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Concurrent Measuremensts of Water Vapor and Ozone Over Washington, D.C., During 1967 and 1968

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ABSTRACT

A balloon-borne instrument system has been assembled which can concurrently measure the concentrations of water vapor and ozone in the atmosphere. An observational program has provided the first collection of data of this kind for studies of atmospheric circulation. Nineteen soundings were made during 1967 and 1968 over the Washington, D.C., area, each providing vertical distributions of these two gases. The data from these soundings have been individually recorded in tables and graphs.

PROBLEM STATUS

This is a final report on one phase of a continuing problem.

AUTHORIZATION

NRL Problem A03-09
Project A37540/652/69-R004-02-01

Manuscript submitted August 14, 1969.

CONCURRENT MEASUREMENTS OF WATER VAPOR AND OZONE OVER WASHINGTON, D.C., DURING 1967 AND 1968

INTRODUCTION

A program for the systematic observation of water vapor and ozone at heights to 100,000 feet was initiated in January 1967 to obtain concurrent distributions in the atmosphere of these two gases and provide data for studies of the atmosphere's general circulation. Soundings are made at approximately 1-month intervals from a site near Washington, D.C., at the NRL Chesapeake Bay Division (38.6°N and 76.6°W). The date and time of individual soundings is given in Table 1. The observational program through 1968 has provided 19 vertical profiles of water vapor and ozone in the atmosphere, which are presented here in tables and graphs.

Table 1
Date and Time of Water Vapor - Ozone Soundings

Date	Date (GMT)	Date	Date (GMT)
Aug. 6, 1966	1450 GMT	Apr. 25, 1968	1630 GMT
Mar. 10, 1967	1650	May 29, 1968	1600
May 18, 1967	1920	June 14, 1968	1520
July 5, 1967	1550	July 1, 1968	1533
Sept. 7, 1967	1545	Aug. 12, 1968	1600
Oct. 3, 1967	1520	Sept. 13, 1968	1530
Dec. 19, 1967	1700	Oct. 21, 1968	1755
Jan. 17, 1968	1620	Nov. 25, 1968	1630
Feb. 26, 1968	1630	Dec. 10, 1968	1603
Mar. 5, 1968	1642		

INSTRUMENTATION

The instrumentation is a consolidation of two instrument systems in a single package, which is carried aloft on an ascent-descent sounding balloon. Data are collected during both the ascent and descent flights. The water vapor measurements are obtained using a frost-point hygrometer (1), which is an instrument for measuring the temperature at which the atmospheric water vapor is in pressure equilibrium with ice or water. Frost-point temperatures are readily converted to vapor pressure, and hence to concentrations, using the relationship between temperature and saturation vapor pressure formulated by Goff and Gratch (2). The partial pressure of ozone is measured by means of an electrochemical concentration cell using the well known oxidation of KI by ozone as

the basic reaction, whereby each ozone molecule absorbed in the solution provides two electrons to an external circuit. The electron current is impressed upon an electronic coupler, whose resistance varies with the current, thus providing a resistance input for radiosonde transmission. By calibrating the flow rate of the pump and measuring the cell current, the ozone concentration is determined. The sensor system employed for these observations is the carbon-iodine ozonesonde, developed by Komhyr (3), which is a form of electrochemical concentration cell employing iodine/iodide redox electrodes. The use of a nonreactive Teflon gas-sampling pump overcomes one of the problems associated with other instruments, that is, the destruction of ozone before reaching the sensor.

A conventional radiosonde is used to telemeter to a ground station the frost-point temperature, the air temperature, the ozone generated current, and various references and instrument parameters.

An expansible neoprene balloon is used as the sounding vehicle, which supports the instrumentation during both ascent and descent. Balloon turnaround to initiate the descent sounding is achieved by a balloon control system (4) which releases gas at the top of the flight. Rate of ascent and descent is in the range of 1000 to 2000 ft/min.

A major problem in the measurement of water vapor at stratospheric levels using sounding balloons has been the water vapor contamination from the equipment and balloon system (5). For this instrument system the problem has been largely overcome by sampling ahead of the contaminated wash of the flight train during a balloon descent and using only the descent sounding data for the measurement of stratospheric water vapor. Contamination by the balloon system is not a problem in the measurement of ozone, and ozone distributions are determined for both the ascent and descent flights.

For most flights, the total ozone in a vertical column of the atmosphere, as determined separately from the ascent and descent soundings, is in good agreement. Where disagreement is observed, it is more reasonable to attribute the difference to instrumental difficulties than to a real time and space variability. Distinctive features of the vertical distribution generally appear at slightly different altitudes when comparing ascent and descent soundings, with the features somewhat too high during ascent and too low during descent. This is due to response lag of the sensor, which displaces the distribution upward for the ascent sounding and downward for the descent sounding. The most probable altitude of the feature is between the ascent and descent indicated levels, probably closer to ascent level because response time of the sensor decreases with sensor temperature, and for these flights sensor temperatures were observed to be lower during the descent flight.

Large discrepancies in ozone amounts between ascent and descent flights may be the result of excessively low sensor temperatures during descent. Steps were taken in the course of the flight series to replenish a portion of the heat lost during the ascent by absorbing solar radiation at the top of the flight, which lessened the temperature drop during the descent flight.

DATA COLLECTION AND PROCESSING

A timed-programmer sequences the data transmission to provide 4-sec readings of ozone and temperature at 30- and 60-sec intervals respectively. Frost-point temperature and reference readings are taken during the intervening times, with 60 percent of transmission time allocated to frost-point temperature.

Prior to data extraction, the recorder record is processed by connecting temperature and ozone segments by straight lines and smoothing the frost-point temperature trace. The smoothed curve is a visual averaging of fluctuations over approximate intervals of 10 sec for frost points above -40°C, 15 sec for frost points of -40 to 80°C, and 30 sec for frost points lower than -80°C. Open intervals in the record of less than 2 min are closed with straight line segments. Data are then extracted at 1/2-min intervals, with the exception of ozone, which was extracted at significant levels.

The vertical distribution of frost-point temperatures is then obtained for the stratosphere by using the descent sounding data exclusively and for the troposphere using descent data where available and ascent data to complete the tropospheric distribution. However, in those cases where the frost-point temperatures for the lowest descent levels are not in substantial agreement with the ascent temperatures, the two distributions are not joined. The upper portion of the ascent distribution, considered subject to significant contamination error, is not included in the composite distribution. The ambient air temperatures are derived from those portions of the record which were used for the composite frost-point distribution. The vertical distribution of ozone is obtained separately from the ascent and descent sounding data.

The frost-point temperatures and ambient air temperatures are graphically presented immediately following the text as distributions of temperature versus pressure height. A mixing-ratio scale in terms of grams of water vapor per gram of air and the single mixing ratio curve for the value 2×10^{-6} is shown for convenient reference. When applicable, the point of joining ascent data to descent data to form the composite curve is indicated by an arrow on the left of the chart.

The ozone concentrations are graphically presented on the conventional ozonagram as distributions of ozone partial-pressure and ozone mass-mixing-ratio versus pressure height. The ozone graphs, for convenient cross reference, have the same pressure height scale as the frost-point temperature and air temperature graph for each flight. The total ozone in a vertical column, which appears in table form on the graphs, is determined by integrating the observed ozone amount to the top of the flight and estimating the residual ozone above the flight level by assuming a constant mixing ratio equal to the mixing ratio at the highest level. For descent flights which did not provide data to ground level, the integrated ozone is obtained from the descent data to the lowest level and the ascent data below this level.

Data tabulations follow the graphs. Values of pressure, P or PRESS; air temperature, T or TEMP; frost-point temperature, F; ozone partial pressure, OZONE; water vapor mass mixing ratio, W; ozone mass mixing ratio, MIXRT; and potential temperature, θ or POT T appear for all datum levels. The water vapor content between successive levels M is computed and expressed as centimeters of water at standard temperature and pressure. The lowest datum level is not the surface, nor is the surface level given. Cumulative water vapor content ΣM and cumulative ozone TOTOZ are tabulated starting at the lowest datum level.

ACKNOWLEDGMENTS

The development of instrumentation was made possible through the support of the Naval Air Systems Command. Mr. Walter Komhyr (ESSA), developer of the CI Ozonesonde, provided consultative services in the use of the sonde. Instrument preparation and field operations were ably conducted by Mr. W. W. Werner and Mr. R. E. Daniels.

REFERENCES

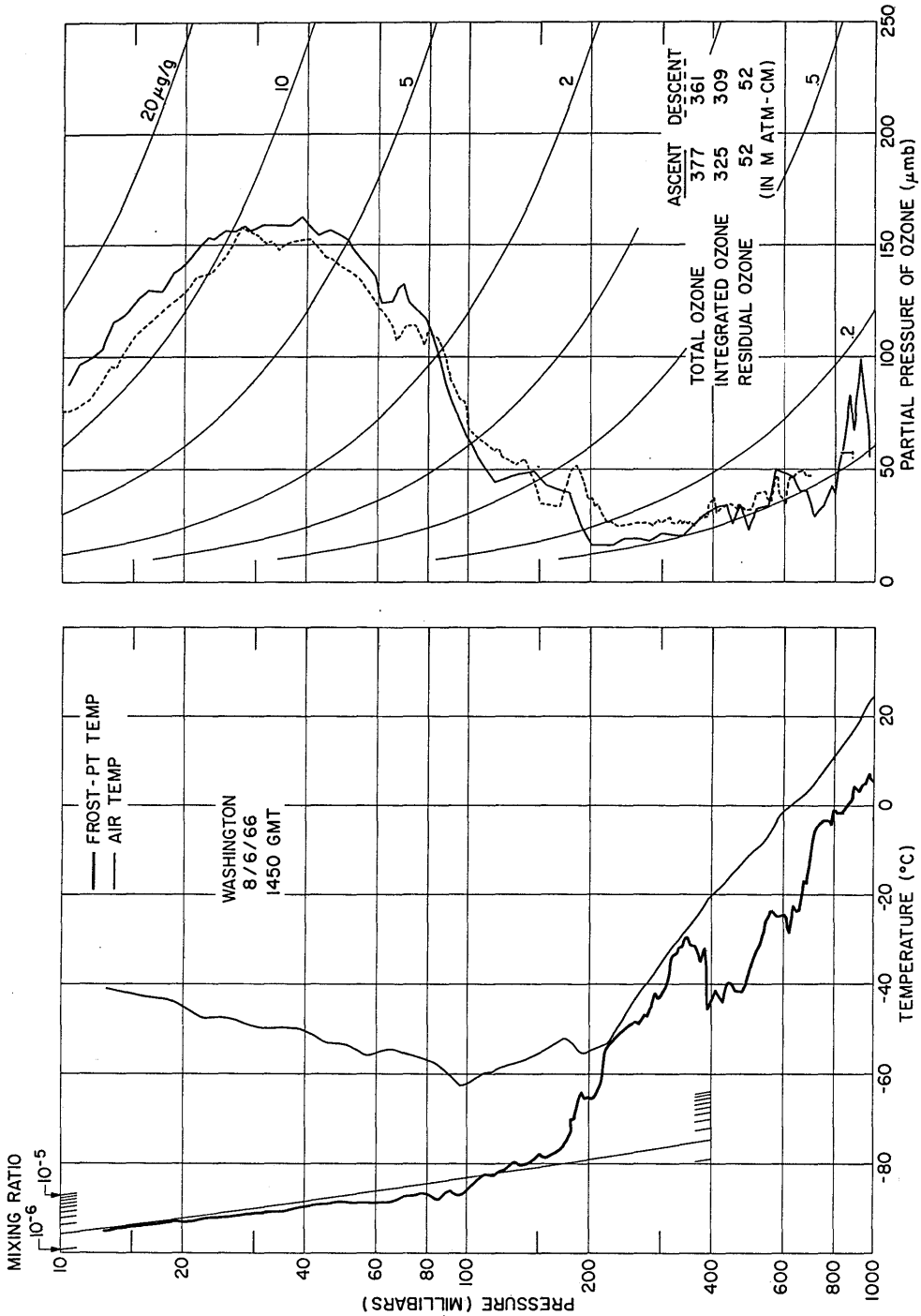
1. Mastenbrook, H.J., "Water Vapor Distribution in the Stratosphere and High Troposphere," J. Atm. Sci. 25:299-311 (1968)

