	.057							.039	.062	.126	
30	.054	.011	11						.100	.042	9	.025	.005	18										.051	.037	38	
	.059	.062	.070						.126	.140	.147	.026	.029	.036										.034	.068	.144	
25	.044	.002	3					.050	.011	10	.033	.013	15											.040	.014	28	
	.044	.046	.047					.050	.062	.067	.032	.046	.056											.031	.055	.066	
20				.053	1	.026	.005	7				.037	.016	18										.035	.015	26	
						.029	.031	.032				.039	.049	.069										.033	.047	.068	
15				.060	.060	6	.027	.011	15			.015	.001	7										.031	.033	28	
				.031	.079	.179	.033	.036	.040			.015	.018	.016										.015	.036	.116	
10				.041	.002	5	.041	.003	6	.015	.001	7	.014	.004	2									.029	.013	20	
				.042	.043	.044	.040	.045	.045	.014	.016	.017	.014	.017	.018									.027	.043	.045	
5									.016	.004	7													.016	.004	7	
									.015	.017	.023													.015	.017	.023	
0									.019	.005	8													.019	.005	8	
									.021	.021	.022													.021	.021	.022	
5																											
10																											
15								.016	.016	2														.016	.016	2	
								.016	.027	.031														.016	.027	.031	
20						.073	.023	9	.123		1													.078	.026	10	
						.083	.089	.091																.085	.091	.117	
25						.091	.017	6																.091	.017	6	
						.086	.112	.116																.086	.112	.116	
30						.074	.022	15																.074	.022	15	
						.083	.098	.102																.083	.098	.102	
35	.028	0.000	2			.057	.028	6	.071	.060	8												.061	.049	17		
	.028	.028	.028			.052	.082	.101	.058	.076	.206												.057	.078	.190		
40									.064		1													.064		1	
45S																											

LONGITUDE

TABLE X. - Continued. GASP AMBIENT OZONE DATA BY LATITUDE FOR OCTOBER

(c) Flight level 330

OCTOBER
FL 330

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

LAT	MEAN												LAT					
	15E	60E	105E	150E	165W	120W	75W	30W	15E	60E	105E	150E						
70N						.325	1	.152	.096	17			.161	.102	18	70N		
								.130	.261	.303			.141	.283	.320			
65						.151	.129	17	.137	.112	26	.108	.085	19	.132	.111	62	
						.055	.333	.345	.057	.303	.331	.061	.249	.266	.057	.293	.340	
60					.300	1	.146	.100	23	.287	.027	17	.160	.093	27	.189	.103	68
							.127	.296	.322	.296	.312	.320	.149	.263	.308	.218	.303	.322
55						.113	.035	10	.238	.067	6	.163	.095	46	.100	.065	88	
						.107	.156	.168	.280	.281	.284	.149	.283	.320	.072	.187	.256	
50						.085	.062	15	.121	.088	22	.121	.052	11	.081	.042	45	
						.062	.166	.196	.094	.213	.336	.123	.127	.235	.067	.102	.207	
45						.089	.028	14	.041	.008	6	.106	.092	5	.082	.035	77	
						.051	.101	.116	.039	.047	.053	.044	.193	.257	.091	.122	.157	
40	.086	.041	12		.081	.034	12	.078	.036	5	.048	.017	14	.066	.030	40		
	.072	.122	.165		.074	.123	.126	.066	.120	.123	.039	.069	.074	.064	.086	.153		
35	.060	.026	26		.037	.020	15	.062	.034	51	.056	.054	5					
	.056	.067	.125		.034	.052	.080	.051	.090	.156	.032	.103	.148					
30	.045	.003	7	.063	.002	2		.046	.027	67	.079	.006	2					
	.044	.046	.050	.063	.064	.065		.044	.072	.098	.079	.083	.085					
25	.067	.004	5	.066	0.000	2	.035	.040	.026	58								
	.066	.071	.074	.066	.066	.066	.033	.036	.053	.134	.033	.036	.042					
20		.057	.016	11	.040	.009	4	.035	.025	10								
		.057	.068	.084	.037	.048	.052	.029	.043	.092								
15		.027	.003	6	.047	.002	2											
		.028	.030	.032	.047	.048	.049											
10					.043		1											
5		.025		1	.019	.004	6											
					.021	.022	.022											
0					.014	.007	8											
					.011	.013	.029											
5					.027	.014	17	.021	.005	14								
					.028	.038	.055	.020	.027	.030								
10					.031	.006	16	.022	.009	14								
					.029	.038	.042	.022	.030	.036								
15					.028	.012	8	.026	.008	7								
					.029	.039	.044	.022	.035	.040								
20		.067	.013	6	.059	.022	22	.020	.013	10								
		.072	.077	.082	.062	.079	.099	.017	.037	.042								
25					.084	.024	30	.078	.048	25								
					.084	.100	.133	.074	.096	.202								
30					.074	.015	12	.104	.058	42								
					.079	.085	.088	.091	.149	.262								
35	.036	.005	4					.094	.081	18								
	.035	.040	.042					.071	.103	.321								
40																		
45S																		

78

LONGITUDE

TABLE X. - Continued. GASP AMBIENT OZONE DATA BY LATITUDE FOR OCTOBER

(d) Flight level 350

OCTOBER
FL 350

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

LAT	MEAN												LAT									
	15E	16E	17E	18E	19E	20E	21E	22E	23E	24E	25E	26E										
70N										.326	.025	13	.187	.089	23	.284	.025	6	.244	.093	42	70N
										.327	.353	368	.217	.277	.300	.279	.312	.321	.267	.326	.360	
65										.227	.065	39	.268	.071	37	.291	.062	13	.256	.070	95	65
										.244	.288	.310	.274	.335	.354	.314	.335	.379	.295	.299	.307	
60										.294	.067	17	.184	.087	80	.163	.076	21	.189	.102	157	60
										.273	.380	.386	.210	.262	.330	.177	.232	.258	.213	.300	.378	
55										.263	.066	32	.127	.082	75	.103	.077	25	.145	.098	212	55
										.261	.328	.363	.254	.286	.298	.094	.111	.306	.057	.222	.292	
50										.189	.122	20	.096	.070	52	.118	.071	100	.108	.075	281	50
										.173	.338	.357	.188	.201	.210	.093	.193	.294	.059	.102	.161	
45	.055	.011	15	.080	.012	2	.110	.090	25	.134	.087	49	.102	.090	82	.095	.066	79	.037	.003	9	45
	.053	.059	.079	.080	.088	.092	.064	.165	.318	.156	.224	.239	.057	.227	.297	.080	.116	.347	.038	.039	.040	
40	.065	.025	36	.063	.017	14	.102	.048	6	.064	.041	71	.073	.071	155	.084	.019	8	.049	.018	4	40
	.059	.082	.125	.069	.074	.096	.117	.145	.153	.048	.116	.142	.041	.135	.293	.081	.106	.108	.050	.067	.070	
35	.057	.021	44	.058	.049	44	.050	.015	15	.056	.031	143	.056	.040	27				.066	.024	17	35
	.054	.082	.101	.044	.086	.194	.043	.062	.084	.048	.079	.150	.056	.073	.175				.058	.087	.117	
30	.059	.018	18	.043	.034	26	.053	.019	40	.053	.043	201	.079		1				.051	.011	34	30
	.056	.075	.093	.091	.107	.108	.056	.044	.145	.041	.070	.193							.052	.063	.073	
25	.072	.023	12	.027	.018	37	.040	.012	31	.032	.011	10	.037	.025	191				.052	.005	27	25
	.083	.095	.097	.052	.075	.093	.040	.053	.059	.033	.039	.048	.034	.055	.101				.051	.057	.061	
20				.047	.016	40	.047	.012	5	.027	.018	95	.026	.045	.073				.054	.003	9	20
				.042	.066	.087	.043	.060	.065										.033	.056	.060	
15				.031	.006	24	.048	.011	12	.017	.005	3	.013	.008	51				.022	.015	90	15
				.032	.035	.041	.049	.057	.066	.019	.022	.023	.015	.019	.029				.019	.035	.057	
10				.027	.009	17	.027	.013	9	.010	.008	11	.013	.009	20				.019	.012	57	10
				.025	.032	.046	.022	.040	.052	.010	.016	.023	.012	.018	.034				.017	.029	.047	
5				.027	.004	6	.015	.002	5	.010	.009	17	.007	.003	7				.013	.010	35	5
				.029	.030	.032	.015	.017	.018	.010	.018	.028	.008	.009	.012				.013	.025	.031	
0				.014	.010	14	.016	.010	19	.013	.004	8	.013	.017	.019				.015	.010	39	0
				.017	.021	.032	.019	.026	.027	.019	.017	.019							.017	.025	.029	
5				.014	.016	16	.019	.003	11										.016	.013	27	5
				.008	.025	.049	.018	.020	.027										.017	.025	.047	
10				.026	.021	16	.019	.005	13										.023	.016	29	10
				.029	.050	.058	.019	.025	.027										.019	.040	.055	
15				.033	.020	15	.025	.012	29										.028	.015	44	15
				.030	.044	.078	.023	.039	.051										.025	.042	.059	
20				.036	.026	22	.041	.029	40										.040	.028	62	20
				.030	.061	.084	.037	.066	.117										.032	.064	.112	
25				.064	.034	16	.091	.070	72										.087	.066	88	25
				.084	.096	.107	.084	.141	.300										.078	.117	.292	
30				.164	.111	4	.126	.089	52										.129	.082	56	30
				.112	.250	.340	.102	.229	.349										.102	.230	.353	
35				.080	.066	19	.114	.111	45										.104	.101	64	35
				.055	.118	.263	.070	.136	.456										.066	.128	.440	
40	.045	.011	91	.056	0.000	2	.094		1										.047	.014	34	40
	.041	.056	.071	.055	.055	.055													.043	.056	.089	
45S	.051	.007	22																.051	.007	22	45S
	.050	.058	.062																.050	.058	.062	

LONGITUDE

TABLE X. - Continued. GASP AMBIENT OZONE DATA BY LATITUDE FOR OCTOBER

(e) Flight level 370

OCTOBER
FL 370

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

LAT	MEAN												LAT	
	15E	60E	105E	150E	165W	120W	75W	30W	15E	60E	105E	150E		
70N					.298 .039 23 .287 .339 .367			.227 .012 2 .227 .235 .239					.292 .042 25 .286 .337 .367	70N
65					.256 .059 85 .262 .299 .366		.223 .050 16 .247 .261 266	.197 .043 12 .164 .250 .262	.238 .022 5 .252 .256 .259				.245 .059 118 .237 .295 .364	65
60				.246 .100 2 .246 .313 .341	.246 .050 41 .247 .271 .369	.168 .089 29 .148 .277 .327	.217 .076 9 .186 .319 .328	.168 .093 7 .210 .263 .267					.211 .082 88 .217 .285 .351	60
55				.287 .077 40 .294 .377 .393	.219 .041 46 .236 .256 .263	.184 .089 37 .197 .276 .317	.252 .088 22 .246 .337 .361	.129 .070 33 .112 .185 .295					.215 .091 178 .207 .303 .388	55
50				.209 .091 64 .201 .319 .368	.116 .092 82 .107 .205 .351	.132 .082 29 .097 .233 .304	.171 .112 120 .148 .326 .354	.128 .082 116 .117 .219 .305					.151 .100 411 .138 .255 .371	50
45	.028 .002 8 .029 .029 .030		.218 .047 4 .195 .251 .293	.148 .107 104 .118 .284 .366	.074 .050 37 .059 .129 .194	.090 .060 93 .084 .136 .260	.121 .079 150 .094 .195 .327	.106 .033 34 .119 .133 .135					.115 .083 430 .071 .193 .347	45
40	.129 .036 11 .126 .163 .195		.134 .084 32 .122 .220 .275	.082 .052 97 .060 .142 .220	.061 .038 78 .052 .093 .168	.106 .070 558 .083 .179 .276	.161 .080 17 .125 .260 .316	.143 .012 26 .147 .156 .163					.103 .068 819 .082 .173 .274	40
35	.093 .030 4 .077 .112 .141		.049 .022 26 .041 .066 .107	.061 .023 38 .067 .086 .094	.064 .037 416 .055 .090 .160	.071 .052 84 .057 .113 .205		.139 .008 7 .139 .147 .151					.065 .039 575 .055 .084 .176	35
30	.100 .022 9 .110 .120 .123		.040 1	.039 .012 32 .037 .050 .065	.056 .037 481 .048 .079 .186	.091 .017 3 .095 .105 .108							.055 .036 526 .047 .079 .175	30
25		.115 1		.031 .003 7 .032 .032 .034	.040 .022 283 .035 .058 .091								.040 .023 291 .035 .058 .092	25
20		.071 .030 7 .094 .096 .101		.074 .020 11 .069 .098 .104	.041 .045 25 .026 .052 .174			.049 .002 2 .049 .050 .051					.054 .040 45 .041 .094 .141	20
15		.035 .018 6 .028 .041 .071	.022 1		.015 .008 20 .016 .023 .028								.020 .014 27 .018 .028 .053	15
10		.032 .014 7 .035 .042 .044		.018 .009 8 .018 .029 .031	.013 .010 34 .017 .022 .027								.017 .012 49 .018 .029 .042	10
5		.011 .020 9 .001 .026 .056		.022 .006 23 .022 .024 .037	.010 .009 25 .013 .018 .026								.015 .012 57 .016 .024 .039	5
0				.022 .005 24 .022 .026 .031	.007 .010 23 .002 .015 .032								.015 .011 47 .019 .025 .032	0
5				.020 .007 21 .020 .024 .035	.012 .011 34 .008 .028 .034								.015 .011 55 .017 .026 .037	5
10				.019 .010 50 .019 .028 .048	.011 .012 11 .007 .019 .038								.018 .011 61 .016 .027 .047	10
15		.044 .013 5 .047 .057 .061		.018 .008 71 .015 .025 .040	.047 1								.020 .011 77 .015 .029 .051	15
20		.069 .011 3 .073 .078 .081		.030 .024 61 .016 .062 .086									.032 .025 64 .016 .062 .086	20
25		.082 .048 4 .103 .113 .121		.059 .057 38 .018 .129 .192									.062 .057 42 .019 .125 .190	25
30		.236 .151 10 .160 .420 .423		.118 .031 39 .113 .156 .165									.142 .088 49 .113 .160 .421	30
35		.289 .122 12 .277 .419 .445		.154 .086 21 .135 .239 .349									.203 .120 33 .165 .344 .444	35
40				.267 1									.267 1	40
45S														45S