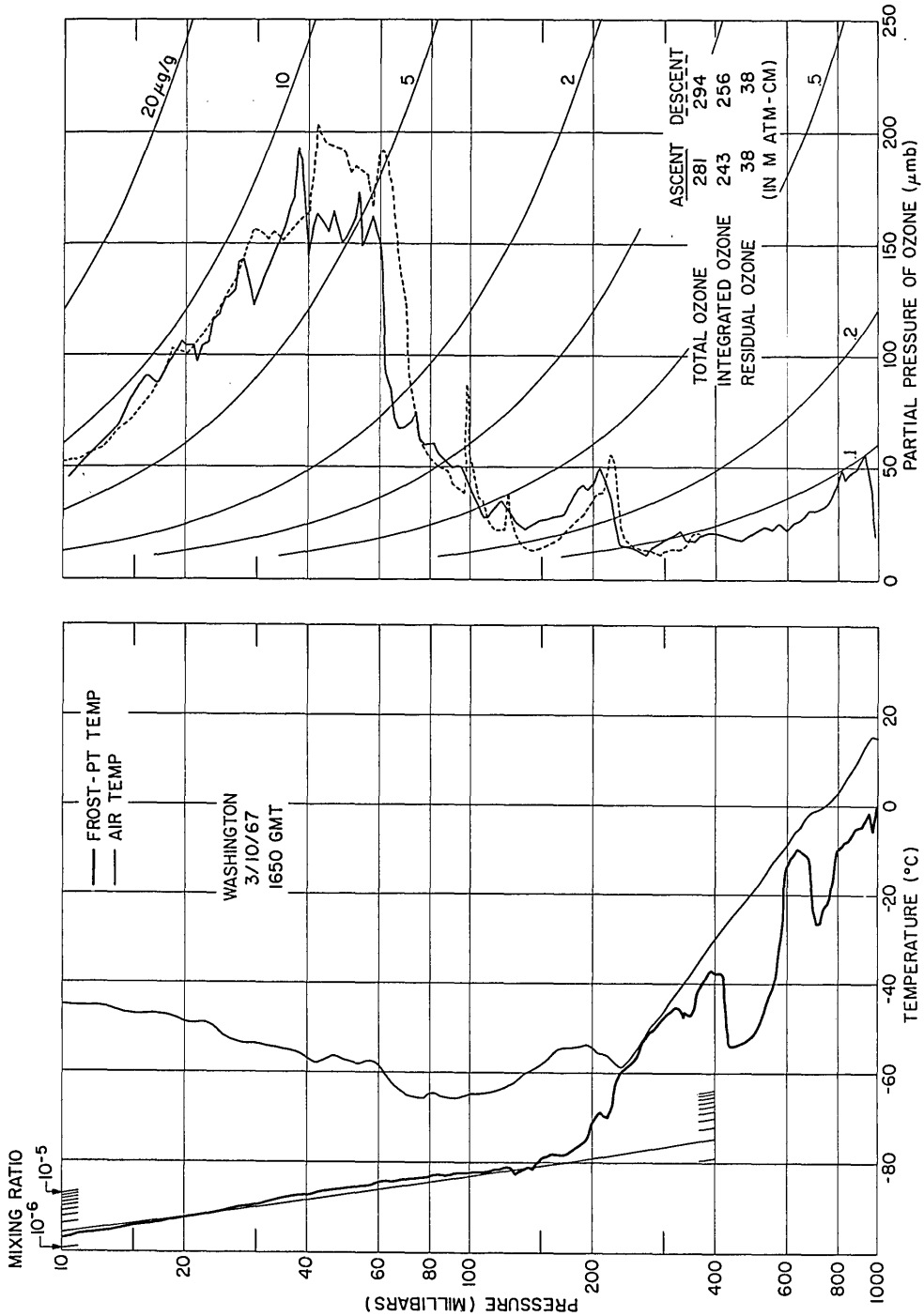
2. Goff, J.A., and Gratch, S., Trans. Am. Soc. Heat. and Vent. Eng. 52:95 (1946)

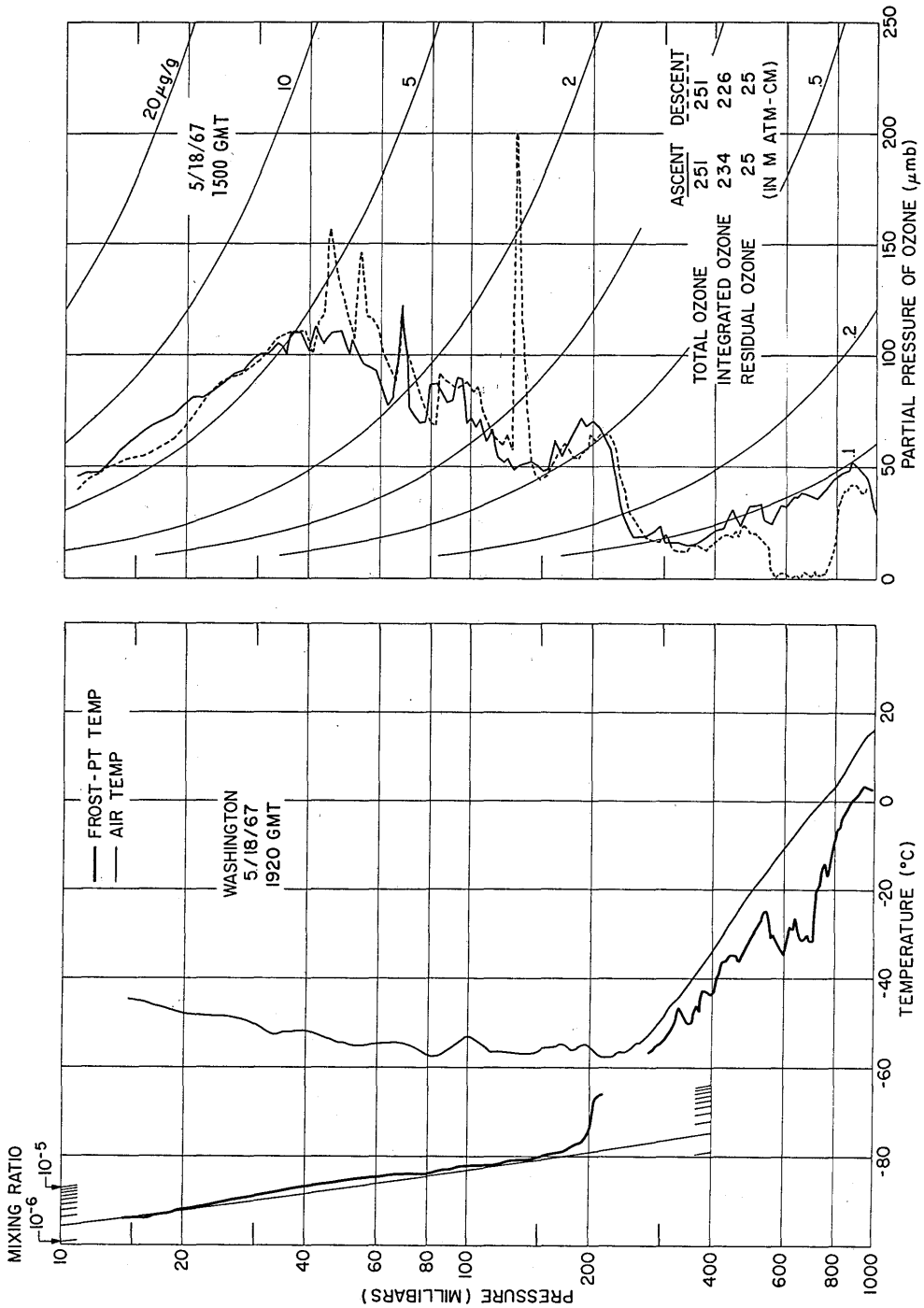
3. Komhyr, W.D., Grass, R.D., and Prouls, R.A., "Ozonesonde Intercomparison Tests, "ESSA Tech. Rpt. ERL85-APCL4, Sept. 1968

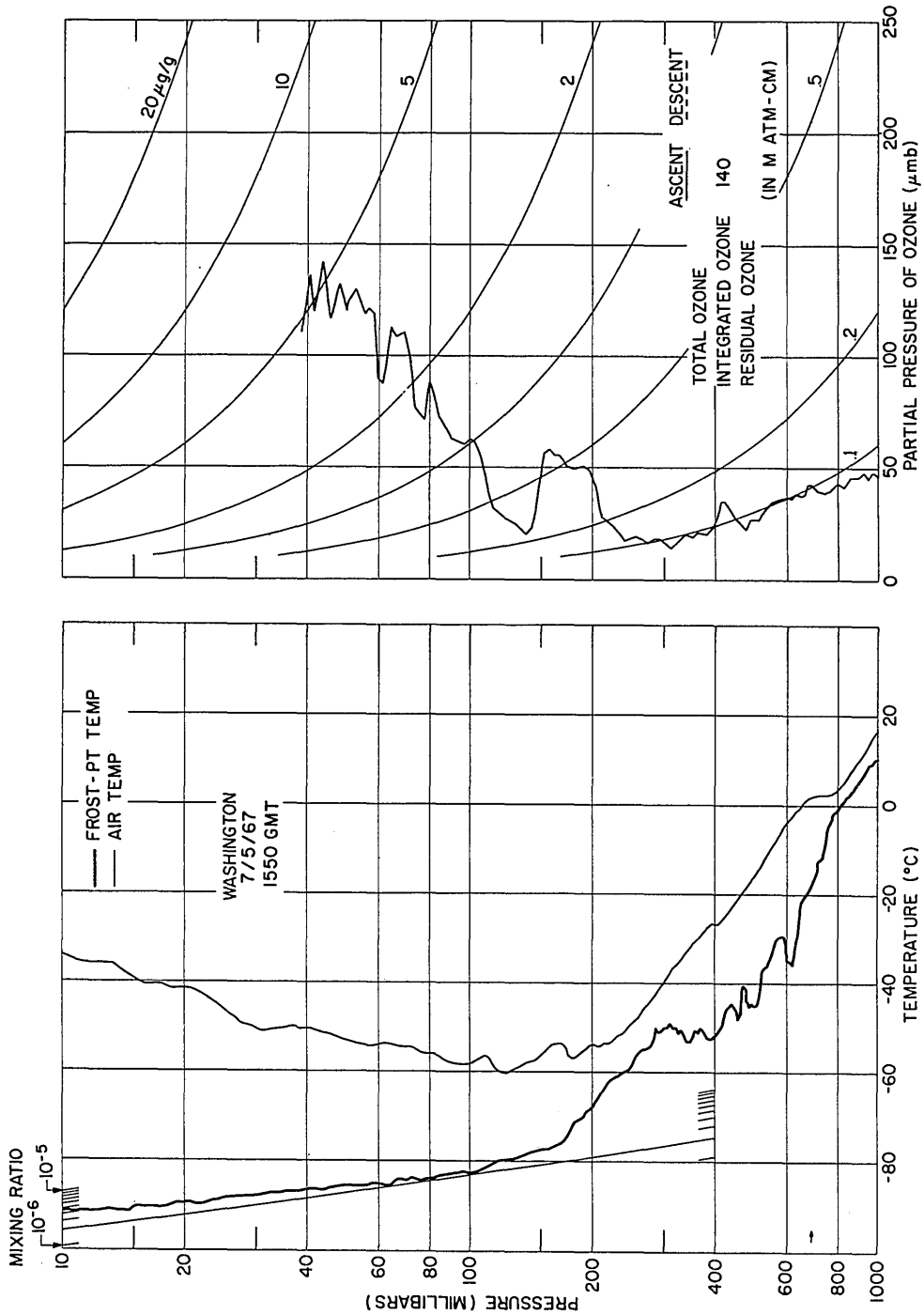
4. Mastenbrook, H.J., "A Control System for Ascent-Descent Balloon Soundings of the Atmosphere," J. Appl. Meteorol. 5:737-740 (1966)