08

TABLE X. - Continued. GASP AMBIENT OZONE DATA BY LATITUDE FOR OCTOBER

(f) Flight level 390

OCTOBER
FL 390

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

81

	MEAN												LAT									
70N									.353	.077	12	.357	.052	10			.355	.067	.22	70N		
									.365	.438	.452	.372	.404	.435			.324	.428	.450			
65				.401	.111	6	.296	.098	74	.318	.050	13					.305	.097	.93	65		
				.435	.470	.488	.288	.401	.477	.316	.380	.404					.316	.413	.483			
60				.292	.080	79	.346	.089	35	.300	.087	22	.160	.092	27	.281	.086	17	.283	.100	180	
				.310	.359	.428	.350	.430	.506	.307	.387	.425	.142	.259	.326	.293	.355	.372	.259	.367	.467	
55				.262	.092	114	.308	.105	30	.235	.080	30	.293	.096	88	.220	.089	143	.255	.097	405	
				.256	.367	.423	.366	.398	.434	.220	.327	.377	.312	.383	.433	.219	.315	.384	.259	.367	.416	
50				.254	.082	29	.214	.096	58	.172	.079	30	.192	.119	58	.202	.125	33	.206	.107	209	
				.260	.340	.424	.189	.331	.383	.166	.265	.306	.179	.345	.375	.141	.330	.450	.187	.328	.410	
45	.090	.016	9	.130	.021	8	.154	.078	57	.105	.062	31	.164	.065	124	.140	.073	29	.145	.070	326	
	.087	.110	.118	.123	.149	.168	.145	.219	.353	.070	.155	.236	.159	.228	.297	.116	.200	.334	.105	.194	.207	
40	.139	.022	4	.079	.064	34	.115	.042	60	.079	.041	41	.110	.075	674	.088	.026	7	.047	.012	812	
	.141	.159	.163	.062	.147	.230	.118	.163	.175	.096	.113	.155	.083	.179	.320	.069	.117	.123	.047	.055	.059	
35				.029	.021	12	.030	.019	34	.084	.021	7	.088	.043	141				.074	.046	194	
				.022	.041	.078	.027	.037	.081	.075	.105	.117	.076	.127	.196				.068	.116	196	
30				.228	.051	8	.036	.021	16	.033	.041	.093	.089	.018	9				.097	.083	33	
				.235	.282	.286	.033	.041	.093	.033	.041	.093	.097	.105	.108				.070	.216	.285	
25	.070	.013	2	.106	.021	3	.071	.034	29	.071	.034	29							.074	.034	34	
	.070	.079	.082	.104	.124	.132	.075	.109	.129	.075	.109	.129							.074	.114	.131	
20							.047	.044	5							.047	.001	16	.047	.021	21	
							.020	.076	.125							.048	.048	.049	.047	.048	.099	
15		.016	1				.018	.017	18				.050	.001	21	.035	.019	40	.035	.019	40	
							.013	.031	.054				.050	.051	.053	.049	.050	.055	.049	.050	.055	
10	.034	.016	4	.043		1	.011	.011	27				.054	.004	28	.033	.022	60	.033	.022	60	
	.038	.047	.050				.007	.024	.030				.054	.058	.060	.022	.055	.060	.022	.055	.060	
5							.011	.014	39				.047	.009	29	.027	.021	68	.027	.021	68	
							.007	.028	.043				.047	.058	.060	.015	.048	.060	.015	.048	.060	
0							.015	.013	59				.050	.006	33	.028	.020	92	.028	.020	92	
							.015	.025	.048				.050	.053	.055	.012	.051	.054	.012	.051	.054	
5							.001	.001	6	.017	.009	68	.048	.001	19	.022	.016	93	.022	.016	93	
							.001	.002	.004	.016	.026	.035	.048	.048	.048	.016	.047	.048	.016	.047	.048	
10							.020	.011	61	.019	.007	25	.046	.001	14	.023	.013	100	.023	.013	100	
							.016	.032	.040	.016	.026	.032	.046	.046	.048	.016	.040	.047	.016	.040	.047	
15							.022	.012	40	.036	.009	4				.023	.012	44	.023	.012	44	
							.024	.032	.043	.037	.043	.048				.024	.036	.043	.024	.036	.043	
20							.029	.025	27							.029	.025	27	.029	.025	27	
							.021	.048	.092							.021	.048	.092	.021	.048	.092	
25							.067	.040	24							.067	.040	24	.067	.040	24	
							.074	.102	.147							.074	.102	.147	.074	.102	.147	
30	.151		1				.138	.073	23							.139	.072	24	.139	.072	24	
							.108	.223	.273							.110	.220	.272	.110	.220	.272	
35							.143	.081	31	.215	.107	49				.167	.104	80	.167	.104	80	
							.097	.230	.338	.197	.330	.476				.147	.282	.472	.147	.282	.472	
40							.324		1							.324		1				
45S																						45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E													
	LONGITUDE																					

TABLE X. - Continued. GASP AMBIENT OZONE DATA BY LATITUDE FOR OCTOBER

(g) Flight level 410

OCTOBER
FL 410

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

LAT	MEAN												LAT												
	15E	60E	105E	150E	165W	120W	75W	30W	15E	60E	105E	150E													
70N									.522	.069	.24	.522	.069	.24	70N										
									.562	.598	.624	.555	.598	.624											
65									.395	.031	.26	.395	.031	.26	65										
									.397	.428	.452	.397	.428	.452											
60				.530	.074	6	.255	.073	14	.234	.059	3	.256	.104	51	.216	.093	56	.257	.114	132	60			
				.517	.595	.646	.277	.319	.365	.228	.283	.306	.256	.353	.484	.201	.324	.374	.206	.353	.357				
55				.309	.108	50	.234	.087	9	.202	.063	20	.275	.144	67	.145	.093	34	.250	.130	180	55			
				.303	.443	.504	.285	.319	.333	.177	.280	.331	.202	.429	.610	.123	.253	.340	.184	.393	.573				
50				.264	.120	100	.103	.087	24	.192	.108	84	.231	.117	128	.247	.122	116	.229	.122	452	50			
				.248	.411	.465	.092	.184	.308	.163	.298	.469	.204	.365	.469	.221	.378	.500	.197	.365	.492				
45	.071	.037	6	.180	.103	13	.167	.074	66	.166	.099	74	.142	.099	96	.245	.151	41	.030	.003	4	.166	.107	322	45
	.061	.090	.147	.160	.255	.411	.166	.240	.320	.146	.259	.376	.133	.230	.415	.277	.386	.547	.029	.033	.036	.128	.276	.427	
40	.122	.040	27	.109	.059	45	.144	.077	67	.111	.074	67	.207	.118	233	.076						.170	.110	394	40
	.114	.146	.227	.092	.182	.272	.126	.184	.340	.104	.194	.300	.167	.366	.397							.108	.300	.390	
35	.076	.023	11	.102	.042	17	.059	.022	9	.113	.043	67	.148	.064	31							.112	.092	135	35
	.068	.091	.128	.093	.151	.184	.053	.080	.097	.116	.154	.196	.125	.233	.280							.112	.155	.247	
30	.055	.012	14							.075	.050	118	.134	.044	4							.075	.049	136	30
	.054	.062	.083							.061	.119	.234	.119	.166	.203							.061	.119	.229	
25	.053	.020	13	.019	.013	6				.080	.038	96										.057	.037	115	25
	.058	.076	.083	.019	.032	.036				.055	.104	.157										.054	.084	.143	
20				.012	.010	19				.050	.022	77										.042	.026	96	20
				.011	.022	.032				.055	.068	.084										.045	.067	.082	
15										.026	.017	57										.026	.043	.051	15
										.026	.043	.051										.026	.043	.051	
10				.020	.002	5	.017	.007	41													.017	.007	46	10
				.020	.021	.022	.019	.022	.023	.017	.004	37										.020	.022	.023	
5										.017	.004	37										.017	.004	37	5
										.017	.018	.022										.017	.018	.022	
0										.025	.005	26										.025	.005	26	0
										.023	.032	.035										.023	.032	.035	
5																									5
10																.062	.015	2	.062	.015	2	.062	.015	.076	10
																.062	.072	.076	.062	.072	.076	.062	.072	.076	
15				.056	.027	5	.056	.027	5							.056	.027	5	.056	.027	5	.056	.027	5	15
				.057	.075	.100	.057	.075	.100							.057	.075	.100	.057	.075	.100	.057	.075	.100	
20				.053	.052	20	.053	.052	20							.053	.052	20	.053	.052	20	.053	.052	20	20
				.026	.130	.149	.026	.130	.149							.026	.130	.149	.026	.130	.149	.026	.130	.149	
25				.041	.042	22	.041	.042	22							.041	.042	22	.041	.042	22	.041	.042	22	25
				.025	.101	.116	.025	.101	.116							.025	.101	.116	.025	.101	.116	.025	.101	.116	
30	.138		1	.083	.032	18	.083	.032	18							.086	.033	19	.086	.033	19	.086	.033	19	30
				.093	.111	.123	.093	.111	.123							.100	.112	.134	.100	.112	.134	.100	.112	.134	
35				.342	.023	2	.263	.150	79							.264	.149	81	.264	.149	81	.264	.149	81	35
				.342	.358	.364	.222	.390	.659							.233	.387	.650	.233	.387	.650	.233	.387	.650	
40																									40
45S				.573	.030	2	.573	.030	2							.573	.030	2	.573	.030	2	.573	.030	2	45S
				.573	.593	.601	.573	.593	.601							.573	.593	.601	.573	.593	.601	.573	.593	.601	

82

TABLE XI. - GASP AMBIENT OZONE DATA BY LATITUDE FOR NOVEMBER

(a) Flight level 290

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

NOVEMBER
FL 290

		MEAN												LAT																			
70N																70N																	
65																65																	
60																60																	
55												.064	.034	8	.064	.034	8	55															
50												.070	.052	16	.075	.048	25	50															
45	.053	.026	4									.083	.039	9	.050	.092	201	.055	.102	198	45												
40	.042	.072	.094									.066	.028	16	.066	.098	108	.052	.045	7	.038	.096	130	40									
35	.053	.013	9									.044	.010	3	.034	.008	11	.037	.041	.043	.054	.023	11	.038	.064	.094	.046	.018	34	35			
30	.058	.060	.073									.070	.022	4	.062	.021	6	.063	.087	.104	.055	.079	.101				.062	.019	20	30			
25	.057	.018	3									.058	.013	5				.067	.068	.071							.055	.079	105	25			
20												.023		1													.062	.019	7	20			
15	.067	.014	4	.073	.001	2												.074	.076	.077							.073	.073	.073	.073	.075	.077	20
10				.061	.014	9	.022	.003	2						.034	.010	10				.032	.043	.053				.044	.019	21	10			
5							.022	.023	.024						.038	.041	.041										.034	.008	7	5			
0							.024		1						.009		1										.034	.041	.041	.009		1	0
5				.031	.011	2												.031	.038	.041							.031	.011	2	5			
10				.031	.038	.041																					.031	.038	.041	.031	.038	.041	10
15							.026	.015	2																		.026	.016	2	15			
20							.026	.037	.041																		.026	.037	.041	.026	.037	.041	20
25							.051		1	.061	1																.056	.005	2	.056	.059	.061	25
30																											.053	.002	2	.053	.054	.054	30
35										.054	1	.051	1													.053	.002	2	.053	.054	.054	35	
40																																	40
45S							.072	.026	2	.106	1																.083	.027	3	.098	.103	.108	45S
				.072	.090	.097																					.083	.027	3	.098	.103	.108	
	15E	60E	105E	150E	165W	120W	75W	30W	15E																								
	LONGITUDE																																