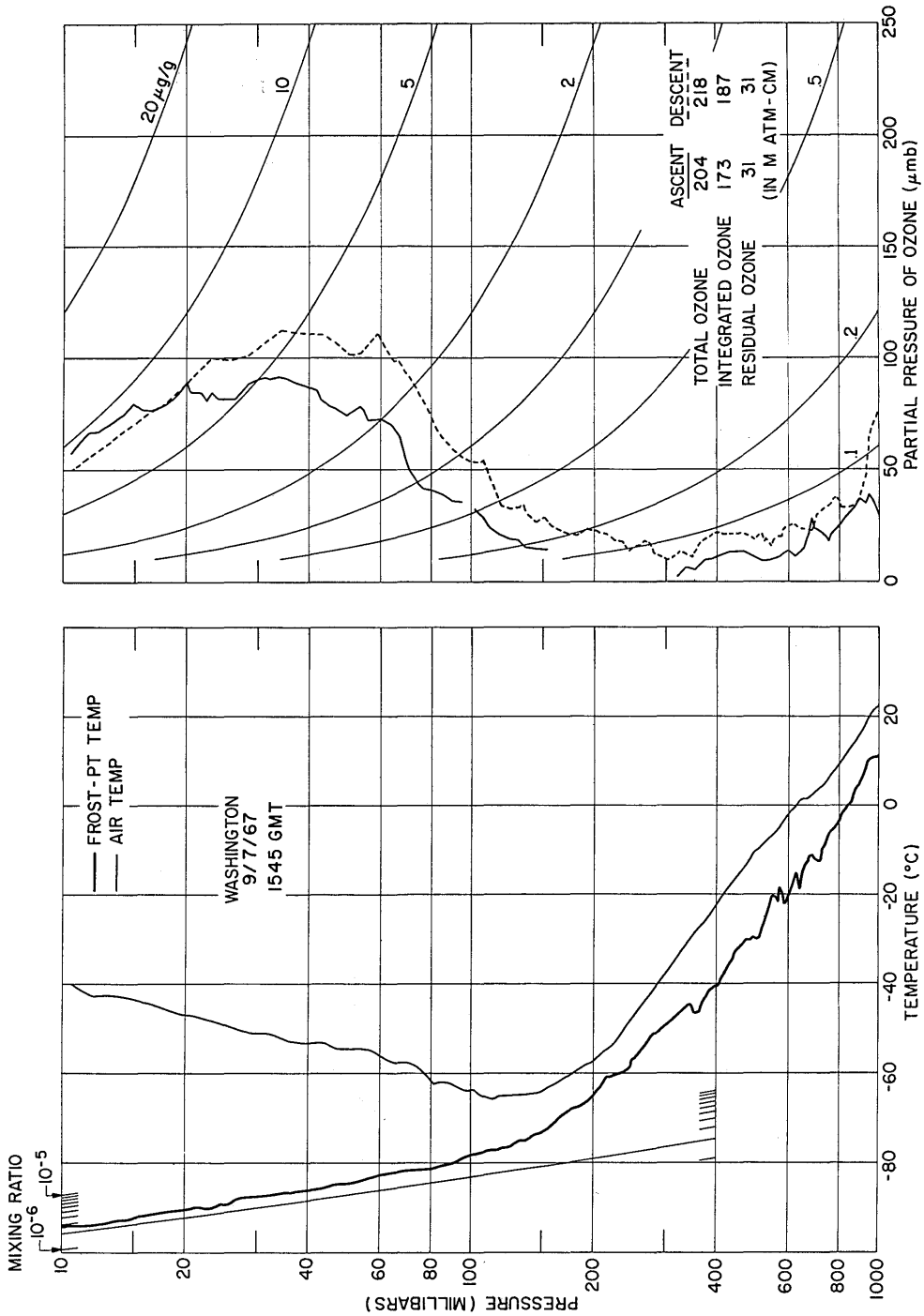
5. Mastenbrook, H.J., "Frost-Point Hygrometer Measurements in the Stratosphere and the Problem of Moisture Contamination," Humidity and Moisture; Measurement and Control in Science and Industry; Vol. 2, New York:Reinhold, pp. 480-485, 1965

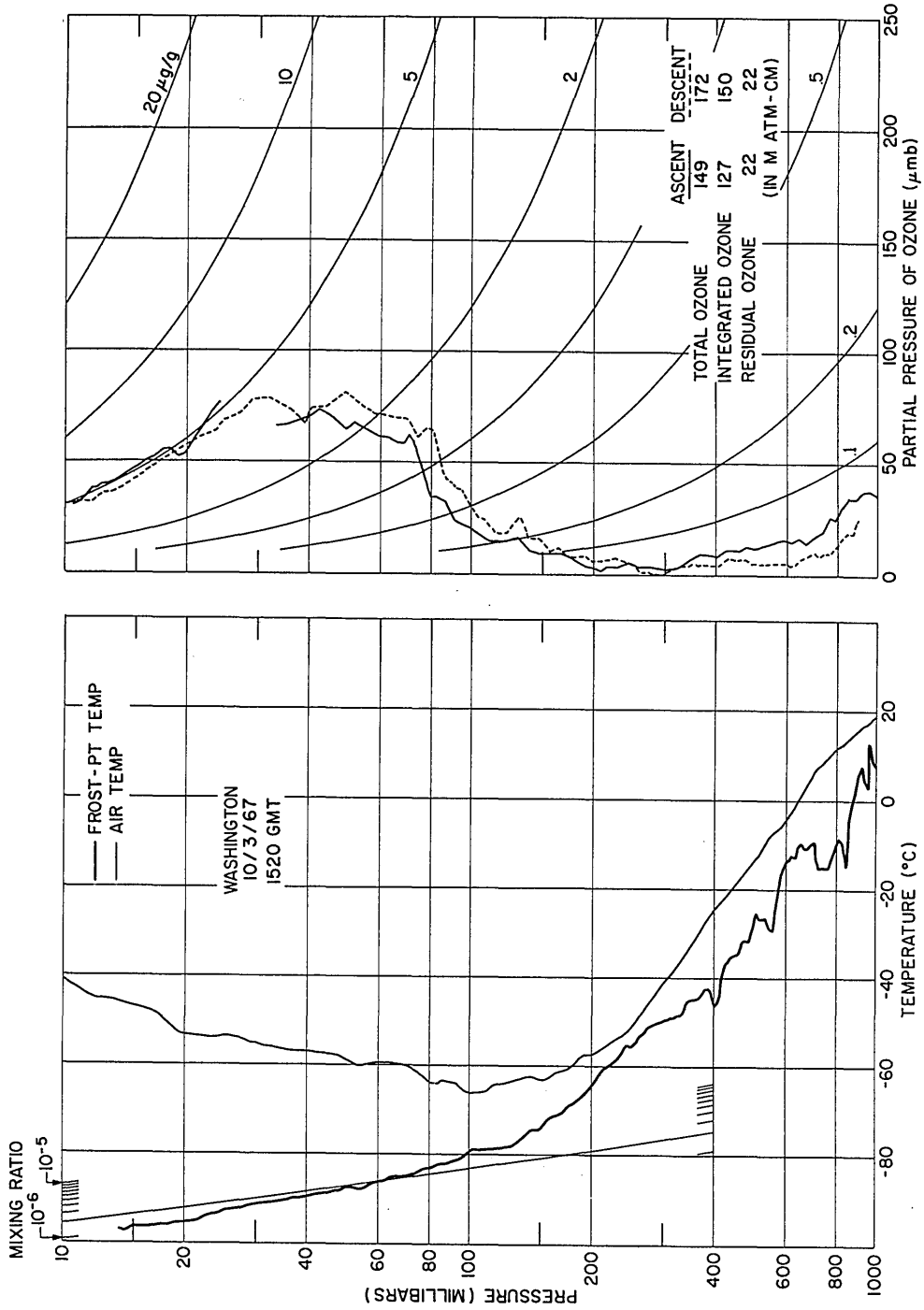

FROST-PT TEMP
AIR TEMP
WASHINGTON
8/6/66
1450 GMT
MIXING RATIO
10^{-6}
10^{-5}
PRESSURE (MILLIBARS)
TEMPERATURE (°C)
20μg/g
10
5
2
TOTAL OZONE
INTEGRATED OZONE
RESIDUAL OZONE
ASCENT DESCENT
377 361
325 309
52 52
(IN M ATM-CM)
PARTIAL PRESSURE OF OZONE (μmb)

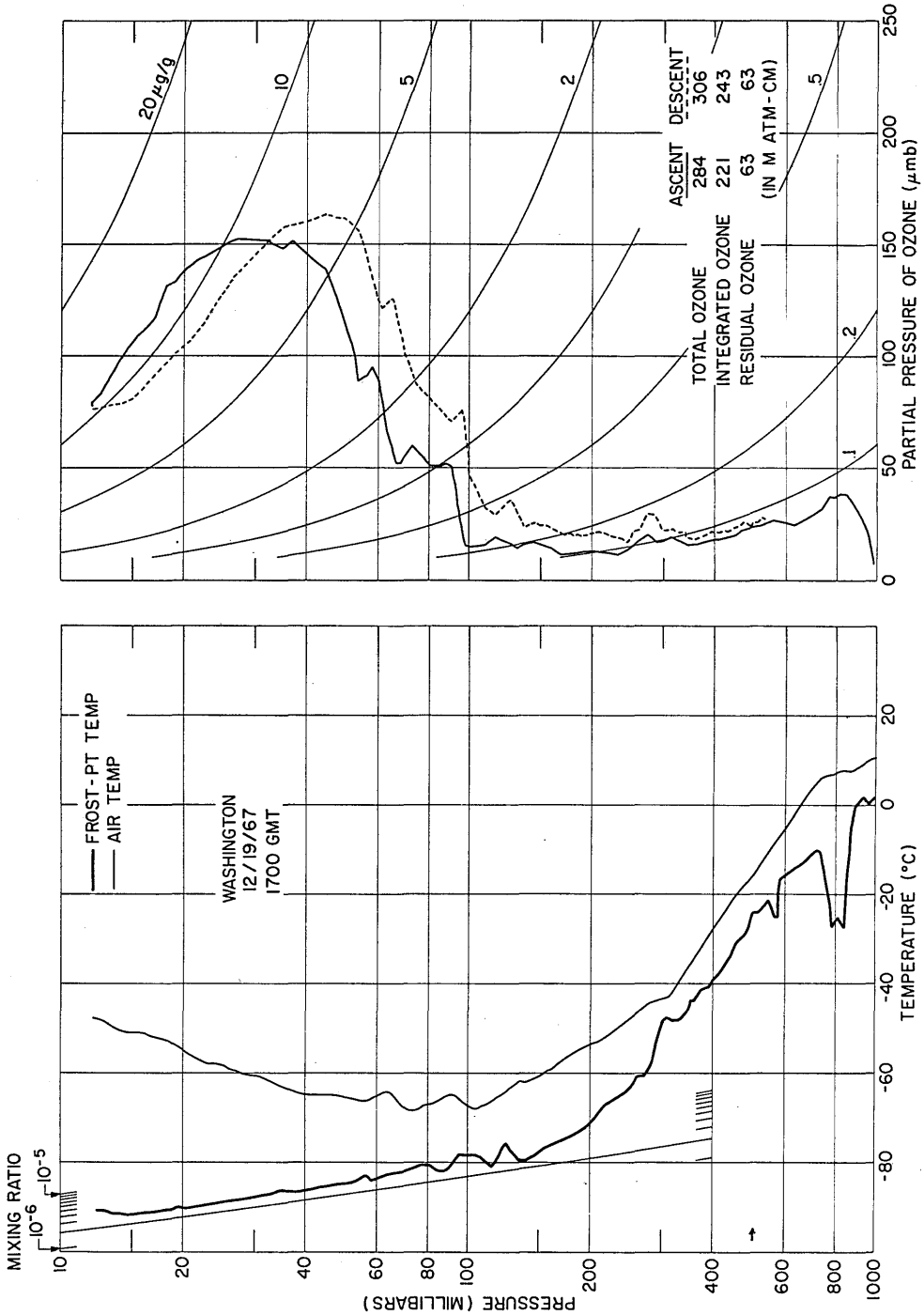

MIXING RATIO
10
10^{-6}
10^{-5}
PRESSURE (MILLIBARS)
20
40
60
80
100
200
400
600
800
1000
FROST-PT TEMP
AIR TEMP
WASHINGTON
3/10/67
1650 GMT
-80
-60
-40
-20
0
20
TEMPERATURE (°C)
20μg/g
10
5
2
1
TOTAL OZONE
INTEGRATED OZONE
RESIDUAL OZONE
ASCENT DESCENT
281 294
243 256
38 38
(IN M ATM-CM)
0
50
100
150
200
250
PARTIAL PRESSURE OF OZONE (μmb)

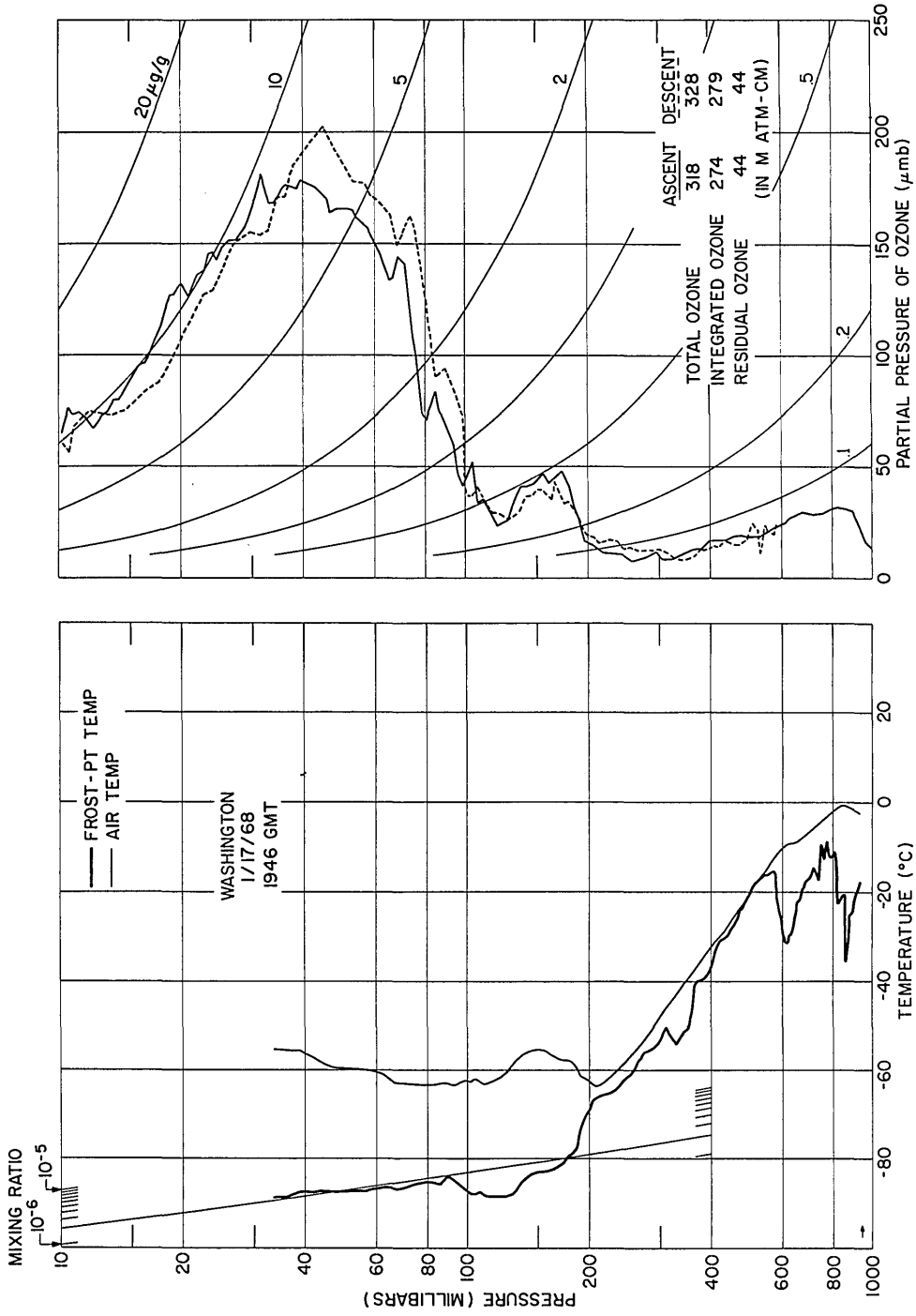

MIXING RATIO
10^{-6}
10^{-5}
10
20
40
60
80
100
200
400
600
800
1000
PRESSURE (MILLIBARS)
FROST-PT TEMP
AIR TEMP
WASHINGTON
5/18/67
1920 GMT
-80
-60
-40
-20
0
20
TEMPERATURE (°C)
20 μg/g
10
5
2
1
5/18/67
1500 GMT
TOTAL OZONE
INTEGRATED OZONE
RESIDUAL OZONE
ASCENT DESCENT
251 251
234 226
25 25
(IN M ATM-CM)
0
50
100
150
200
250
PARTIAL PRESSURE OF OZONE (μmb)

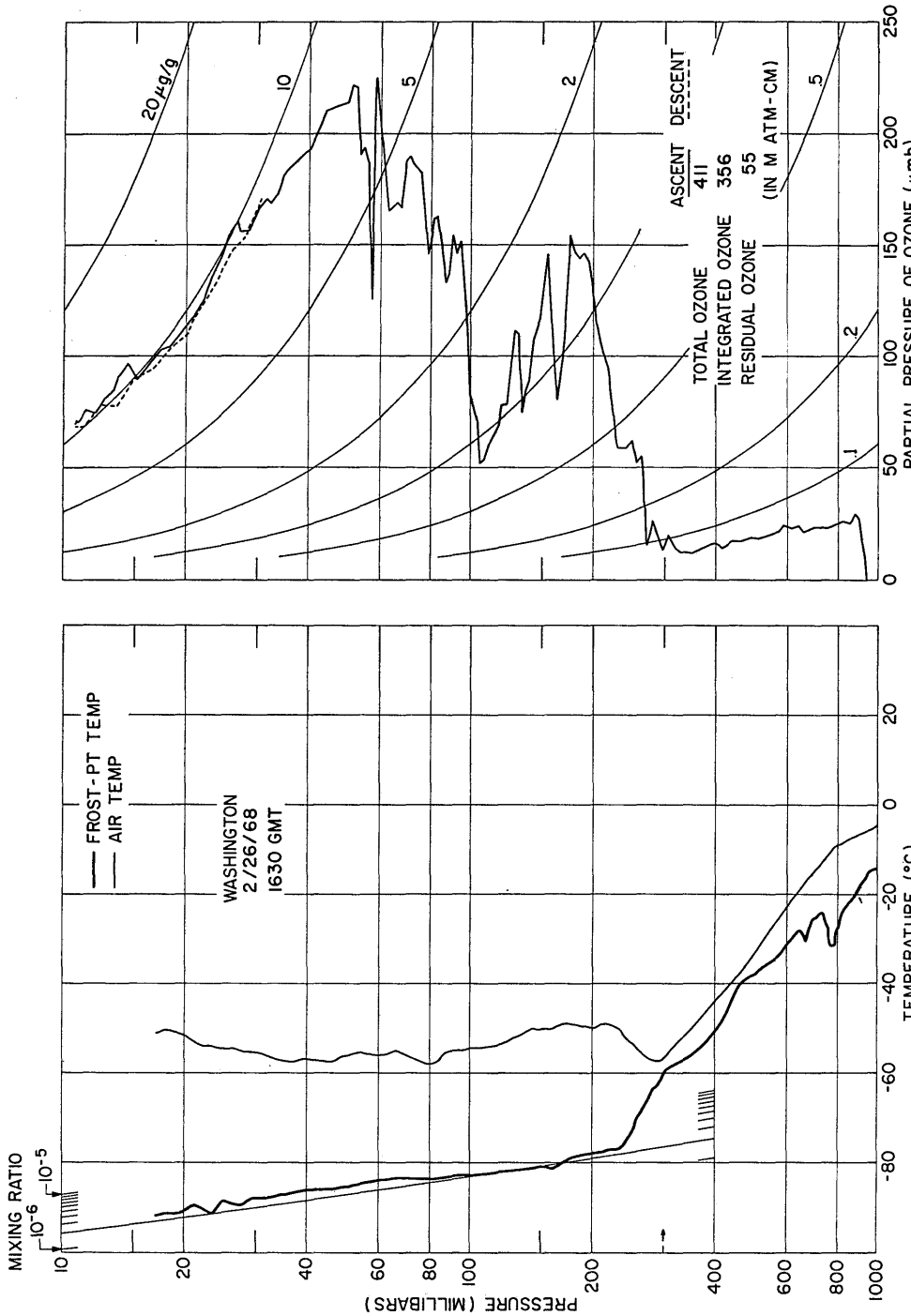

MIXING RATIO
10
10^{-6}
10^{-5}
PRESSURE (MILLIBARS)
20
40
60
80
100
200
400
600
800
1000
FROST-PT TEMP
AIR TEMP
WASHINGTON
7/5/67
1550 GMT
-80
-60
-40
-20
0
20
TEMPERATURE (°C)
20μg/g
10
5
2
1
.5
.2
.1
ASCENT DESCENT
TOTAL OZONE
INTEGRATED OZONE 140
RESIDUAL OZONE
(IN M ATM-CM)
0
50
100
150
200
250
PARTIAL PRESSURE OF OZONE (μmb)

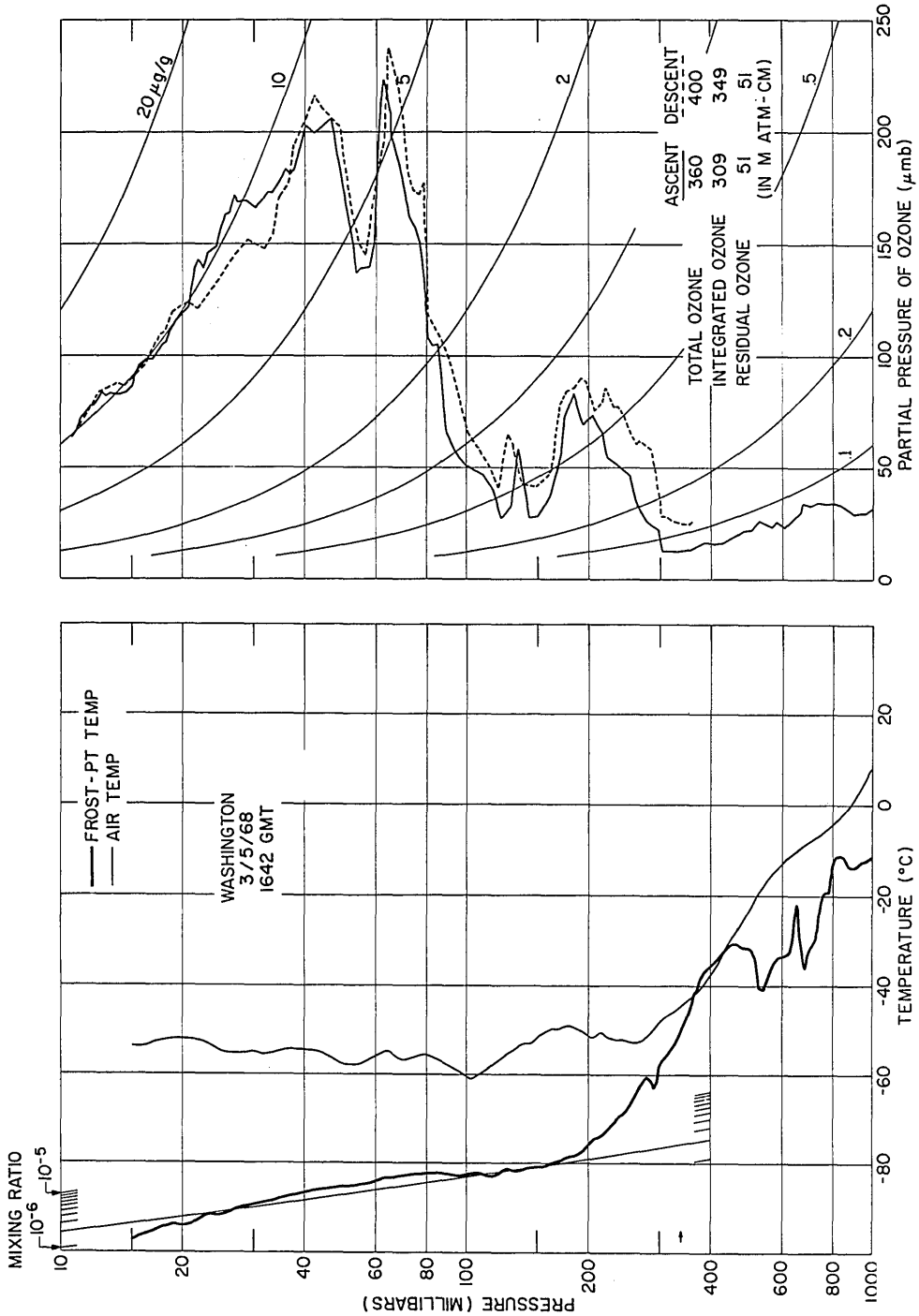

20μg/g
10
5
2
1
TOTAL OZONE
INTEGRATED OZONE
RESIDUAL OZONE
ASCENT DESCENT
204 218
173 187
31 31
(IN M ATM-CM)
PARTIAL PRESSURE OF OZONE (μmb)
0 50 100 150 200 250
FROST-PT TEMP
AIR TEMP
WASHINGTON
9/7/67
1545 GMT
MIXING RATIO
10 10-6 10-5
PRESSURE (MILLIBARS)
20 40 60 80 100 200 400 600 800 1000
TEMPERATURE (°C)
-80 -60 -40 -20 0 20