TABLE XI. - Continued. GASP AMBIENT OZONE DATA BY LATITUDE FOR NOVEMBER

(c) Flight level 330

NOVEMBER
FL 330

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

		MEAN												LAT											
70N											.271 .297	.056 .312	10 .321	.277	1	.271 .291	.054 .312	11 .320	70N						
65											.217 .237	.036 .244	3 .247	.280 .291	.042 .318	15 .331	.269 .275	.047 .317	18 .331	65					
60				.267 .255	.044 .324	7 .341					.118 .053	.106 .274	19 .294	.230 .274	.086 .310	13 .320	.182 .226	.111 .296	39 .328	60					
55							.223 .236	.082 .315	12 .322		.275 .267	.026 .292	8 .294	.184 .258	.103 .278	27 .315	.138 .135	.077 .225	18 .238	.194 .227	.096 .285	65 .318	55		
50				.057 .057	.002 .058	2 .059	.039		1	.138 .064	.112 .302	17 .331	.183 .198	.106 .306	57 .357	.056 .043	.045 .065	79 .226	.111 .044	.100 .238	156 .350	50			
45	.097 .074	.048 .133	11 .206				.119 .132	.026 .138	7 .143	.041 .041	.001 .042	2 .042	.071 .053	.045 .101	35 .190	.084 .064	.068 .118	86 .281	.069 .066	.033 .095	12 .138	.082 .065	.059 .119	153 .273	45
40	.052 .052	.018 .072	34 .085	.063 .052	.012 .074	3 .078	.067 .053	.040 .107	11 .140	.039 .038	.011 .043	14 .085	.075 .056	.049 .106	48 .203	.058 .045	.053 .067	15 .195				.062 .053	.041 .077	125 .201	40
35	.064 .057	.020 .087	18 .105	.079 .076	.026 .102	26 .138	.091 .089	.007 .098	4 .101	.047 .042	.023 .069	22 .095	.075 .067	.050 .098	15 .187							.067 .066	.032 .096	85 .152	35
30	.061 .058	.015 .081	12 .086	.049 .053	.007 .057	11 .058	.061 .055	.020 .069	7 .101	.094		1	.063 .061	.030 .073	40 .139	.058						.061 .048	.025 .072	72 .123	30
25				.034 .034	.014 .043	8 .057				.053 .043	.034 .077	33 .132										.049 .042	.032 .073	41 .116	25
20				.033 .033	.006 .037	2 .039	.020 .019	.006 .024	3 .027				.058 .060	.026 .079	6 .096		.056		1			.044 .035	.025 .071	12 .094	20
15				.025 .027	.011 .037	9 .041	.025 .025	.003 .027	2 .028							.037 .039	.004 .039	5 .040				.029 .024	.010 .039	16 .041	15
10				.021 .021	.005 .027	12 .028							.037 .037	.001 .038	4 .038							.025 .023	.008 .036	16 .038	10
5				.026 .023	.007 .035	8 .038	.003 .003	.002 .004	2 .004				.030 .030	.007 .035	2 .037	.034 .034	.005 .037	2 .039				.024 .022	.011 .037	14 .039	5
0				.015 .013	.004 .019	5 .020				.041 .038	.011 .046	17 .071										.035 .036	.015 .045	22 .069	0
5				.025 .027	.005 .029	4 .030	.047 .046	.037 .067	11 .130	.052 .050	.025 .071	8 .089										.044 .029	.032 .065	20 .124	5
10				.058 .045	.028 .092	7 .096	.037 .036	.026 .061	14 .093				.024 .024	.004 .027	4 .029							.041 .032	.027 .069	25 .099	10
15				.067 .065	.031 .101	13 .111	.058 .044	.030 .079	4 .105	.032 .030	.011 .045	13 .048	.041 .041	.024 .057	5 .078							.049 .041	.029 .088	35 .111	15
20				.060 .068	.023 .076	10 .082	.038 .038	.001 .038	6 .040				.066 .067	.020 .080	4 .091							.054 .039	.022 .075	20 .089	20
25				.108		1	.059 .057	.017 .077	14 .084				.062 .071	.028 .088	5 .097							.062 .061	.023 .033	20 .104	25
30				.117 .110	.049 .159	17 .229							.078 .070	.012 .086	3 .093							.112 .106	.048 .134	20 .226	30
35				.064 .064	.002 .065	2 .065	.135 .097	.081 .238	30 .311				.050		1							.128 .095	.080 .222	33 .305	35
40				.131 .141	.106 .235	4 .241																.131 .141	.106 .235	4 .241	40
45S				.069 .069	.002 .070	2 .071																.069 .069	.002 .070	2 .071	45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E																

98

TABLE XI. - Continued. GASP AMBIENT OZONE DATA BY LATITUDE FOR NOVEMBER

(d) Flight level 350

NOVEMBER
FL 350

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

	MEAN												LAT										
70N									.260	.051	.13		.270	.046	.10			.264	.049	.23	70N		
									.257	.312	.321		.268	.319	.331			.266	.315	.328			
65									.219	.041	.20		.243	.047	.21			.232	.046	.41	65		
									.217	.263	.282		.240	.283	.310			.223	.283	.307			
60				.329		1			.172	.055	.6		.185	.084	.68		.235	.026	.11	.271	.039	.7	
									.191	.224	.235		.202	.261	.341		.225	.259	.283	.256	.307	.342	
55				.181	.061	.25			.208	.019	.7		.196	.090	.65		.146	.113	.53	.126	.076	.56	
				.164	.251	.302			.209	.225	.231		.219	.271	.358		.107	.277	.371	.127	.198	.308	
50				.131	.086	.38			.092	.070	.15		.158	.088	.62		.145	.099	.96	.072	.061	.78	
				.111	.237	.338			.068	.091	.266		.155	.244	.358		.123	.256	.339	.051	.127	.277	
45	.059	.054	.23						.255	.023	.2		.121	.091	.34			.086	.057	.63	.051	.031	.7
	.050	.064	.212						.255	.280	.286		.093	.162	.345			.068	.154	.199	.044	.089	.090
40	.080	.035	.62						.132	.091	.24		.093	.064	.23			.072	.106	.16	.070	.082	.67
	.078	.122	.138						.094	.212	.346		.067	.139	.263			.030	.055	.355	.038	.083	.299
35	.083	.025	.23						.083	.041	.9		.030	.008	.12			.044	.030	.69	.046	.020	.15
	.083	.112	.128						.092	.114	.149		.030	.037	.046			.036	.053	.155	.041	.057	.094
30	.033	.011	.19						.048	.019	.20		.043	.024	.130								
	.032	.045	.055						.047	.064	.086		.036	.061	.113								
25	.058	.009	.2						.039	.011	.18		.037	.019	.110								
	.058	.064	.067						.037	.047	.065		.031	.058	.080								
20		.032	.008	.2					.021		.1		.040		.1								
		.032	.037	.035									.049	.057	.22								
15													.038	.014	.8								
													.042	.052	.052								
10													.053	.008	.4								
													.051	.059	.065								
5				.032	.003	.2							.041	.012	.6					.021	.004	.5	
				.032	.034	.035							.048	.049	.049					.023	.024	.024	
0				.045	.018	.9				.022	.011	.19		.019	.010	.3				.024	.003	.5	
				.038	.066	.071				.017	.038	.043		.012	.026	.032				.022	.027	.029	
5				.051	.018	.12				.024	.013	.18								.016	.001	.4	
				.052	.071	.082				.024	.040	.047								.016	.017	.018	
10				.068	.025	.11				.031	.011	.15								.013		.1	
				.056	.095	.100				.032	.039	.052											
15				.062	.018	.13				.029	.022	.7		.052	.1								
				.061	.074	.100				.021	.027	.076											
20				.075	.029	.12				.054	.044	.5								.100	.1		
				.066	.118	.127				.027	.088	.131											
25				.080	.032	.7				.102	.013	.14											
				.068	.112	.128				.104	.111	.118											
30				.091	.014	.7				.091	.029	.39											
				.086	.107	.112				.098	.122	.138											
35				.187	.008	.2				.100	.029	.28											
				.187	.192	.194				.103	.137	.148											
40				.088	.028	.2																	
				.088	.106	.114																	
45S				.065	.005	.8																	
				.067	.068	.072																	
	15E	60E	105E	150E	165W	120W	75W	30W	15E														

87

LONGITUDE

TABLE XI. - Continued. GASP AMBIENT OZONE DATA BY LATITUDE FOR NOVEMBER

(g) Flight level 410

NOVEMBER
FL 410

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

		MEAN												LAT						
70N																	70N			
65								.398	.091	13		.135					.379	.111	14	65
								.426	.482	.496							.424	.480	.496	
60								.395	.121	27		.304	.146	38			.329	.165	105	60
								.385	.514	.590		.232	.544	.653			.306	.532	.647	
55								.405	.116	66		.528	.090	11			.398	.120	117	55
								.390	.524	.632		.521	.627	.688			.319	.348	.357	
50								.340	.137	88		.192	.116	32			.317	.089	9	50
								.344	.493	.603		.191	.238	.552			.167	.364	.448	
45								.211	.124	7		.162	.142	49			.046	.075	21	45
								.161	.387	.412		.112	.258	.596			.013	.096	.251	
40	.081	.029	17					.148	.097	39		.339	.170	18			.143	.133	173	40
	.072	.092	.159					.118	.249	.362		.333	.495	.621			.089	.270	.521	
35	.110	.050	13					.064	.032	19		.081	.022	10			.078	.042	47	35
	.106	.144	.213					.054	.081	.144		.072	.093	.132			.069	.107	.206	
30	.034	.010	12					.044	.012	10		.072	.008	6			.024		1	30
	.032	.043	.052					.042	.059	.063		.073	.078	.084						
25	.050	.022	11	.050	.018	5		.059	.006	4		.066	.006	2			.032	.007	5	25
	.053	.072	.080	.055	.063	.067		.059	.065	.066		.066	.069	.071			.030	.039	.042	
20				.053	.009	15		.009		1							.054	.018	8	20
				.056	.060	.065											.051	.079	.084	
15																	.106	.011	6	15
																	.104	.111	.127	
10																	.065	.020	2	10
																	.065	.078	.083	
5				.013		1	.011			1							.062	.012	7	5
																	.063	.074	.075	
0																	.077	.019	12	0
																	.070	.101	.108	
5																	.074	.017	18	5
																	.073	.093	.101	
10																	.059	.013	17	10
																	.055	.072	.081	
15																	.054	.015	16	15
																	.051	.070	.079	
20																	.065	.016	15	20
																	.065	.082	.096	
25																				25
30																				30
35																				35
40																				40
45S																				45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E											

LONGITUDE

TABLE XII. - GASP AMBIENT OZONE DATA BY LATITUDE FOR DECEMBER

(a) Flight level 290

DECEMBER
FL 290

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

		MEAN												LAT																				
70N																	70N																	
65																	65																	
60													.094	.031	7	.094	.031	7	60															
													.096	.127	139	.096	.127	139																
55													.071	.034	8	.071	.034	8	55															
													.063	.116	127	.063	.116	127																
50													.176	.029	2	.035	.010	7	.088	.055	15	50												
													.176	.196	203	.034	.047	.048	.055	.141	205	.080	.058	24	.050	.146	209							
45	.062	.036	18										.033	.003	5	.098	.081	43	.093	.023	16	.085	.065	82	45									
	.044	.115	132										.032	.036	.039	.054	.221	.274	.066	.116	.142	.056	.117	266	.050	.027	59	.044	.065	132				
40	.042	.019	36										.037		1	.057	.022	10	.070	.037	12				.050	.027	59					40		
	.037	.058	.079										.048	.027	3	.047	.079	.085								.044	.065	132						
35	.043	.014	10										.043	.027	3	.053	.025	11								.049	.021	25					35	
	.044	.056	.064			.062		1					.035	.070	.085											.045	.073	.091						
30	.038	.006	6										.056		1											.050	.011	19					30	
	.039	.043	.044			.056	.007	12																		.054	.060	.064						
25	.030	.001	4										.064		1											.035	.012	7					25	
	.030	.032	.032			.030	.003	2																		.031	.033	.060						
20													.055	.021	4	.065	.027	7	.055	.008	9					.059	.020	20					20	
													.059	.071	.081	.052	.073	.119	.056	.061	.069					.051	.071	.109						
15													.032		1												.034	.020	10					15
						.026	.006	3								.038	.025	6	.032								.016	.051	.073					
10						.029	.030	.031								.036	.061	.076									.037	.010	6					10
						.037	.010	6								.035	.050	.052									.035	.050	.052					
5																																		5
0																																		0
5																																		5
10																																		10
15																.053		1	.029	.006	2						.037	.012	3					15
																.029	.033	.035	.029	.033	.035					.035	.047	.052						
20																																		20
25																.044	.013	5									.044	.013	5					25
																.051	.054	.057									.051	.054	.057					
30																.021	.006	2									.021	.006	2					30
																.021	.024	.026									.021	.024	.026					
35																.032	.003	2	.089	.039	3						.066	.041	5					35
																.032	.034	.035	.107	.119	.124						.035	.113	.124					
40																.022		1	.027		1						.025	.003	2					40
																											.025	.026	.027					
45S																																		45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E																									