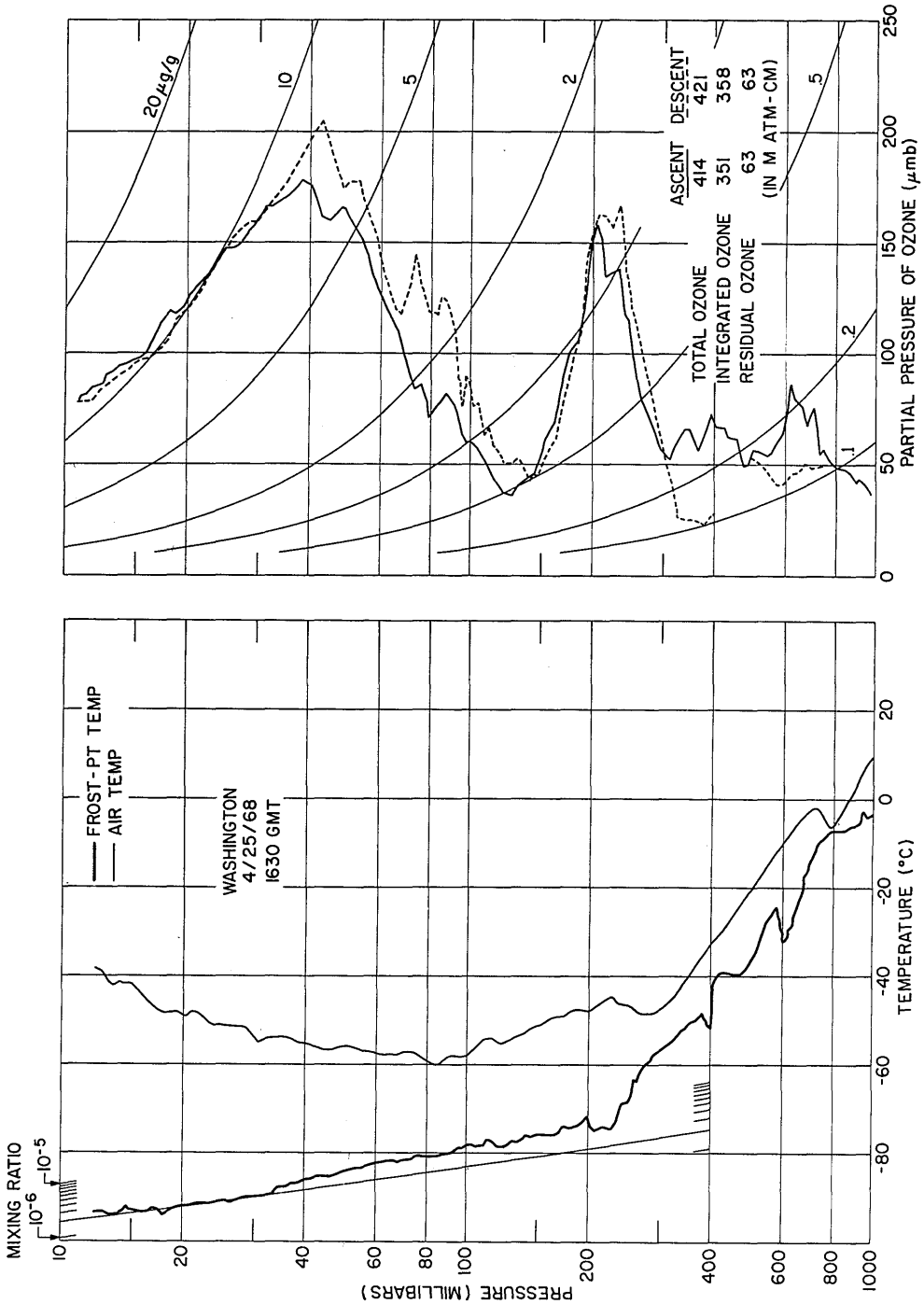

MIXING RATIO
10
10^{-6}
10^{-5}
PRESSURE (MILLIBARS)
20
40
60
80
100
200
400
600
800
1000
FROST-PT TEMP
AIR TEMP
WASHINGTON
10/3/67
1520 GMT
TEMPERATURE (°C)
-80
-60
-40
-20
0
20
20 μg/g
10
5
2
1
.2
.5
TOTAL OZONE
INTEGRATED OZONE
RESIDUAL OZONE
ASCENT
DESCENT
149
172
127
150
22
22
(IN M ATM-CM)
PARTIAL PRESSURE OF OZONE (μmb)
0
50
100
150
200
250

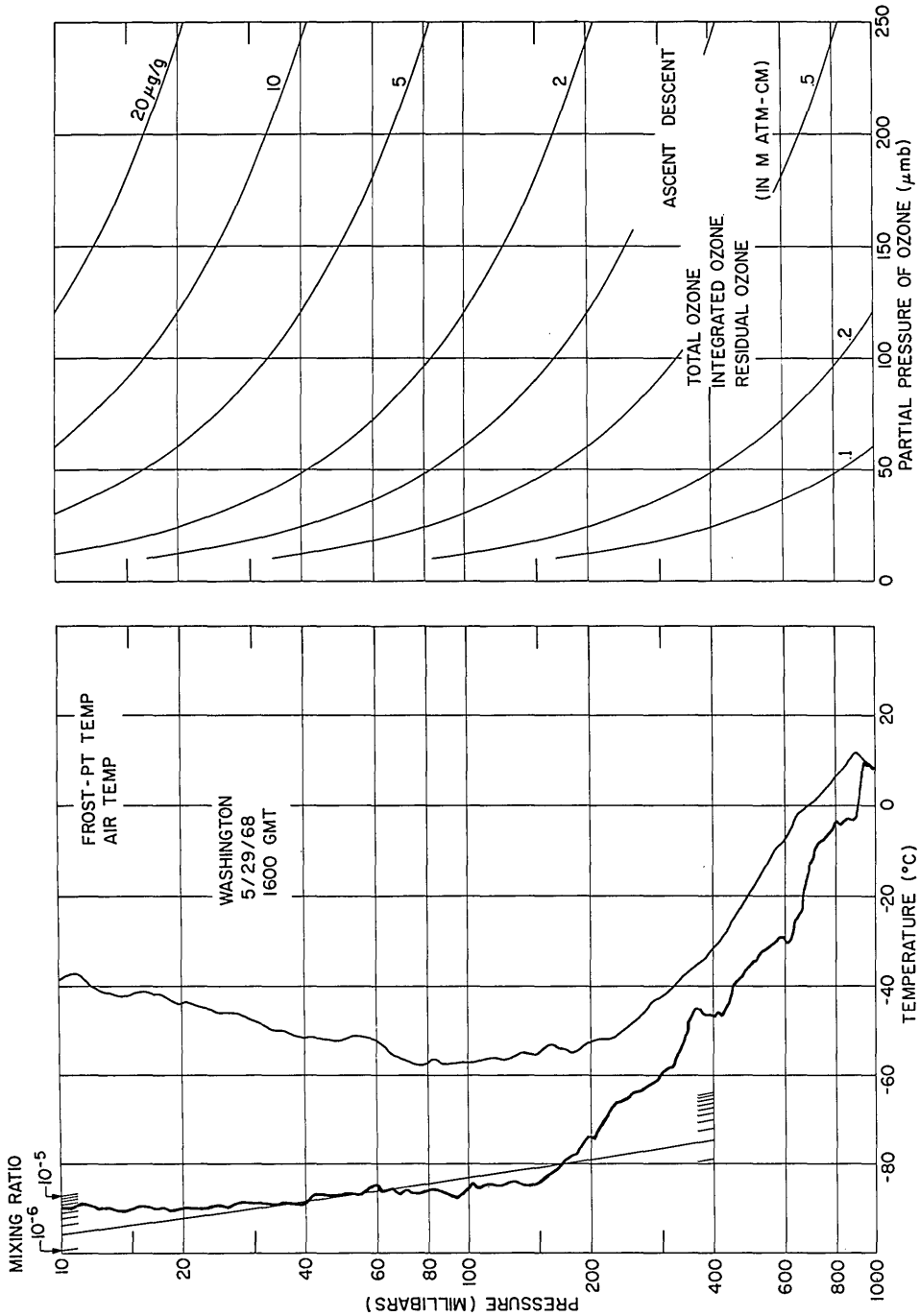

MIXING RATIO
10^{-5}
10^{-6}
10
20
40
60
80
100
200
400
600
800
1000
PRESSURE (MILLIBARS)
FROST-PT TEMP
AIR TEMP
WASHINGTON
12/19/67
1700 GMT
-80
-60
-40
-20
0
20
TEMPERATURE (°C)
20μg/g
10
5
2
1
.5
.2
.1
TOTAL OZONE
INTEGRATED OZONE
RESIDUAL OZONE
ASCENT DESCENT
284 306
221 243
63 63
(IN M ATM-CM)
0
50
100
150
200
250
PARTIAL PRESSURE OF OZONE (μmb)

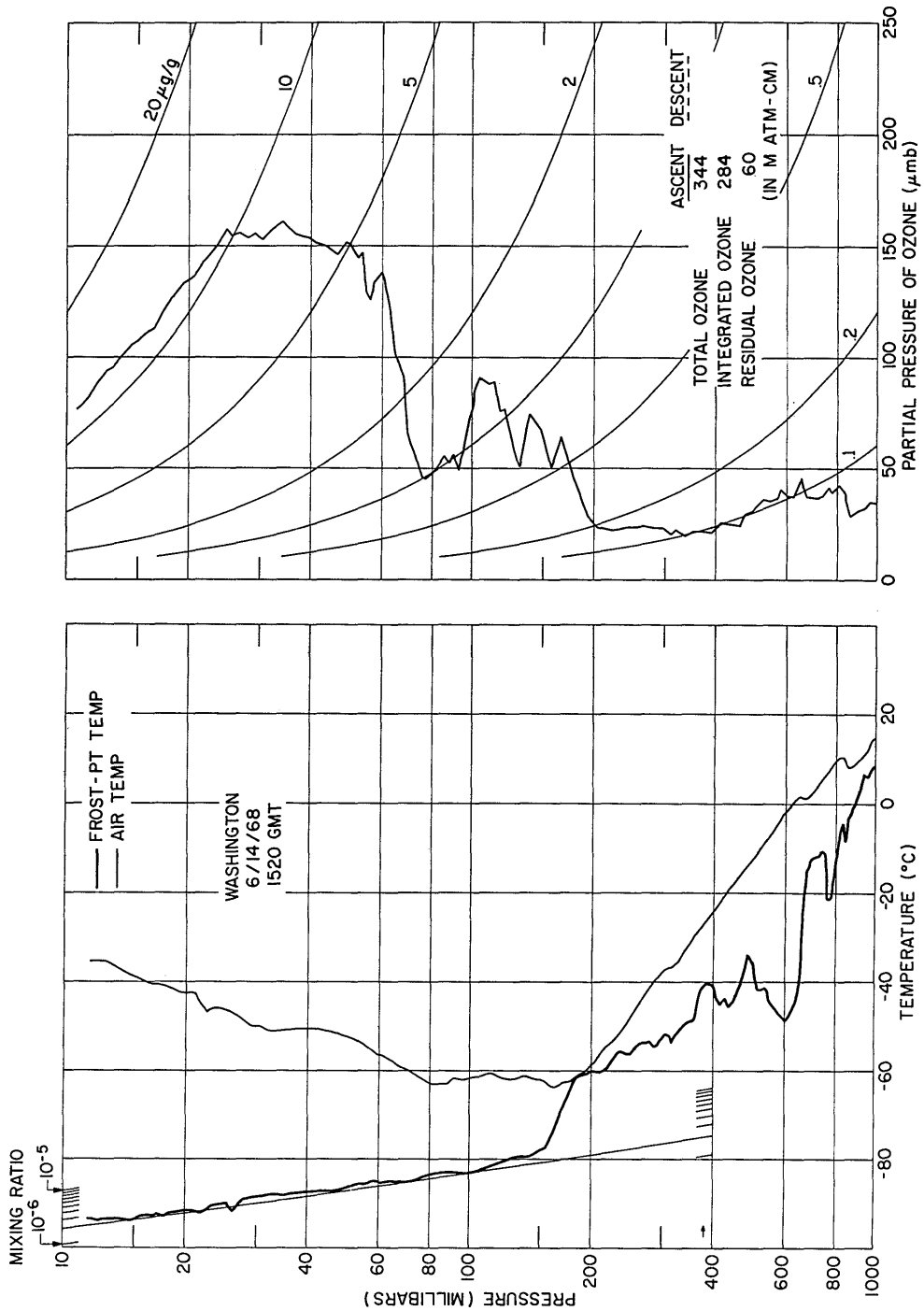

20μg/g
10
5
2
1
TOTAL OZONE
INTEGRATED OZONE
RESIDUAL OZONE
ASCENT DESCENT
318 328
274 279
44 44
(IN M ATM-CM)
PARTIAL PRESSURE OF OZONE (μmb)
FROST-PT TEMP
AIR TEMP
WASHINGTON
1/17/68
1946 GMT
MIXING RATIO
10-6
10-5
PRESSURE (MILLIBARS)
TEMPERATURE (°C)

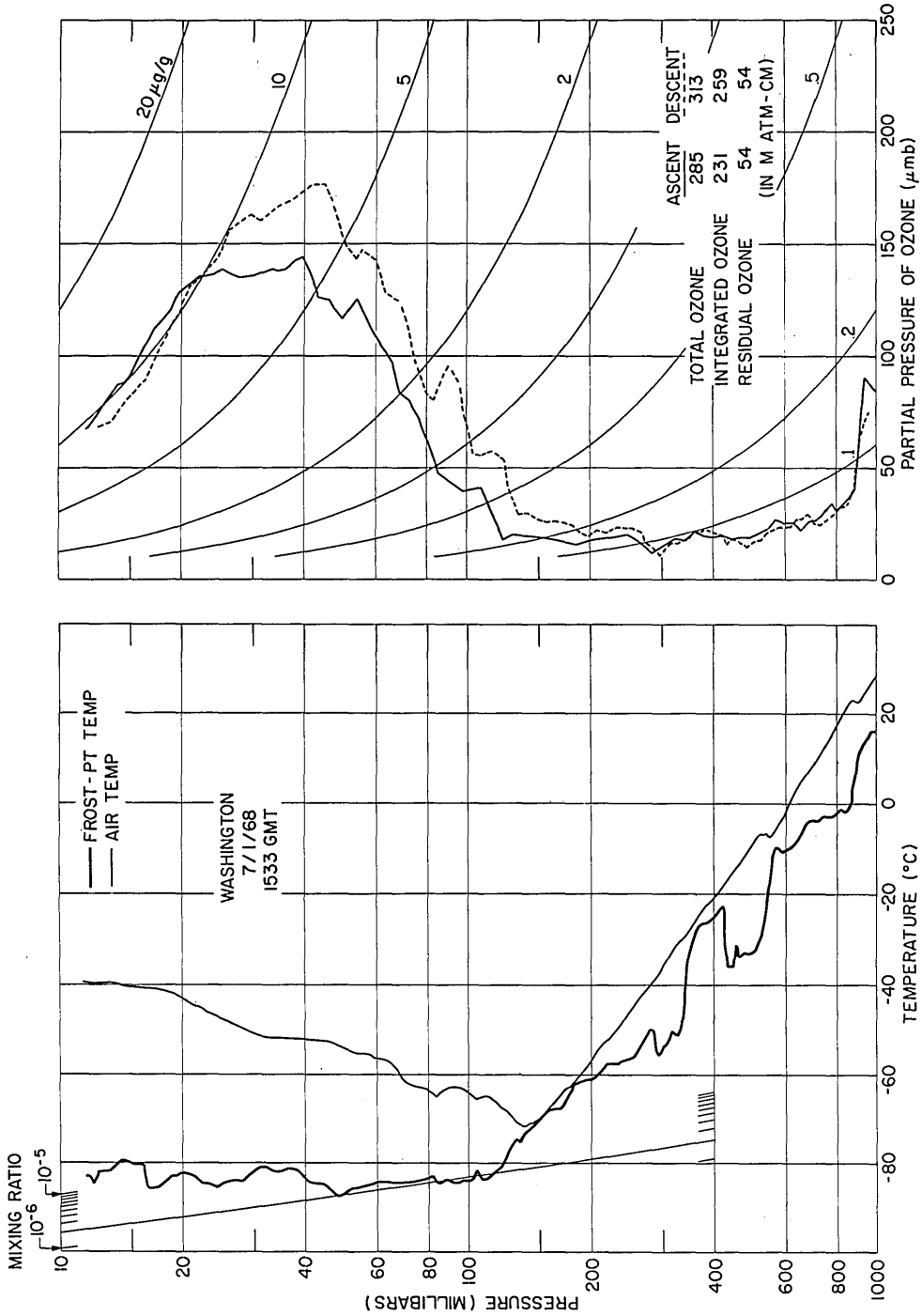

MIXING RATIO
10^{-6}
10^{-5}
10
20
40
60
80
100
200
400
600
800
1000
PRESSURE (MILLIBARS)
FROST-PT TEMP
AIR TEMP
WASHINGTON
2/26/68
1630 GMT
-80
-60
-40
-20
0
20
TEMPERATURE (°C)
20μg/g
10
5
2
1
TOTAL OZONE
INTEGRATED OZONE
RESIDUAL OZONE
ASCENT DESCENT
411
356
55
(IN M ATM-CM)
0
50
100
150
200
250
PARTIAL PRESSURE OF OZONE (μmb)

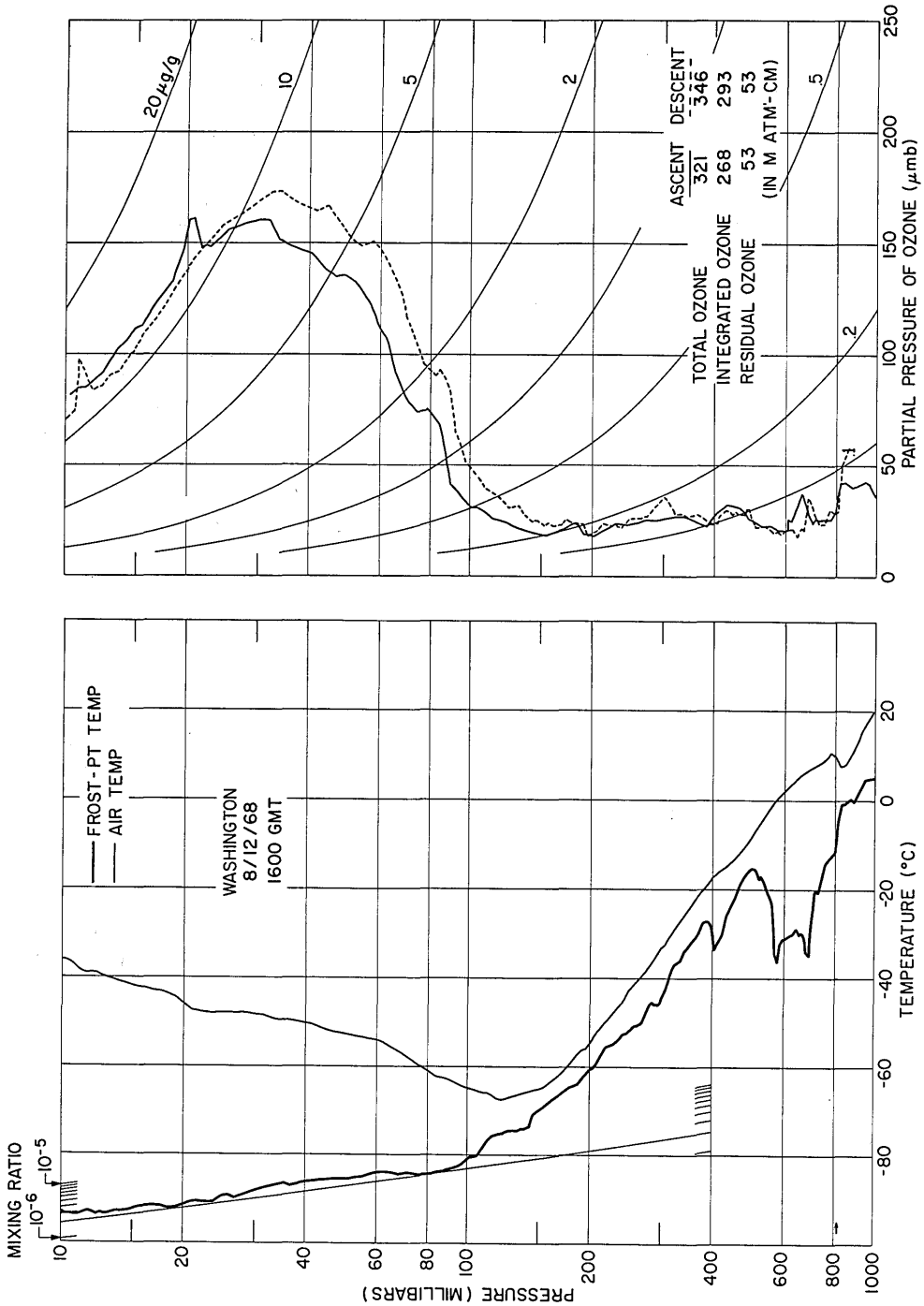

FROST-PT TEMP
AIR TEMP
WASHINGTON
3/5/68
1642 GMT
MIXING RATIO
10^{-6}
10^{-5}
PRESSURE (MILLIBARS)
TEMPERATURE (°C)
20μg/g
10
5
2
1
.2
.5
TOTAL OZONE
INTEGRATED OZONE
RESIDUAL OZONE
ASCENT DESCENT
360 400
309 349
51 51
(IN M ATM-CM)
PARTIAL PRESSURE OF OZONE (μmb)

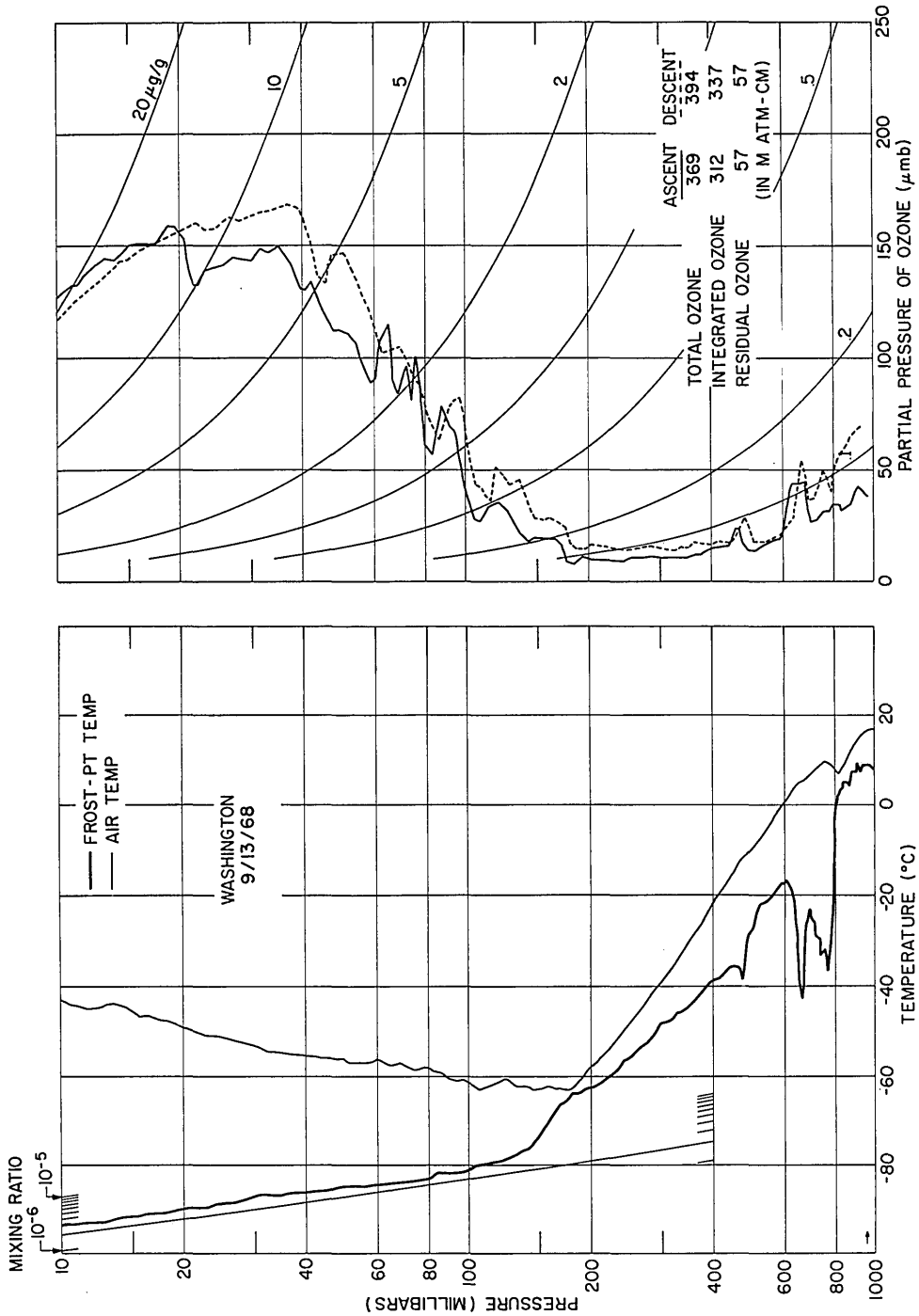

MIXING RATIO
10
10^{-6}
10^{-5}
PRESSURE (MILLIBARS)
20
40
60
80
100
200
400
600
800
1000
FROST-PT TEMP
AIR TEMP
WASHINGTON
4/25/68
1630 GMT
-80
-60
-40
-20
0
20
TEMPERATURE (°C)
20μg/g
10
5
2
1
.5
TOTAL OZONE
INTEGRATED OZONE
RESIDUAL OZONE
ASCENT
414
351
63
DESCENT
421
358
63
(IN M ATM-CM)
0
50
100
150
200
250
PARTIAL PRESSURE OF OZONE (μmb)