92

LONGITUDE

TABLE XII. - Continued. GASP AMBIENT OZONE DATA BY LATITUDE FOR DECEMBER

(c) Flight level 330

DECEMBER
FL 330

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

		MEAN												LAT								
70N										.215	.022	3			.215	.022	3	70N				
										.214	.233	.241			.214	.233	.241					
65							.312	1			.092	.038	5	.159	.054	12	.149	.069	18	65		
										.108	.129	.132		.142	.227	.249	.121	.227	.291			
60									.236	.043	20			.224	.095	41	.312		1	60		
									.242	.280	.291			.236	.297	.456				.229	.082	62
55						.190	1			.226	.045	14		.119	.093	35	.167	.099	60	.160	.097	110
									.229	.274	.287			.081	.247	.315	.188	.274	.349	.108	.269	.345
50						.206	.037	7	.181	1				.269	.051	15	.125	.076	46	.190	.105	89
						.210	.235	.254						.296	.377	.428	.107	.196	.321	.188	.307	.408
45	.044	.013	11			.055	.007	11	.046	.027	13			.109	.066	33	.112	.086	50	.094	.073	127
	.049	.056	.059			.056	.062	.066	.034	.068	.112			.083	.156	.287	.067	.205	.317	.062	.160	.297
40	.077	.024	2		.134	.059	6		.126	.058	24			.082	.065	69	.044	.023	14	.087	.064	121
	.077	.092	.099		.128	.188	.218		.102	.196	.225			.062	.109	.321	.038	.054	.101	.064	.134	.227
35	.039	.008	7		.075	.050	21		.047	.011	3			.054	.031	40				.059	.036	93
	.031	.035	.046		.051	.117	.198		.041	.055	.061			.047	.066	.129	.060	.027	.22	.048	.079	.173
30	.039	.031	6	.022	.002	3			.064	.034	40			.055	.106	.139	.050		1	.058	.034	50
	.026	.047	.099	.022	.024	.025														.048	.103	.135
25	.072		1	.028	.016	10	.045	.020	5					.056	.027	35				.050	.027	51
				.024	.029	.065	.058	.062	.066					.044	.082	.124				.041	.073	.123
20				.039	.027	3	.063	.032	7	.075	.015	24		.041	.011	11				.062	.024	45
				.024	.060	.075	.065	.094	.098	.074	.090	.105		.037	.055	.058				.062	.089	.102
15				.040		1	.032	.015	23	.080	.011	12								.048	.027	36
							.031	.044	.069	.079	.091	.098								.031	.077	.097
10																						
5				.033	.001	7				.032	1									.033	.001	8
				.033	.034	.035														.033	.034	.035
0				.028	.010	6														.028	.010	6
				.027	.039	.041														.027	.039	.041
5				.007	.003	4			.021	.001	4									.014	.007	8
				.007	.010	.011			.021	.022	.023									.012	.021	.023
10							.027	.012	9											.027	.012	9
							.020	.043	.048											.020	.043	.048
15							.024	.010	3	.034	.016	13								.032	.016	16
							.021	.033	.037	.033	.056	.057								.027	.052	.057
20							.072	.006	5											.072	.006	5
							.072	.076	.079											.072	.076	.079
25							.070	.025	16											.070	.025	16
							.079	.096	.098											.079	.096	.098
30							.102	.032	37											.102	.032	37
							.097	.123	.193											.097	.123	.193
35				.056		1	.104	.044	12											.101	.044	13
							.096	.137	.198											.095	.126	.198
40				.048		1														.048		1
45S																						
	15E	60E	105E	150E	165W	120W	75W	30W	15E													

TABLE XII. - Continued. GASP AMBIENT OZONE DATA BY LATITUDE FOR DECEMBER

(d) Flight level 350

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

DECEMBER
FL 350

LAT	MEAN												LAT											
	15E	60E	105E	150E	165W	120W	75W	30W	15E															
70N						.299 .295	.054 .361	8 .385		.285 .290	.067 .347	23 .408		.289 .290	.064 .357	31 .406	70N							
65					.258 .252	.035 .280	15 .336		.163 .163	.007 .168	2 .170		.193	1	.244 .243	.046 .273	18 .335	65						
60				.146	1	.202 .214	.075 .264	10 .296	.160 .126	.082 .280	32 .302				.169 .146	.081 .281	43 .301	60						
55				.077 .071	.045 .099	15 .186		.185 .189	.053 .253	28 .275		.175 .172	.093 .282	54 .337	.252 .289	.123 .365	16 .431	.170 .183	.063 .217	9 .256	.175 .127	.095 .269	122 .381	55
50				.054 .063	.031 .085	9 .104		.144 .105	.102 .202	34 .375		.187 .189	.113 .314	44 .379	.176 .137	.130 .353	31 .380	.136 .112	.079 .217	46 .283	.155 .084	.108 .293	164 .376	50
45	.103 .097	.054 .160	42 .236			.110 .102	.059 .132	22 .267	.145 .116	.089 .251	59 .336	.233 .239	.102 .335	140 .396	.144 .102	.109 .276	65 .360	.108 .054	.094 .247	23 .279	.170 .156	.108 .298	351 .382	45
40	.093 .071	.051 .141	64 .217		.115 .065	.095 .189	13 .327	.176 .202	.101 .289	24 .334	.088 .062	.080 .154	88 .328	.090 .066	.060 .149	248 .244	.183 .074	.184 .402	19 .495		.099 .056	.060 .163	456 .355	40
35	.081 .068	.053 .106	38 .262		.075 .052	.058 .102	5 .179	.062 .049	.031 .105	21 .125	.079 .055	.058 .136	189 .244	.100 .085	.054 .143	57 .241					.082 .059	.108 .156	310 .249	35
30	.064 .060	.028 .089	51 .132	.096 .081	.030 .116	4 .144	.049 .050	.004 .052	3 .053			.063 .051	.041 .087	232 .220	.066 .064	.006 .068	7 .078				.064 .053	.038 .087	297 .215	30
25				.071 .070	.015 .077	13 .104	.059	1			.051 .045	.022 .069	219 .113								.052 .047	.022 .071	233 .112	25
20				.055		1	.018 .018	.002 .019	6 .021	.065 .051	.019 .064	21 .103	.044 .039	.019 .064	58 .089						.047 .040	.022 .069	86 .096	20
15				.033 .031	.004 .036	3 .039	.049 .047	.017 .066	5 .070	.054 .055	.020 .074	23 .083	.049 .045	.015 .065	18 .079						.050 .046	.018 .071	49 .034	15
10				.045 .045	.004 .048	5 .050						.037 .034	.012 .051	8 .053							.040 .045	.010 .050	13 .053	10
5				.035 .034	.008 .042	7 .047						.019 .018	.004 .022	4 .025							.029 .027	.010 .040	11 .047	5
0				.034 .035	.003 .036	7 .038				.021 .021	.000 .022	3 .022	.024 .024	.008 .029	2 .031						.029 .031	.007 .036	12 .038	0
5				.019 .017	.006 .023	5 .028				.024 .025	.004 .027	3 .028									.021 .017	.006 .028	8 .029	5
10				.021 .018	.008 .027	4 .034				.028 .027	.009 .034	6 .043									.025 .021	.009 .034	10 .042	10
15				.046 .045	.004 .049	6 .052						.041 .041	.017 .053	2 .057							.045 .045	.009 .052	8 .057	15
20							.044 .042	.014 .047	9 .074												.044 .044	.014 .047	9 .074	20
25					.073 .082	.025 .095	20 .101		.019	1											.071 .078	.027 .095	21 .101	25
30					.064 .073	.029 .084	29 .119		.023	1											.062 .073	.030 .083	30 .118	30
35					.049 .054	.012 .060	18 .061	.077 .081	.038 .114	12 .139											.060 .048	.029 .087	30 .135	35
40					.063	1															.063	1	40	
45S																								45S

95

LONGITUDE

TABLE XII. - Continued. GASP AMBIENT OZONE DATA BY LATITUDE FOR DECEMBER

(e) Flight level 370

DECEMBER
FL 370

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

96

		MEAN												LAT						
70N																	70N			
65								.204	.069	.18		.268	.080	.20			.237	.082	.38	65
								.174	.285	.336		.267	.353	.393			.199	.312	.390	
60								.211	.162	.18		.159	.092	.48			.198	.122	.99	60
								.240	.393	.416		.140	.252	.362			.181	.349	.400	
55								.224	.130	.55		.173	.071	.40			.238	.125	.147	55
								.230	.303	.513		.164	.206	.415			.221	.367	.502	
50								.358	.163	.35		.139	.085	.33			.252	.158	.128	50
								.298	.536	.682		.109	.266	.315			.158	.409	.594	
45								.155	.095	.61		.132	.101	.33			.166	.125	.234	45
								.144	.257	.369		.149	.216	.329			.094	.290	.483	
40	.117	.026	13					.102	.056	9		.088	.062	.81			.125	.101	.733	40
	.107	.139	.165					.103	.155	.196		.068	.163	.220			.103	.205	.431	
35	.102	.038	3					.058	.031	24		.090	.067	.293			.105	.070	.458	35
	.082	.132	.152					.045	.087	.128		.062	.156	.270			.069	.192	.246	
30	.148	.065	7	.116	.058	7	.054	.035	42			.073	.054	.222			.073	.054	.281	30
	.191	.205	.219	.093	.203	.206	.041	.097	.127			.059	.101	.243			.060	.109	.240	
25	.044	.029	10	.067	.027	12	.038	.017	27			.068	.033	.188			.061	.032	.267	25
	.032	.079	.096	.071	.084	.114	.046	.056	.061			.067	.098	.145			.059	.092	.144	
20				.047	.020	17	.039	.006	7			.053	.027	.98			.054	.023	.86	20
				.052	.071	.080	.036	.041	.052			.040	.065	.120			.048	.077	.108	
15				.065	.001	3	.034	.016	13			.032	.010	.40			.036	.013	.67	15
				.064	.065	.066	.030	.050	.063			.031	.040	.057			.033	.049	.065	
10								.028	1			.029	.007	.43			.029	.007	.44	10
								.031	.034	.044							.031	.034	.044	
5		.026	1					.030	.007	12		.029	.005	.34			.029	.006	.47	5
								.031	.036	.040		.029	.032	.039			.029	.034	.040	
0								.024	.006	13		.029	.006	.27			.027	.007	.40	0
								.025	.028	.033		.028	.036	.039			.026	.033	.039	
5								.022	.007	12		.032	.007	.28			.029	.008	.40	5
								.023	.027	.028		.033	.040	.040			.026	.039	.040	
10								.031	.011	29		.031	.009	.14			.031	.011	.43	10
								.027	.043	.051		.033	.037	.050			.028	.041	.051	
15								.041	.014	34		.023	.002	.3			.039	.015	.37	15
								.038	.054	.072		.021	.024	.026			.037	.053	.071	
20								.051	.025	26		.020	.005	.7			.044	.026	.33	20
								.045	.057	.120		.020	.021	.029			.044	.057	.116	
25								.061	.022	11		.014	.003	.7			.043	.029	.18	25
								.058	.083	.105		.013	.017	.018			.043	.066	.104	
30								.116	.014	4							.116	.014	.4	30
								.121	.126	.129							.121	.126	.129	
35								.149	.007	3							.177	.103	.18	35
								.154	.154	.154							.124	.329	.359	
40								.042	.016	6							.042	.016	.6	40
								.036	.058	.067							.036	.058	.067	
45S								.128	.032	6							.128	.032	.6	45S
								.136	.154	.154							.136	.154	.154	

15E 60E 105E 150E 165W 120W 75W 30W 15E

LONGITUDE

TABLE XII. - Concluded. GASP AMBIENT OZONE DATA BY LATITUDE FOR DECEMBER

(h) Flight level 430

DECEMBER
FL 430

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

66

		MEAN												LAT											
70N																	70N								
65																	65								
60																	60								
55					.478	.018	4						.575	.147	4		.527	.116	8	55					
					.487	.490	.492						.540	.716	.777		.468	.623	.766						
50					.602	.157	20					.651	.079	3		.477	.174	16		.555	.173	39	50		
					.542	.779	.968					.643	.716	.747		.439	.669	.732		.541	.738	.896			
45					.372	.106	11					.838	.037	7		.204	.190	22		.389	.238	57	45		
					.411	.474	.514					.852	.865	.884		.136	.475	.554		.422	.527	.853			
40					.277	.156	38					.106	.060	41		.360	.228	2		.192	.149	81	40		
					.231	.420	.652					.101	.154	249		.360	.514	.578		.148	.307	.605			
35					.073	.077	9					.164	.041	21		.093	.042	21		.119	.063	51	35		
					.031	.134	.241					.150	.211	.256		.110	.129	.138		.125	.159	.256			
30					.017	.005	9					.103	.048	21						.077	.057	30	30		
					.018	.021	.026					.106	.157	.187						.070	.144	.185			
25	.069	.010	21	.073	.010	8	.034	.024	14				.033	.004	10						.054	.023	53	25	
	.070	.080	.088	.075	.080	.088	.018	.066	.071				.032	.037	.040						.061	.075	.089		
20					.053	.011	26	.044	.024	14				.059	.006	3						.050	.017	43	20
					.052	.064	.066	.047	.067	.077				.057	.064	.067						.054	.065	.074	
15					.022	.008	13							.024	.003	5						.022	.007	18	15
					.021	.031	.036							.024	.027	.028						.020	.029	.036	
10					.011	.012	20															.011	.012	20	10
					.011	.016	.041															.011	.016	.041	
5					.018	.015	8	.008	.005	10				.020	.002	6						.014	.011	24	5
					.010	.030	.049	.009	.012	.014				.020	.021	.023						.012	.020	.043	
0								.025	.004	5				.019		1						.024	.004	6	0
					.025	.029	.030															.023	.028	.030	
5					.025	.001	4															.025	.001	4	5
					.026	.026	.026															.025	.026	.026	
10					.023	.003	6															.023	.003	6	10
					.024	.025	.025															.024	.025	.025	
15					.037	.022	14	.044	.022	52				.044	.022	52						.042	.022	66	15
					.027	.065	.076	.037	.065	.086				.037	.065	.086						.035	.065	.085	
20																									20
25					.111	.008	4															.111	.008	4	25
					.109	.118	.124															.109	.118	.124	
30					.111	.006	2															.111	.006	2	30
					.111	.114	.116															.111	.114	.116	
35					.187	.099	49															.187	.099	49	35
					.146	.323	.433															.146	.323	.433	
40																									40
45S																									45S
	15E	60E	105E	150E	165W	120W	75W	30W	15E																
	LONGITUDE																								

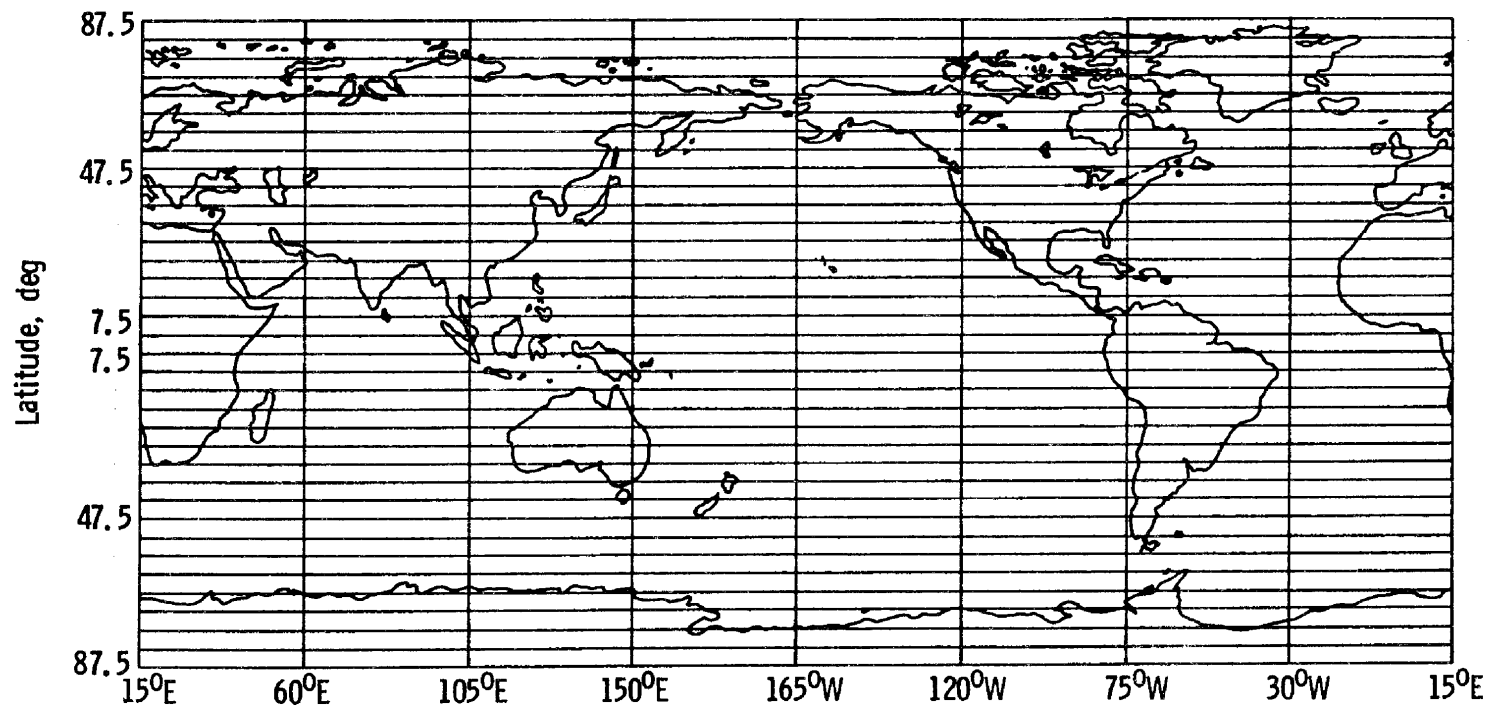


Figure 1. - Geographical grid for ozone tabulations in tables I to XII.

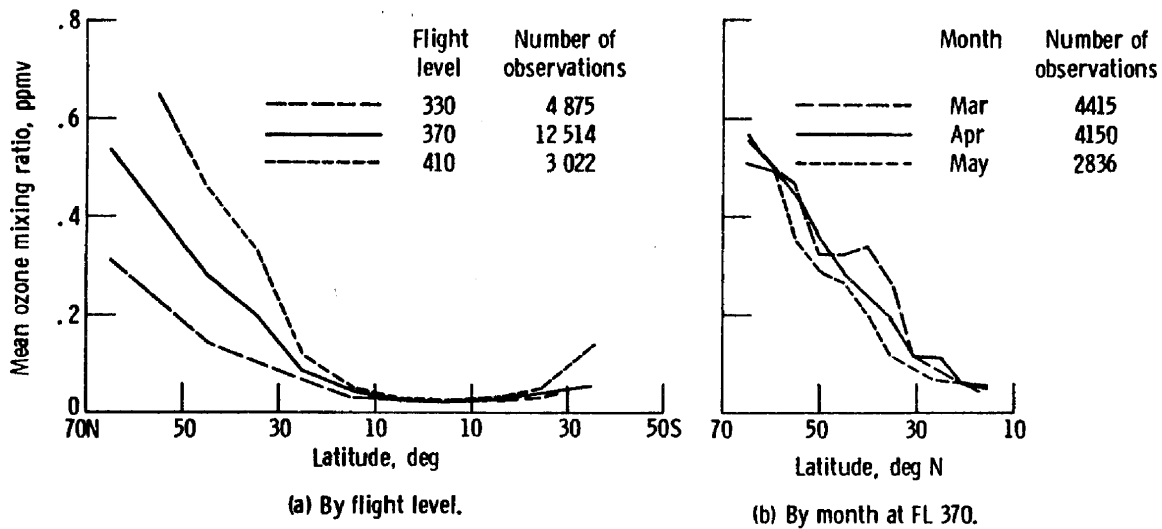


Figure 2. - Variation of mean ambient ozone with latitude in the spring (M-A-M).

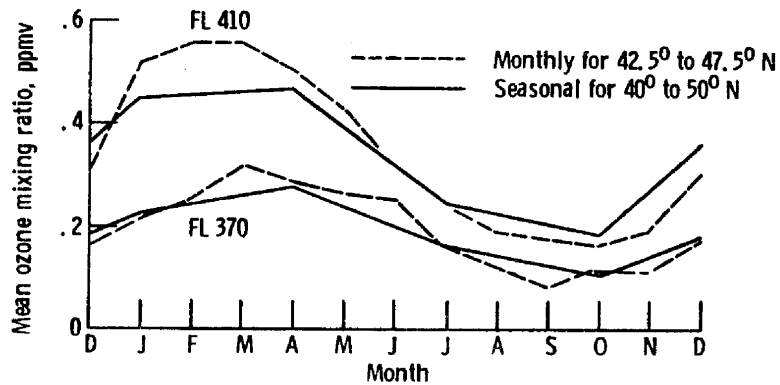
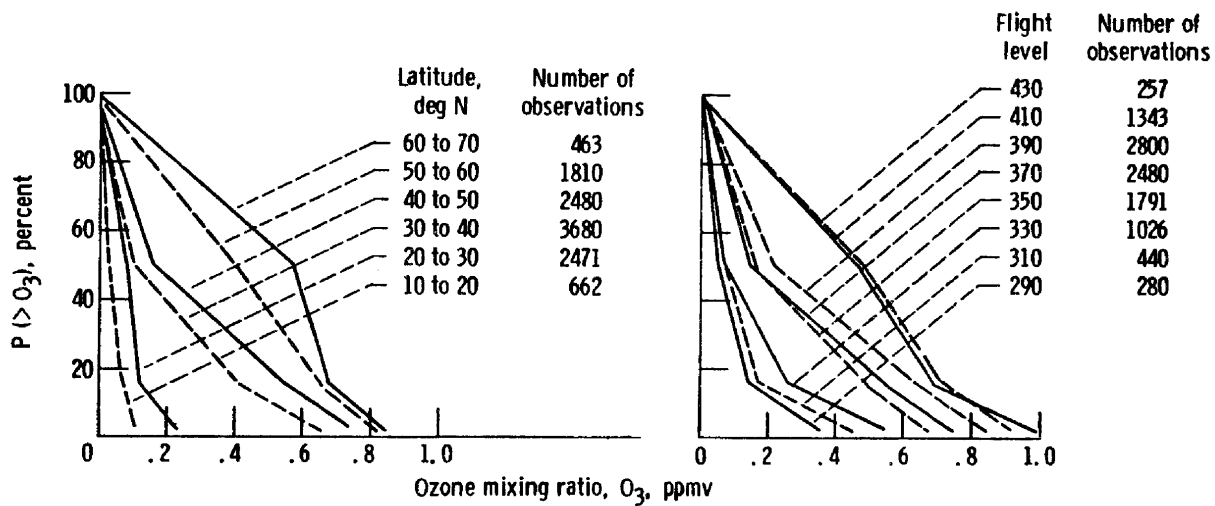


Figure 3. - Seasonal variation of mean ambient ozone near 45° N for flight levels 370 and 410.



(a) Flight level, 370. (b) 40° to 50° N latitude.
 Figure 4. - Ambient ozone cumulative frequency distributions for spring (M-A-M).

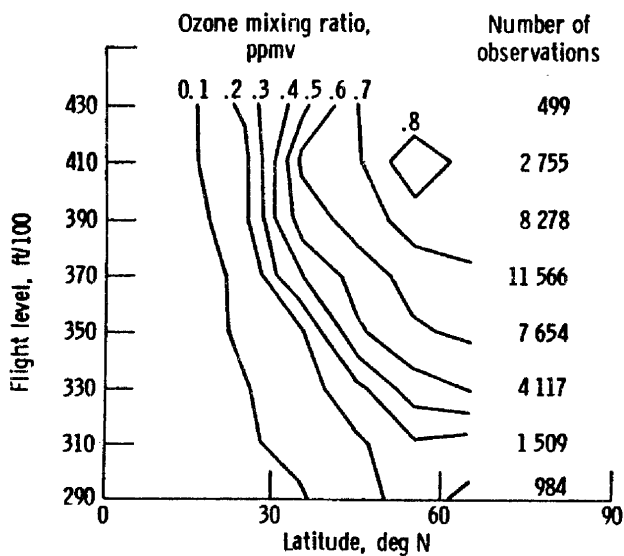


Figure 5. - Northern Hemisphere latitude - flight level cross sections of zonal 84th percentile ozone mixing ratios in the spring.