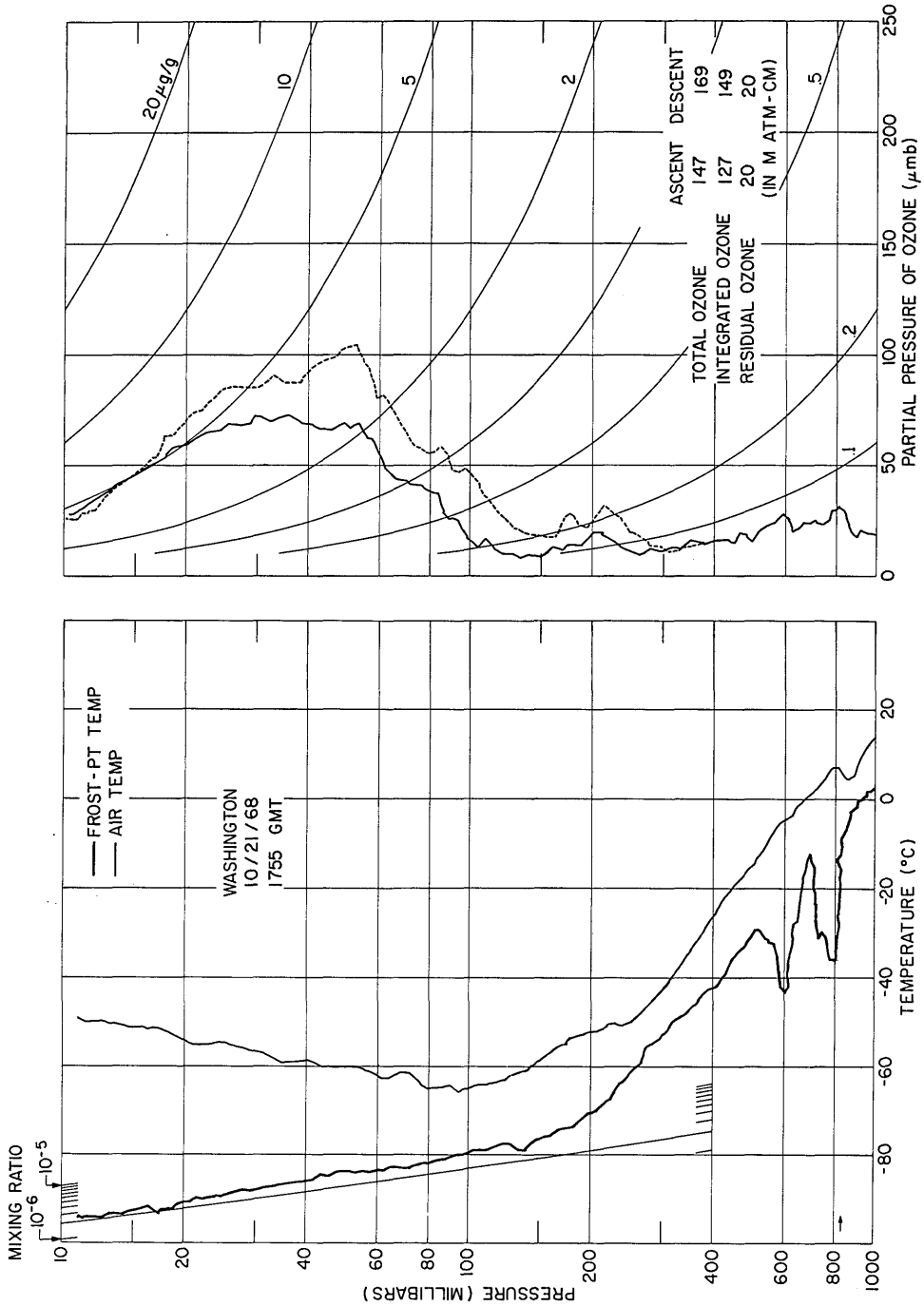

MIXING RATIO
10^{-6}
10^{-5}
10
20
40
60
80
100
200
400
600
800
1000
PRESSURE (MILLIBARS)
FROST-PT TEMP
AIR TEMP
WASHINGTON
5/29/68
1600 GMT
-80
-60
-40
-20
0
20
TEMPERATURE (°C)
20 μg/g
10
5
2
1
.2
.1
.5
ASCENT DESCENT
TOTAL OZONE
INTEGRATED OZONE
RESIDUAL OZONE
(IN M ATM-CM)
0
50
100
150
200
250
PARTIAL PRESSURE OF OZONE (μmb)

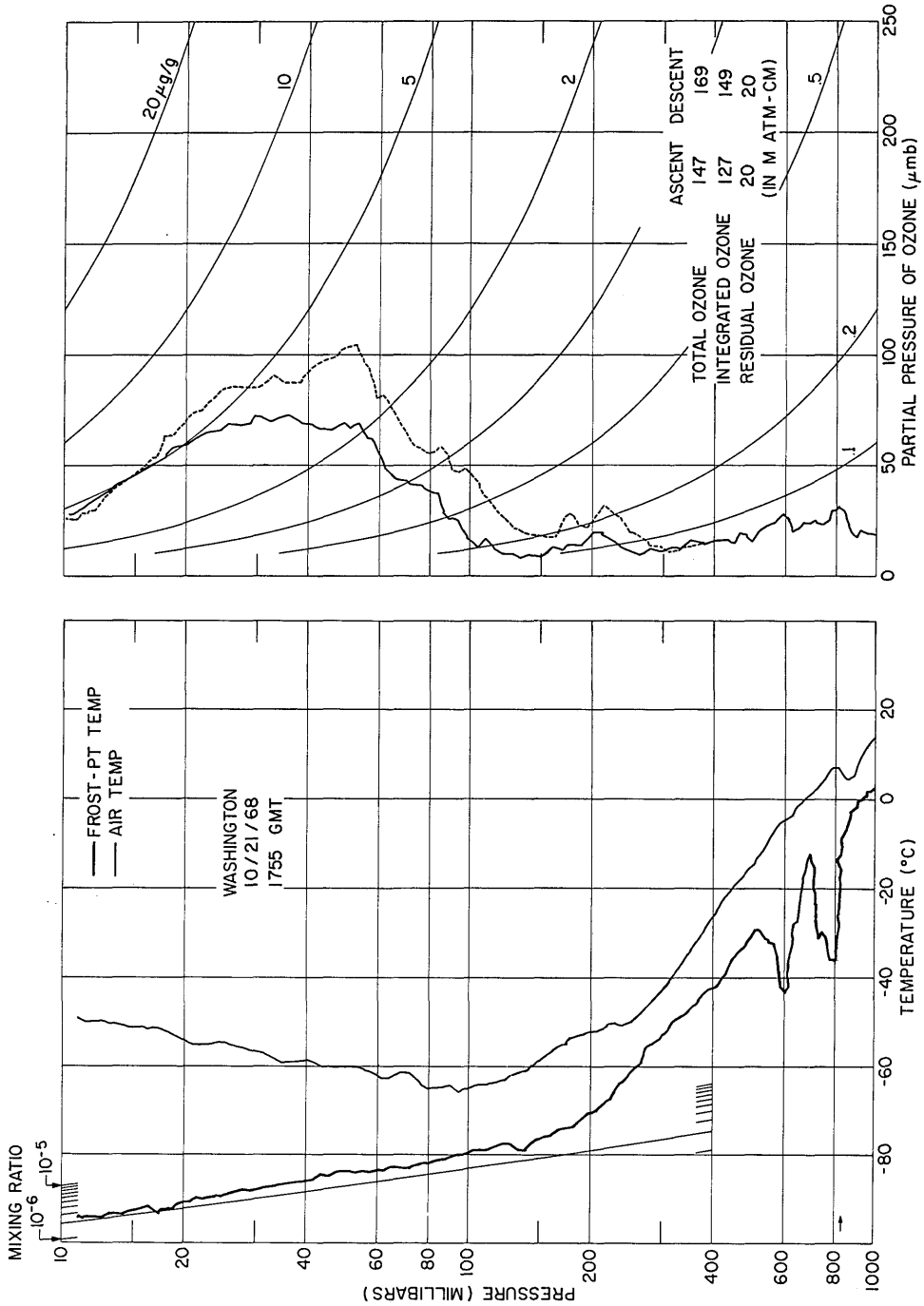

MIXING RATIO
10^{-5}
10^{-6}
FROST-PT TEMP
AIR TEMP
WASHINGTON
6/14/68
1520 GMT
PRESSURE (MILLIBARS)
TEMPERATURE (°C)
20 μg/g
10
5
2
1
.5
TOTAL OZONE
INTEGRATED OZONE
RESIDUAL OZONE
ASCENT DESCENT
344
284
60
(IN M ATM-CM)
PARTIAL PRESSURE OF OZONE (μmb)

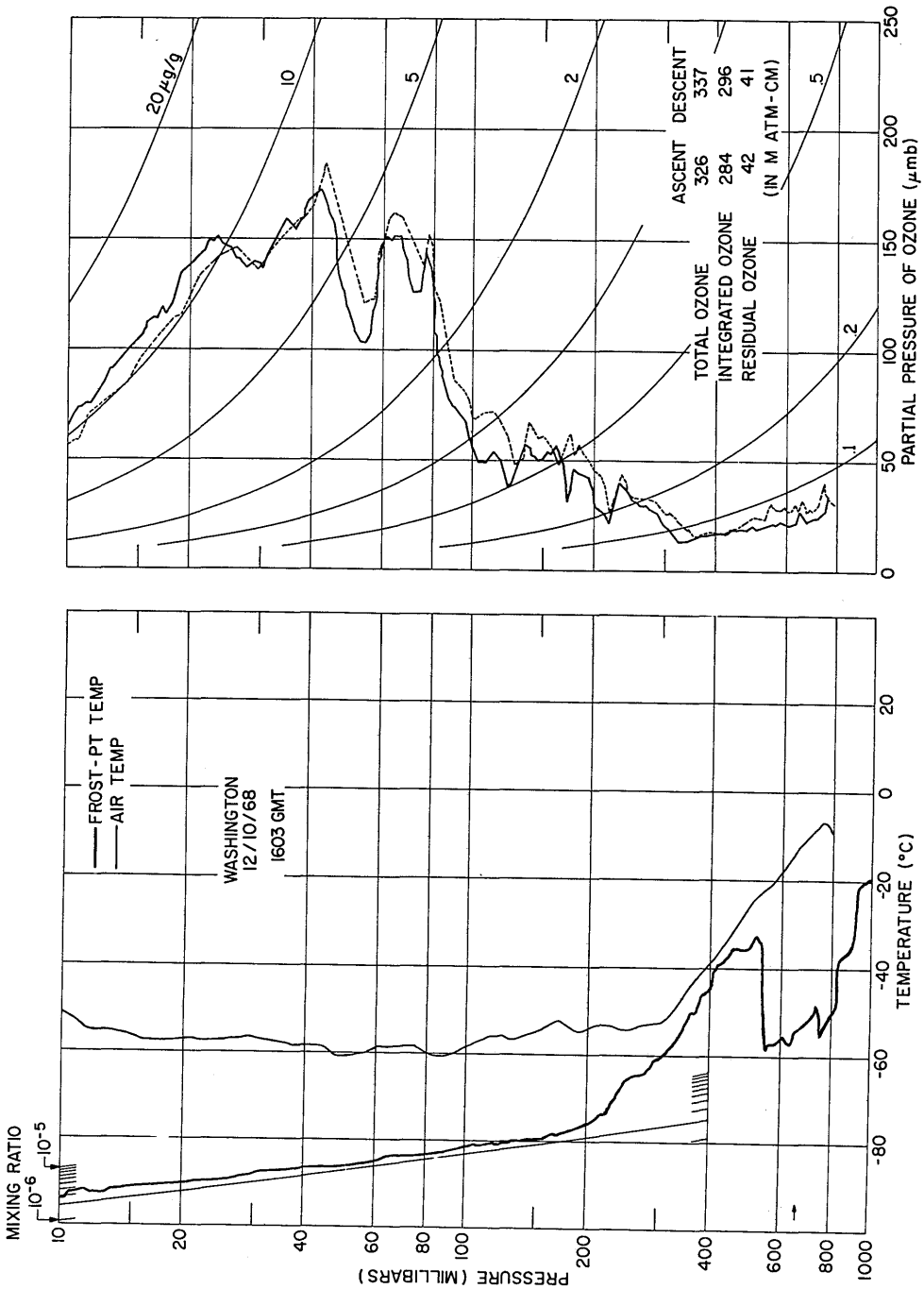

MIXING RATIO
10^{-6}
10^{-5}
10
20
40
60
80
100
200
400
600
800
1000
PRESSURE (MILLIBARS)
FROST-PT TEMP
AIR TEMP
WASHINGTON
7/1/68
1533 GMT
-80
-60
-40
-20
0
20
TEMPERATURE (°C)
20μg/g
10
5
2
.5
.2
.1
TOTAL OZONE
INTEGRATED OZONE
RESIDUAL OZONE
ASCENT DESCENT
285 313
231 259
54 54
(IN M ATM-CM)
0
50
100
150
200
250
PARTIAL PRESSURE OF OZONE (μmb)