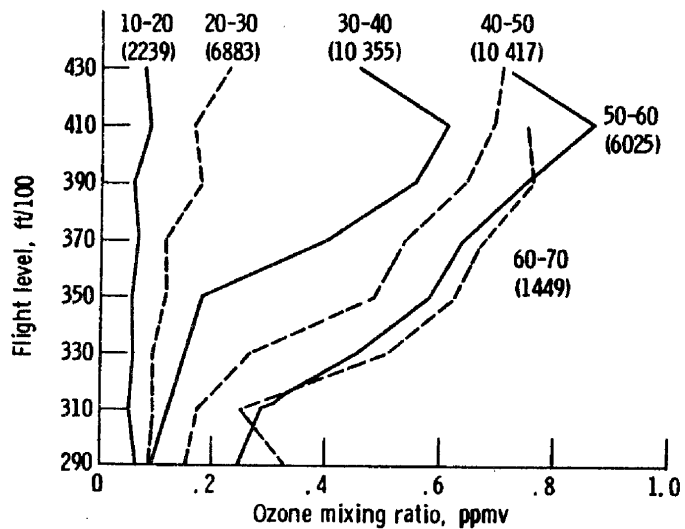


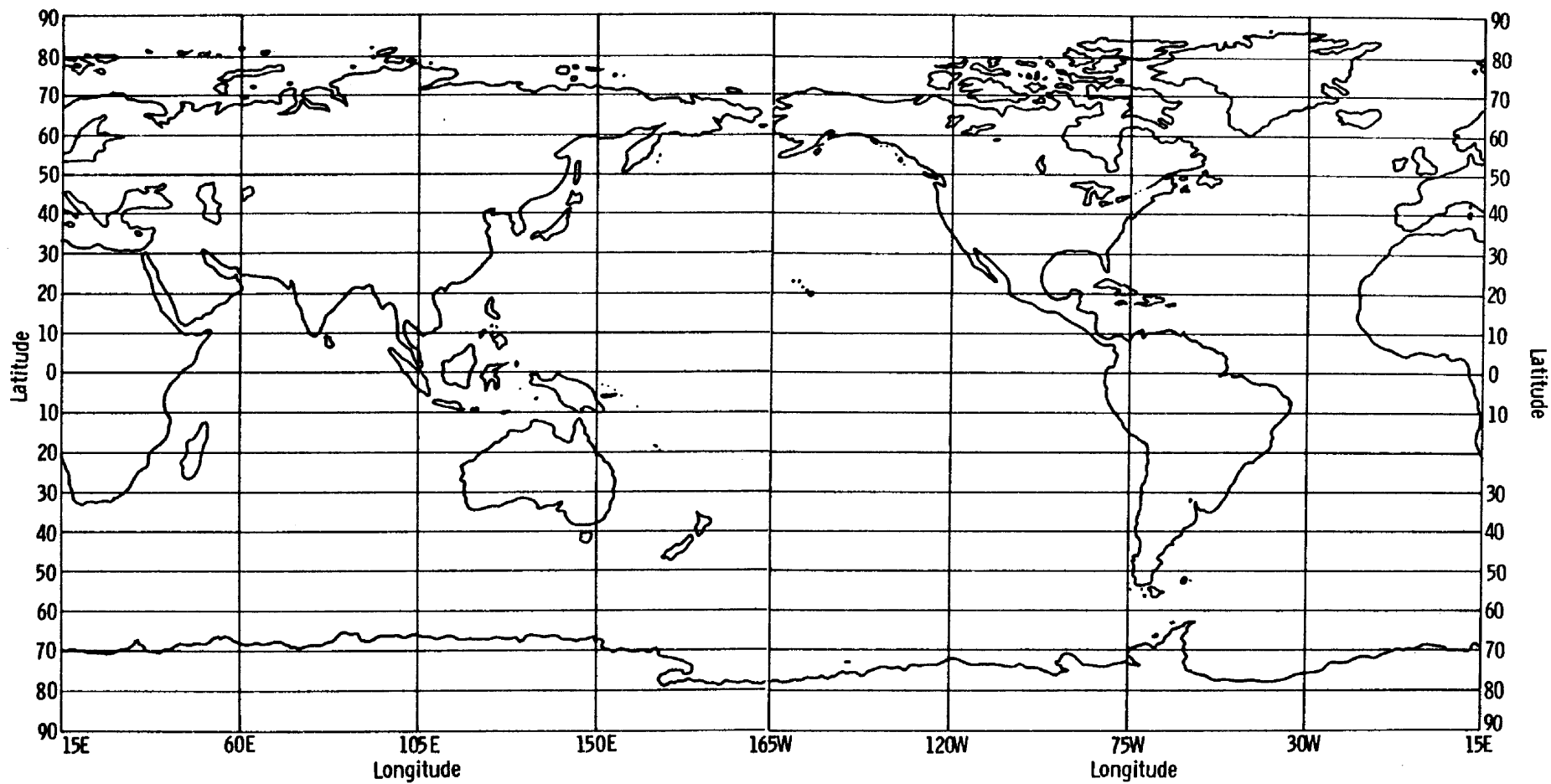
Figure 6. - Vertical profiles of zonal 84th percentile ozone mixing ratios for selected latitudes (deg N). Number of observations for each latitude is given in parentheses.

APPENDIX A
OZONE UNIT CONVERSION FACTORS

[Multiply "From" units by this factor to get "To" units. All temperatures are in K and all pressures in hectopascals (hPa).]

From	To						
	$\mu\text{g}/\text{m}^3$	10^{-3} cm SPT/km	mol/cm^3	hPa	$\mu\text{g}/\text{g}$	ppm v	ppm v SLE
$\mu\text{g}/\text{m}^3$	1	0.0467	1.26×10^{10}	1.73×10^{-3} T/P	2.87×10^{-3} T/P	1.73×10^{-3} T/P	5.09×10^{-4}
10^{-3} cm STP/km	21.4	1	2.69×10^{11}	0.037 QT	0.614 T/P	0.0370 T/P	0.0109
Molecules	7.97×10^{-11}	3.72×10^{-12}	1	1.38×10^{-13}	2.29×10^{-13} T/P	1.38×10^{-13} T/P	4.06×10^{-14}
$\mu\text{g}/\text{g}$ (ppmw)	348 P/T	16.3 P/T	4.37×10^{12} P/T	0.603 P	1	0.603	0.177 P/T
Partial pressure, hPa (mbar)	578/T	27.0/T	7.25×10^{12} P/T	1	1.66/P	1/P	0.294/T
Parts per million by volume (ppmv)	578 P/T	27.0 P/T	7.25×10^{12} P/T	P	1.66	1	0.294 P/T
Parts per million by volume, sea level equivalent (ppmv SLE)	1.96×10^3	91.8	2.46×10^{13}	3.40T	5.64 T/P	340 T/P	1

APPENDIX B
TABULATIONS OF GASP AMBIENT OZONE DATA BY SEASON AND
LATITUDE FOR 2000-FOOT ALTITUDE INTERVALS



Geographical grid used for appendix B ozone tabulations.

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

WINTER
FL 290

		MEAN												AT				
90N																		
80																		
70																		
60													.126	.012	3	.126	.012	3
50													.126	.136	.140	.061	.030	.38
40													.058	.014	8	.062	.033	.30
30													.052	.051	.089	.057	.074	.150
20													.072	.064	40	.082	.070	71
10													.043	.115	.249	.053	.132	.266
0													.094	.049	46	.077	.148	.214
10													.047	.005	2	.049	.004	2
20													.047	.050	.052	.037	.072	.238
30													.058	.061	22	.049	.021	50
40													.048	.060	103	.049	.051	.052
50													.072	.064	40	.082	.070	71
60													.043	.115	.249	.053	.132	.266
70													.094	.049	46	.077	.148	.214
80													.047	.005	2	.049	.004	2
90S													.047	.050	.052	.037	.072	.238
													.058	.061	22	.049	.021	50
													.048	.060	103	.049	.051	.052
													.072	.064	40	.082	.070	71
													.043	.115	.249	.053	.132	.266
													.094	.049	46	.077	.148	.214
													.047	.005	2	.049	.004	2
													.047	.050	.052	.037	.072	.238
													.058	.061	22	.049	.021	50
													.048	.060	103	.049	.051	.052
													.072	.064	40	.082	.070	71
													.043	.115	.249	.053	.132	.266
													.094	.049	46	.077	.148	.214
													.047	.005	2	.049	.004	2
													.047	.050	.052	.037	.072	.238
													.058	.061	22	.049	.021	50
													.048	.060	103	.049	.051	.052
													.072	.064	40	.082	.070	71
													.043	.115	.249	.053	.132	.266
													.094	.049	46	.077	.148	.214
													.047	.005	2	.049	.004	2
													.047	.050	.052	.037	.072	.238
													.058	.061	22	.049	.021	50
													.048	.060	103	.049	.051	.052
													.072	.064	40	.082	.070	71
													.043	.115	.249	.053	.132	.266
													.094	.049	46	.077	.148	.214
													.047	.005	2	.049	.004	2
													.047	.050	.052	.037	.072	.238
													.058	.061	22	.049	.021	50
													.048	.060	103	.049	.051	.052
													.072	.064	40	.082	.070	71
													.043	.115	.249	.053	.132	.266
													.094	.049	46	.077	.148	.214
													.047	.005	2	.049	.004	2
													.047	.050	.052	.037	.072	.238
													.058	.061	22	.049	.021	50
													.048	.060	103	.049	.051	.052
													.072	.064	40	.082	.070	71
													.043	.115	.249	.053	.132	.266
													.094	.049	46	.077	.148	.214
													.047	.005	2	.049	.004	2
													.047	.050	.052	.037	.072	.238
													.058	.061	22	.049	.021	50
													.048	.060	103	.049	.051	.052
													.072	.064	40	.082	.070	71
													.043	.115	.249	.053	.132	.266
													.094	.049	46	.077	.148	.214
													.047	.005	2	.049	.004	2
													.047	.050	.052	.037	.072	.238
													.058	.061	22	.049	.021	50
													.048	.060	103	.049	.051	.052
													.072	.064	40	.082	.070	71
													.043	.115	.249	.053	.132	.266
													.094	.049	46	.077	.148	.214
													.047	.005	2	.049	.004	2
													.047	.050	.052	.037	.072	.238
													.058	.061	22	.049	.021	50
													.048	.060	103	.049	.051	.052
													.072	.064	40	.082	.070	71
													.043	.115	.249	.053	.132	.266
													.094	.049	46	.077	.148	.214
													.047	.005	2	.049	.004	2
													.047	.050	.052	.037	.072	.238
													.058	.061	22	.049	.021	50
													.048	.060	103	.049	.051	.052
													.072	.064	40	.082	.070	71
													.043	.115	.249	.053	.132	.266
													.094	.049	46	.077	.148	.214
													.047	.005	2	.049	.004	2
													.047	.050	.052	.037	.072	.238
													.058	.061	22	.049	.021	50
													.048	.060	103	.049	.051	.052
													.072	.064	40	.082	.070	71
													.043	.115	.249	.053	.132	.266
													.094	.049	46	.077	.148	.214
													.047	.005	2	.049	.004	2
													.047	.050	.052	.037	.072	.238
													.058	.061	22	.049	.021	50
													.048	.060	103	.049	.051	.052
													.072	.064	40	.082	.070	71
													.043	.115	.249	.053	.132	.266
													.094	.049	46	.077	.148	.214
													.047	.005	2	.049	.004	2
													.047	.050	.052	.037	.072	.238
													.058	.061	22	.049	.021	50
													.048	.060	103	.049	.051	.052
													.072	.064	40	.082	.070	71
													.043	.115	.249	.053	.132	.266
													.094	.049	46	.077	.148	.214
													.047	.005	2	.049	.004	2
													.047	.050	.052	.037	.072	.238
													.058	.061	22	.049	.021	50

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

WINTER
FL 330

		LAT												MEAN					
90N																			
80																			
70																			
60								.312	1	.187	.066	.23	.197	.107	.70	.179	.050	.26	
50								.308	.089	.65	.205	.108	.35	.245	.089	.40	.177	.114	.163
40	.099	.072	.58					.303	.389	.484	.218	.310	.364	.252	.296	.498	.179	.303	.383
30	.084	.050	.95					.196	.120	.112	.056	.035	.41	.148	.102	.140	.130	.121	.266
20	.071	.133	.219					.163	.331	.425	.045	.083	.135	.111	.262	.390	.062	.262	.429
10	.089	.047	.26	.056	.029	.85	.038	.021	.38	.061	.038	.66	.045	.031	.365	.054	.020	.52	
0	.071	.111	.213	.052	.076	.136	.031	.058	.098	.058	.091	.163	.037	.073	.127	.049	.074	.106	
10				.047	.018	.52	.033	.021	.45	.078	.012	.19	.060	.025	.2	.045	.012	.28	
20				.040	.067	.081	.025	.046	.095	.079	.088	.097	.060	.076	.083	.045	.054	.067	
30				.043	.020	.44	.022	.008	.21	.116		1	.032		1	.013		1	
40				.036	.070	.086	.021	.031	.039							.020	.007	.16	
50				.025	.011	.37	.028	.013	.35	.017	.008	.35				.019	.003	.4	
60				.027	.032	.047	.025	.039	.060	.013	.025	.035				.019	.021	.023	
70				.040	.011	.30	.040	.016	.18	.024	.013	.117	.034	.016	.13				
80				.041	.049	.061	.038	.052	.074	.021	.037	.056	.033	.056	.057	.044		1	
90N	.061	.021	.36	.059	.026	.17	.050	.018	.46	.049	.031	.251							
	.052	.083	.104	.054	.074	.122	.048	.065	.090	.041	.086	.115							
				.071	.021	.19	.081	.041	.34	.066	.036	.266							
				.077	.090	.097	.077	.109	.168	.063	.100	.154							
										.061	.049	.5							
										.036	.084	.150							
										.030	.004	.5							
										.030	.033	.035							
										.045	.033	.8							
										.032	.080	.109							
90S																			

15E 60E 105E 150E 165W 120W 75W 30W 15E

LONGITUDE

109

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

WINTER
FL 370

		MEAN												LAT														
90N																												
80																												
70																												
60						.032		1	.407	.199	.136	.387	.190	.79	.343	.023	3	.308	.052	9	.394	.193	228					
60									.444	.586	.771	.338	.578	.734	.356	.361	.363	.319	.332	.362	.274	.584	.751					
50									.364	.194	.335	.345	.200	.319	.356	.159	.100	.354	.208	.328	.324	.205	1290					
50									.343	.569	.785	.340	.555	.746	.379	.501	.660	.047	.378	.495	.190	.545	.738					
40	.217	.091	.16				.449	.184	.26	.327	.195	.296	.230	.186	.277	.223	.157	.1147	.116	.131	.411	.239	.162	.332	.223	.173	2505	
40	.208	.322	.386				.468	.622	.765	.295	.545	.695	.185	.438	.713	.197	.424	.539	.054	.221	.501	.241	.424	.525	.189	.429	.627	
30	.211	.142	.186				.190	.124	.236	.146	.123	.504	.137	.112	1779	.184	.135	1316	.369	.179	.33	.181	.093	.22	.162	.128	4076	
30	.159	.355	.453				.206	.310	.416	.101	.279	.505	.098	.248	413	.162	.321	.523	.394	.523	.629	.170	.253	.367	.095	.302	.487	
20	.049	.028	.26	.055	.026	.154	.049	.035	.119	.113	.065	.276	.090	.069	1676	.038	.018	3							.088	.066	2254	
20	.035	.077	.104	.056	.070	.110	.046	.066	.101	.083	.209	.245	.079	.131	.323	.028	.052	.063							.068	.130	.310	
10				.033	.015	.41	.028	.041	.43	.056	.019	.34	.030	.018	.217	.051	.019	.31	.042	.005	6				.034	.024	372	
10				.030	.047	.068	.020	.043	.098	.055	.077	.087	.027	.041	.093	.051	.061	.097	.044	.045	.047				.030	.053	.093	
0				.020	.008	.8				.019	.010	.167	.027	.010	.141	.053		1	.024	.003	3				.022	.011	320	
0				.020	.026	.032				.017	.029	.040	.026	.034	.058				.025	.026	.027				.015	.032	.048	
10							.020	.003	.2	.019	.011	.192	.031	.011	.68				.019	.006	.21				.023	.012	303	
10							.020	.021	.022	.020	.028	.045	.032	.040	.054				.019	.025	.032				.022	.034	.047	
20							.034	.013	.28	.031	.015	.154	.030	.018	.14				.025	.016	.25				.031	.015	221	
20							.034	.047	.058	.028	.049	.061	.024	.037	.078				.019	.042	.060				.028	.048	.061	
30	.034	.005	.8	.033	.007	.29	.047	.017	.29	.046	.030	.67	.015	.003	.9				.041	.023	.3				.041	.024	145	
30	.035	.038	.040	.032	.042	.045	.047	.059	.090	.036	.070	.127	.014	.018	.020				.054	.059	.061				.036	.057	119	
40				.092		1	.098	.055	.99	.119	.102	.33													.103	.070	133	
40							.084	.153	.239	.087	.235	.353													.084	.158	330	
50							.115	.048	.11	.064	.042	.7													.095	.052	18	
50							.132	.158	.175	.039	.104	.137													.082	.154	.173	
60							.169	.019	.7																.169	.019	7	
60							.172	.182	.190																.172	.182	.190	
70																												
80																												
90S																												
	15E	60E	105E	150E	165W	120W	75W	30W	15E																			

LONGITUDE

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

WINTER
FL 410

111

		MEAN																
		701			1									701			1	
90N																		
80																		
70																		
60																		
50																		
40																		
30																		
20																		
10																		
0																		
10																		
20																		
30																		
40																		
50																		
60																		
70																		
80																		
90S																		
	15E	60E	105E	150E	165W	120W	75W	30W	15E									

LONGITUDE

CODE:	MEAN	ST. DEV.	N
	50%	84%	98%

SPRING
FL 330

115

		MEAN												LAT									
90N																							
80														.261	.105	6	.170	.109	5	.220	.116	11	
70														.284	.350	.397	.141	.233	.360	.152	.353	.399	
60									265	1	.360	.151	30	.381	.162	44	.202	.132	39	.313	.170	114	
50											.380	.526	.588	.437	.537	.595	.136	.361	.441	.250	.505	.586	
40											.325	.156	91	.161	.143	198	.213	.177	340	.220	.178	683	
30	.130	.096	45								.325	.497	.578	.090	.291	.565	.125	.458	.597	.143	.451	603	
20	.101	.181	.394								.132	.145	103	.170	.147	192	.150	.151	475	.142	.142	1026	
10											.071	.258	.526	.107	.294	.552	.079	.304	.560	.076	.263	550	
0	.116	.096	157								.089	.077	509	.148	.154	161	.087	.031	14	.105	.103	1031	
90S	.075	.218	.395								.071	.106	.364	.078	.283	.626	.085	.109	.152	.074	.146	483	
80											.045	.004	3	.058	.018	91	.063	.014	47	.069	.048	887	
70	.045	.048	.050								.064	.014	.084	.068	.039	75	.067	.098	.183	.060	.095	181	
60											.058	.076	.084	.058	.039	.102	.172	.062	.038	162	.077	.063	14
50											.040	.030	28	.040	.018	50	.039	.010	29	.038	.023	376	
40											.028	.056	.083	.041	.056	.082	.040	.050	.060	.034	.059	097	
30											.029	.011	45	.026	.042	.048	.032	.011	16	.029	.012	147	
20											.027	.042	.058	.027	.042	.058	.022	.007	37	.027	.041	057	
10											.021	.031	.034	.013	.024	.028	.014	.012	3	.031	.039	.042	
0											.015	.008	51				.038	.017	22	.024	.014	101	
90N											.026	.006	17	.026	.034	.036	.033	.006	11	.023	.036	061	
80											.033	.009	13	.033	.038	.041	.033	.039	.045	.023	.036	052	
70											.039	.006	16	.039	.009	.058	.023	.008	77	.028	.011	125	
60											.024	.031	.038	.030	.034	.038	.030	.005	14	.027	.036	052	
50											.019	.013	16	.043	.007	29	.031	.006	10	.033	.016	203	
40											.017	.025	.048	.045	.051	.055	.033	.036	.038	.032	.050	072	
30											.045	.008	10	.043	.046	.065	.039	.011	32	.037	.046	182	
20											.043	.046	.065	.039	.052	.061	.062	.051	140	.040	.105	187	
10											.036	.010	6	.037	.046	.047	.042	.121	.198	.036	.010	6	
0											.037	.046	.047							.037	.046	.047	
90S																							
	15E	60E	105E	150E	165W	120W	75W	30W	15E														
	LONGITUDE																						

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

SPRING
FL 350

116

		MEAN												LAT					
90N																			
80																			
70																			
60																			
50																			
40																			
30																			
20																			
10																			
0																			
10																			
20																			
30																			
40																			
50																			
60																			
70																			
80																			
90S																			
		15E	60E	105E	150E	165W	120W	75W	30W	15E									
		LONGITUDE																	

SPRING
FL 430

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

		MEAN												LAT						
90N																	90N			
80																	80			
70																	70			
60																	60			
50						.594	.134	15			.675		1	.346	.050	7	.531	.175	23	50
40						.563	.737	.874						.335	.347	.448	.515	.709	.892	40
30						.647	.118	60			.197	.122	18	.381	.190	110	.481	.219	257	30
20						.629	.761	.852			.134	.294	.479	.336	.541	.965	.489	.713	.923	20
10						.405	.174	33			.321	.115	41	.329	.190	73	.344	.172	147	10
0						.369	.524	.861			.319	.439	.596	.305	.450	.910	.319	.459	.856	0
10S						.054	.008	14			.182	.055	25				.136	.076	39	10S
20S						.055	.059	.066			.195	.230	.268				.128	.227	.262	20S
30S						.081	.002	4				.026	.004	5			.054	.022	33	30S
40S						.080	.082	.083				.025	.031	.031			.053	.079	.082	40S
50S						.048	.001	3									.046	.006	16	50S
60S						.049	.049	.049									.045	.051	.054	60S
70S																				70S
80S																				80S
90S																				90S
	15E	60E	105E	150E	165W	120W	75W	30W	15E											
	LONGITUDE																			

120

123

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

SUMMER
FL 330

		MEAN												LAT					
90N																			
80																			
70																			
60									.486		1		.307	.133	15	.414	.151	51	
50													.310	.451	.481	.470	.569	.586	
40																.106	.046	9	
30																.084	.155	.198	
20																			
10																			
0																			
10																			
20																			
30																			
40																			
50																			
60																			
70																			
80																			
90S																			
	15E	60E	105E	150E	165W	120W	75W	30W	15E										
	LONGITUDE																		

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

SUMMER
FL 390

		MEAN												AT					
90N																			
80																			
70																			
60																			
50																			
40																			
30																			
20																			
10																			
0																			
10																			
20																			
30																			
40																			
50																			
60																			
70																			
80																			
90S																			
	15E	60E	105E	150E	165W	120W	75W	30W	15E										
	LONGITUDE																		

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

SUMMER
FL 430

		MEAN																					
90N																							
80																							
70																							
60									.637	.113	8	.643	.004	2		.638	.101	10					
50									.655	.716	.784	.643	.646	.647		.645	.711	.781					
40												.468	.181	34	.265	.057	19	.277	.070	8	.385	.149	133
30												.491	.652	.753	.269	.319	.335	.240	.368	.403	.411	.506	.685
20																							
10																							
0																							
10																							
20																							
30																							
40																							
50																							
60																							
70																							
80																							
90N																							
90S																							
	15E	60E	105E	150E	165W	120W	75W	30W	15E														
	LONGITUDE																						

129

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

AUTUMN
FL 290

		MEAN												AT			
90N																	
80																	
70																	
60																	
50													.080 .025 2	.074 .052 64	.074 .051 66		
40	.074 .027 59												.080 .096 103	.057 .089 206	.057 .089 206		
30	.055 .015 45	.055 1															
20	.054 .070 .086																
10	.058 .018 9	.054 .015 42															
0	.062 .074 .077	.054 .070 .077															
10		.031 .006 9															
20		.030 .039 .042															
30		.031 .007 5															
40		.030 .037 .041															
50																	
60																	
70																	
80																	
90S																	
	15E	60E	105E	150E	165W	120W	75W	30W	15E								
	LONGITUDE																

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

AUTUMN
FL 310

130

		MEAN															
90N																	
80																	
70																	
60									.244	.026	7	.110	.085	33	.112	.061	18
									.232	.279	.280	.060	.240	.271	.082	.178	.219
									.054	.030	15	.197		1	.163	.094	135
									.044	.074	.129	.049	.081	.190	.150	.268	345
50		.081	.038	31				.055	.031	15		.074	.056	109	.075	.057	136
		.063	.124	.172				.044	.062	.135		.049	.081	.190	.052	.114	.241
40		.061	.025	69				.074	.037	17		.048	.028	81	.042	.027	33
		.053	.087	.125		.057	.029	50	.054	.115	.134	.041	.077	.102	.040	.055	.121
30		.052	.011	25		.042	.022	8	.039	.017	22	.074	.039	19	.042	.035	57
		.049	.065	.073		.030	.072	.082	.032	.053	.072	.060	.132	.146	.037	.061	.096
20						.043	.030	32	.027	.011	22	.011	.005	7	.019	.012	48
						.032	.057	.116	.030	.037	.043	.014	.014	.014	.016	.028	.057
10						.032	.011	14	.040	.004	4	.012	.008	41	.016	.007	17
						.035	.043	.044	.040	.043	.045	.012	.017	.029	.015	.022	.029
0									.062		1	.012	.005	21			
									.010	.020	.022	.010	.020	.022			
10									.057	.024	4	.038	.041	14			
									.062	.076	.082	.025	.086	.122			
20									.071	.030	40	.060	.024	24			
									.083	.100	.112	.064	.079	.109			
30									.073	.024	38	.079	.048	24			
		.028	0.000	2		.073	.024	38	.075	.094	.118	.065	.104	.209			
		.028	.028	.028													
40															.050	.004	2
															.050	.053	.054
50									.079		1						
60																	
70																	
80																	
90S																	

90N

80

70

60

50

40

30

20

10

0

10

20

30

40

50

60

70

80

90S

15E

60E

105E

150E

165W

120W

75W

30W

15E

LONGITUDE

CODE: MEAN ST. DEV. N
50% 84% 98%

AUTUMN
FL 350

		MEAN																	
90N																			
80																			
70																			
60																			
50																			
40																			
30																			
20																			
10																			
0																			
10																			
20																			
30																			
40																			
50																			
60																			
70																			
80																			
90S																			
	15E	60E	105E	150E	165W	120W	75W	30W	15E										

LONGITUDE

CODE:

MEAN	ST. DEV.	N
50%	84%	98%

AUTUMN
FL 370

														MEAN							
90N										.280	.015	4						.280	.015	4	
80										.287	.292	.292						.287	.292	.292	
70										.298	.035	50	.359	1				.299	.036	51	
60										.306	.330	.358						.307	.334	.359	
50										.167	.022	4	.254	.084	250	.234	.099	97	.288	.106	70
40										.177	.183	.185	.256	.334	.395	.256	.337	.386	.293	.394	.453
30										.227	.103	290	.220	.088	246	.198	.109	212	.188	.123	261
20										.243	.339	.390	.223	.312	.382	.195	.307	.449	.160	.337	.428
10										.112	.084	612	.110	.096	349	.103	.069	966	.117	.089	561
0										.084	.192	.340	.070	.194	.370	.081	.174	.278	.089	.205	.362
10S										.092	.075	42	.081	.174	.278	.089	.205	.362	.095	.072	177
20S										.064	.188	291	.064	.192	.340	.083	.133	.344	.083	.133	.344
30S										.066	.041	198	.057	.034	1186	.083	.065	417	.044	.056	31
40S										.047	.083	252	.051	.082	155	.065	.145	272	.032	.041	220
50S										.066	.041	198	.057	.034	1186	.083	.065	417	.044	.056	31
60S										.058	.092	177	.051	.082	155	.065	.145	272	.032	.041	220
70S										.047	.023	33	.042	.029	892	.043	1	.027	.011	37	
80S										.038	.068	103	.036	.063	1111	.043	1	.030	.035	.047	
90S										.020	.021	13	.017	.010	99	.056	.005	3	.045	.027	45
										.038	.044	077	.017	.026	043	.057	.050	062	.047	.076	093
										.020	.021	13	.017	.015	83	.053	.022	43	.056	.071	088
										.029	.016	4	.017	.017	65	.046	.018	27	.056	.062	068
										.037	.039	040	.008	.041	052	.056	.062	068	.021	.047	082
										.021	.008	86	.017	.017	65	.046	.018	27	.024	.018	162
										.022	.028	037	.017	.032	048	.056	.071	088	.010	.043	063
										.021	.009	70	.008	.041	052	.056	.062	068	.025	.020	229
										.041	.019	10	.048	.003	4	.047	.006	14	.021	.047	082
										.039	.058	071	.049	.051	052	.047	.052	056	.025	.017	170
										.051	.045	33	.068	.053	116	.048	.021	5	.018	.043	071
										.028	.098	152	.048	.051	052	.041	.067	081	.064	.051	154
										.215	.106	64	.048	.051	052	.041	.067	081	.048	.113	173
										.176	.345	438	.048	.051	052	.041	.067	081	.064	.051	154
										.139	.074	54	.048	.051	052	.041	.067	081	.048	.113	173
										.123	.191	333	.048	.051	052	.041	.067	081	.048	.113	173
										.182	.015	2	.048	.051	052	.041	.067	081	.048	.113	173
										.262	.333	391	.048	.051	052	.041	.067	081	.048	.113	173
										.104	.053	22	.048	.051	052	.041	.067	081	.048	.113	173
										.088	.116	253	.048	.051	052	.041	.067	081	.048	.113	173
										.082	.015	10	.048	.051	052	.041	.067	081	.048	.113	173
										.077	.100	106	.048	.051	052	.041	.067	081	.048	.113	173
										.402	.027	50	.048	.051	052	.041	.067	081	.048	.113	173
										.401	.430	.447	.048	.051	052	.041	.067	081	.048	.113	173
										.321	.055	54	.048	.051	052	.041	.067	081	.048	.113	173
										.335	.382	.390	.048	.051	052	.041	.067	081	.048	.113	173
										.258	.020	18	.048	.051	052	.041	.067	081	.048	.113	173
										.254	.281	.292	.048	.051	052	.041	.067	081	.048	.113	173
										.258	.020	18	.048	.051	052	.041	.067	081	.048	.113	173
										.253	.281	.292	.048	.051	052	.041	.067	081	.048	.113	173

135

CODE: MEAN ST. DEV. N
50% 84% 98%

AUTUMN
FL 410

		MEAN												LAT																	
90N														363	039	12				.413	.029	57				404	.036	72	90N		
80	.399	.008	3											374	.400	.419				.410	.434	.477				404	.426	.477	80		
70	.405	.405	.405																	.491	.057	.41				491	.057	.41	70		
60																				.480	.567	.589				480	.567	.589	60		
50																				.451	.095	.18				321	.126	.424	50		
40																				.429	.540	.648				429	.540	.648	40		
30																				.316	.144	.62				316	.144	.62	30		
20																				.305	.463	.632				305	.463	.632	20		
10																				.272	.107	.28				272	.107	.28	10		
0																				.249	.384	.518				249	.384	.518	0		
10																				.264	.120	.247				264	.120	.247	10		
20																				.251	.373	.542				251	.373	.542	20		
30																				.273	.121	.276				273	.121	.276	30		
40	.114	.055	.41																	.225	.356	.422				225	.356	.422	40		
50	.107	.160	.243																	.230	.118	.272				230	.118	.272	50		
60	.090	.045	.78																	.221	.356	.485				221	.356	.485	60		
70	.075	.128	.211																	.167	.116	.51				167	.116	.51	70		
80	.051	.019	.45	.041	.027	.48	.047	.030	.78	.036	.011	.4	.063	.039	.215				.146	.293	.442				146	.293	.442	80			
90N	.055	.068	.081	.046	.073	.086	.046	.080	.103	.040	.046	.047	.060	.082	.181				.185	.119	.2090				185	.119	.2090	90N			
80				.027	.024	.6	.029	.014	.44	.020		.1	.030	.020	.135				.117	.318	.464				117	.318	.464	80			
70				.020	.054	.069	.028	.045	.051				.025	.050	.076				.098	.056	.692				098	.056	.692	70			
60													.113	.058	.111				.086	.140	.256				086	.140	.256	60			
50																			.055	.035	.399				055	.035	.399	50			
40																			.056	.077	.132				056	.077	.132	40			
30																			.033	.023	.201				033	.023	.201	30			
20																			.026	.051	.098				026	.051	.098	20			
10																			.026	.018	.121				026	.018	.121	10			
0				.025	.016	.10	.025	.010	.23	.020	.002	.4	.021	.010	.73				.021	.033	.075				021	.033	.075	0			
10				.030	.040	.045	.023	.029	.051	.020	.022	.022	.019	.023	.050				.063	.065	.106				063	.065	.106	10			
20										.031	0.000	.2	.027	.009	.13				.070	.018	.35				070	.018	.35	20			
30										.031	.031	.031	.025	.034	.045				.069	.050	.103				069	.050	.103	30			
40										.045	.033	.27							.056	.014	.33				056	.014	.33	40			
50										.033	.060	.134							.052	.071	.082				052	.071	.082	50			
60										.059	.051	.55							.076	.016	.6				076	.016	.6	60			
70										.037	.113	.169							.081	.087	.098				081	.087	.098	70			
80	.138		1							.232	.146	.104													232	.146	.104	80			
90S				.342	.023	.2	.342	.358	.364	.183	.337	.563										.233	.145	.107				233	.145	.107	90S
80										.571	.023	.15										.183	.338	.562				183	.338	.562	80
70										.568	.594	.619										.571	.023	.15				571	.023	.15	70
60										.839	.105	.47										.568	.594	.619				568	.594	.619	60
50										.876	.903	.938										.839	.105	.47				839	.105	.47	50
40																						.876	.903	.938				876	.903	.938	40
30																															30
20																															20
10																															10
0																															0
10																															10
20																															20
30																															30
40																															40
50																															50
60																															60
70																															70
80																															80
90S																															90S

LONGITUDE

REFERENCES

1. Perkins, Porter J.; and Gustafsson, Ulf R. C.: An Automated Atmospheric Sampling System Operating on 747 Airliners. NASA TM X-71790, 1975.
2. Perkins, Porter J.; Holdeman, J. D.; and Gauntner, Daniel J.: Aircraft Cabin Ozone Measurements on B747-100 and B747-SP Aircraft: Correlations with Atmospheric Ozone and Ozone Encounter Statistics. NASA TM-79060, 1978.
3. Holdeman, James D.: Procedures for Estimating the Frequency of Commercial Airline Flights Encountering High Cabin Ozone Levels. NASA TP-1560, 1979.
4. Perkins, Porter J.; Holdeman, J. D.; and Nastrom, G. D.: Simultaneous Cabin and Ambient Ozone Measurements on Two Boeing 747 Airplanes: Volume 1. FAA-EE-79-05, NASA TM-79166, 1979.
5. Nastrom, Gregory D.; Holdeman, James D.; and Perkins, Porter J.: Measurements of Cabin and Ambient Ozone on B747 Airplanes. J. Aircr., vol. 17, no. 4, Apr. 1980, pp. 246-249.
6. Holdeman, J. D.; and Nastrom, G. D.: Ozone Contamination in Aircraft Cabins: Results from GASP Data and Analyses. AIAA Paper 81-0305, 1981. (See also NASA TM-81671, 1981.)
7. Holdeman, J. D.; et al.: Simultaneous Cabin and Ambient Ozone Measurements on Two Boeing 747 Airplanes: Volume II - January to October 1978. NASA TM -81733, 1981.
8. Belmont, A. D.; et al.: Guidelines for Flight Planning During Periods of High Ozone Occurrence. FAA-EQ-78-03, Federal Aviation Administration, Jan. 1978. (AD-A050988.)
9. Nastrom, Gregory D.; and Holdeman, James D.: Tabulations of Ambient Ozone Data Obtained by GASP Airliners; March 1975 to December 1977. FAA-EE-80-43, NASA TM-81528, 1980.
10. Transport Category Airplanes Cabin Ozone Concentrations. FAA-AC-120-38, Federal Aviation Administration, 1980.
11. Tiefermann, Marvin W.: Ozone Measurement System for NASA Global Air Sampling Program. NASA TP-1451, 1979.
12. DeMore, W. B.; and Patapoff, M.: Comparison of Ozone Determinations by Ultraviolet Photometry and Gas-Phase Titration. Environ. Sci. Technol., vol. 10, no. 9, Sep. 1976, pp. 897-899.
13. Holdeman, J. D.; and Lezberg, E. A.: NASA Global Atmospheric Sampling Program (GASP) Data Report for Tape VLO001. NASA TM X-71905, 1976.
14. Holdeman, James D.; and Lezberg, Erwin A.: NASA Global Atmospheric Sampling Program (GASP) Data Report for Tape VLO002. NASA TM X-73484, 1976.

15. Holdeman, James D.: NASA Global Atmospheric Sampling Program (GASP) Data Report for Tape VL0003. NASA TM X-73506, 1976.
16. Holdeman, J. D.; Humenik, F. M.; and Lezberg, E. A.: NASA Global Atmospheric Sampling Program (GASP) Data Report for Tape VL0004. NASA TM X-73574, 1976.
17. Holdeman, J. D.; and Humenik, F. M.: NASA Global Atmospheric Sampling Program (GASP) Data Report for Tape VL0005. NASA TM X-73608, 1977.
18. Gauntner, Daniel J.; Holdeman, J. D.; and Humenik, Francis M.: NASA Global Atmospheric Sampling Program (GASP) Data Report for Tape VL0006. NASA TM-73727, 1977.
19. Holdeman, J. D.; et al.: NASA Global Atmospheric Sampling Program (GASP) Data Report for Tapes VL0007 and VL0008. NASA TM-73784, 1977.
20. Holdeman, J. D.; et al: NASA Global Atmospheric Sampling Program (GASP) Data Report for Tape VL0009. NASA TM-79058, 1978.
21. Holdeman, J. D.; et al.: NASA Global Atmospheric Sampling Program (GASP) Data Report for Tapes VL0010 and VL0012. NASA TM-79061, 1979.
22. Holdeman, J. D.; Dudzinski, Thomas J.; and Tiefermann, Marvin W.: NASA Global Atmospheric Sampling Program (GASP) Data Report for Tapes VL0011 and VL0013, TM-81462, 1980.
23. Briehl, Daniel; Dudzinski, Thomas J.; and Lin, David C.: NASA Global Atmospheric Sampling Program (GASP) Data Report for Tape VL0014, NASA TM-81579, 1980.
24. Papathakos, Leonidas C.; and Briehl, Daniel: NASA Global Atmospheric Sampling Program (GASP) Data Report for Tapes VL0015, VL0016, VL0017, VL0018, VL0019, and VL0020. NASA TM-81661, 1981.

1. Report No. NASA TM-82742 FAA-EE-83-12		2. Government Accession No.		3. Recipient's Catalog No.	
4. Title and Subtitle Tabulations of Ambient Ozone Data Obtained by GASP Airliners: March 1975 to July 1979				5. Report Date January 1984	
				6. Performing Organization Code 505-44-22	
7. Author(s) William H. Jasperson and James D. Holdeman				8. Performing Organization Report No. E-1055	
				10. Work Unit No.	
9. Performing Organization Name and Address National Aeronautics and Space Administration Lewis Research Center Cleveland, Ohio 44135				11. Contract or Grant No.	
				13. Type of Report and Period Covered Technical Memorandum	
12. Sponsoring Agency Name and Address National Aeronautics and Space Administration Washington, D.C. 20546				14. Sponsoring Agency Code	
15. Supplementary Notes William H. Jasperson, Control Data Corp., Minneapolis, Minnesota; James D. Holdeman, Lewis Research Center; work partly supported by FAA through interagency agreement DOT-FA78WAI-893.					
16. Abstract Tabulations are given of GASP ambient ozone mean, standard deviation, median, 84th percentile, and 98th percentile values, by month, flight level, and geographical region. These data are tabulated to conform to the temporal and spatial resolution required by FAA Advisory Circular 120-38 (monthly by 2000 ft in altitude by 5° in latitude) for climatological data used to show compliance with cabin ozone regulations. In addition seasonal x 10° latitude tabulations are included which are directly comparable to and supersede the interim GASP ambient ozone tabulations given in appendix B of FAA-EE-80-43 (NASA TM-81528). Selected probability variations are highlighted to illustrate the spatial and temporal variability of ambient ozone and to compare results from the coarse and fine grid analyses.					
17. Key Words (Suggested by Author(s)) Ambient ozone Aircraft measurements GASP Cabin ozone				18. Distribution Statement Unclassified - unlimited STAR Category 47	
19. Security Classif. (of this report) Unclassified		20. Security Classif. (of this page) Unclassified		21. No. of pages	22. Price*