FROST-PT TEMP
AIR TEMP
WASHINGTON
8/12/68
1600 GMT
MIXING RATIO
10
10^{-6}
10^{-5}
PRESSURE (MILLIBARS)
20
40
60
80
100
200
400
600
800
1000
TEMPERATURE (°C)
-80
-60
-40
-20
0
20
20 μg/g
10
5
2
1
TOTAL OZONE
INTEGRATED OZONE
RESIDUAL OZONE
ASCENT 321
DESCENT 346
268 293
53 53
(IN M ATM'-CM)
PARTIAL PRESSURE OF OZONE (μmb)
0
50
100
150
200
250


20 μg/g
10
5
2
ASCENT DESCENT
369 394
TOTAL OZONE 312 337
INTEGRATED OZONE 57 57
RESIDUAL OZONE (IN M ATM-CM)
PARTIAL PRESSURE OF OZONE (μmb)
FROST-PT TEMP
AIR TEMP
WASHINGTON
9/13/68
MIXING RATIO
TEMPERATURE (°C)
PRESSURE (MILLIBARS)

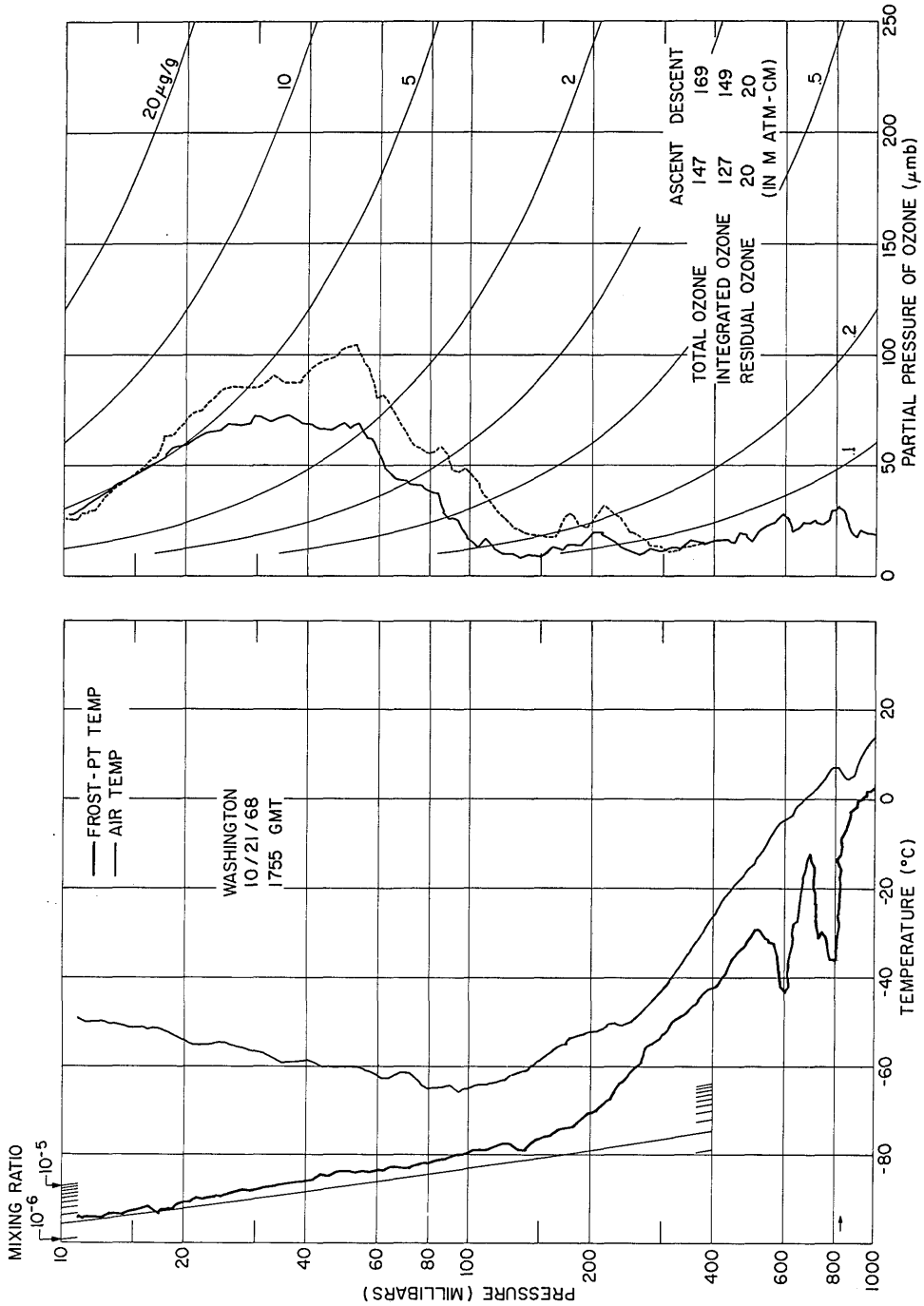

20μg/g
10
5
2
1
.2
.5
ASCENT DESCENT
147 169
127 149
20 20
(IN M ATM-CM)
TOTAL OZONE
INTEGRATED OZONE
RESIDUAL OZONE
PARTIAL PRESSURE OF OZONE (μmb)
0
50
100
150
200
250
FROST-PT TEMP
AIR TEMP
WASHINGTON
10/21/68
1755 GMT
MIXING RATIO
10
10⁻⁶
10⁻⁵
PRESSURE (MILLIBARS)
20
40
60
80
100
200
400
600
800
1000
TEMPERATURE (°C)
-80
-60
-40
-20
0
20


20μg/g
10
5
2
1
.2
.5
ASCENT DESCENT
147 169
127 149
20 20
(IN M ATM-CM)
TOTAL OZONE
INTEGRATED OZONE
RESIDUAL OZONE
PARTIAL PRESSURE OF OZONE (μmb)
0
50
100
150
200
250
FROST-PT TEMP
AIR TEMP
WASHINGTON
10/21/68
1755 GMT
MIXING RATIO
10
10⁻⁶
10⁻⁵
PRESSURE (MILLIBARS)
20
40
60
80
100
200
400
600
800
1000
TEMPERATURE (°C)
-80
-60
-40
-20
0
20


MIXING RATIO
10
10^{-6}
10^{-5}
PRESSURE (MILLIBARS)
20
40
60
80
100
200
400
600
800
1000
FROST-PT TEMP
AIR TEMP
WASHINGTON
12/10/68
1603 GMT
TEMPERATURE (°C)
-80
-60
-40
-20
0
20
20μg/g
10
5
2
1
.2
.5
TOTAL OZONE
INTEGRATED OZONE
RESIDUAL OZONE
ASCENT DESCENT
326 337
284 296
42 41
(IN M ATM-CM)
PARTIAL PRESSURE OF OZONE (μmb)
0
50
100
150
200
250

WASHINGTON,D.C. 8/6/66 1450Z WATER VAPOR DATA

P (mb)	T (°C)	F (°C)	w (g/kg)	θ (°K)	M (cm)	ΣM (cm)
1000.00	24.4	5.8	5.70130	297.6		
981.00	23.5	8.0	6.77119	298.3	0.12090684	0.12090684
967.00	22.6	5.8	5.89771	298.6	0.09049217	0.21139901
952.00	21.6	5.8	5.99153	299.0	0.09098911	0.30238812
937.00	20.6	4.7	5.66422	299.2	0.08920215	0.39159027
923.00	19.5	3.7	5.36352	299.4	0.07876952	0.47035979
910.00	18.5	4.7	5.83385	299.6	0.07426826	0.54462805
897.00	17.6	4.7	5.91920	299.9	0.07795394	0.62258199
884.00	16.4	1.9	4.90576	300.0	0.07179826	0.69438026
871.00	15.8	1.0	4.67413	300.5	0.06354010	0.75792035
858.00	14.8	0.2	4.46276	300.8	0.06060183	0.81852218
847.00	14.0	0.2	4.52114	301.1	0.05041989	0.86894207
834.00	13.0	-1.4	4.07062	301.4	0.05698621	0.92592828
820.00	11.9	-1.4	4.14058	301.7	0.05865149	0.98457976
807.00	11.1	-0.6	4.49357	302.2	0.05726738	1.04184714
796.00	10.3	-0.6	4.55613	302.6	0.05078913	1.09263627
784.30	9.9	-3.6	3.59286	303.4	0.04864446	1.14128073
773.00	9.0	-2.9	3.87341	303.7	0.04304533	1.18432605
762.00	8.2	-2.9	3.92968	304.1	0.04379282	1.22811888
751.00	7.6	-2.9	3.98760	304.7	0.04443372	1.27255259
740.00	6.9	-3.6	3.80926	305.2	0.04375793	1.31631053
729.50	5.7	-4.3	3.64275	305.2	0.03992148	1.35623201
719.00	4.9	-5.0	3.48927	305.5	0.03820722	1.39443923
709.00	4.0	-7.5	2.84727	305.8	0.03232930	1.42676853
700.00	3.5	-12.3	1.88126	306.3	0.02171264	1.44848117
689.00	2.6	-17.1	1.23343	306.7	0.01748041	1.46596158
678.00	2.1	-16.7	1.30049	307.5	0.01422102	1.48018260
668.00	1.4	-21.3	0.84854	308.1	0.01096444	1.49114704
658.00	1.1	-23.2	0.71862	309.1	0.00799569	1.49914273
649.00	0.7	-23.4	0.70773	309.8	0.00654954	1.50569227
639.00	0.3	-21.9	0.83393	310.7	0.00786559	1.51355786
629.00	-0.0	-23.4	0.73026	311.8	0.00798054	1.52153840
620.00	-0.3	-28.4	0.44901	312.8	0.00541498	1.52695338
611.50	-0.7	-27.0	0.52822	313.6	0.00423799	1.53119137
603.50	-1.4	-24.0	0.71883	314.0	0.00509002	1.53628139
595.50	-1.9	-24.3	0.70828	314.6	0.00582493	1.54210632
587.70	-2.6	-24.6	0.69796	315.0	0.00559625	1.54770257
580.00	-3.1	-24.3	0.72723	315.5	0.00559895	1.55330152
573.20	-3.9	-23.7	0.77872	315.7	0.00522471	1.55852623
566.00	-4.7	-23.2	0.83558	315.9	0.00593009	1.56445632
559.80	-5.6	-23.4	0.82065	315.8	0.00523909	1.56969541
553.30	-6.5	-24.9	0.72123	315.8	0.00511337	1.57480878
547.00	-7.1	-25.7	0.67268	316.1	0.00448044	1.57928922
541.00	-7.9	-26.7	0.61258	316.1	0.00393449	1.58322371
534.00	-8.2	-29.1	0.48538	317.0	0.00392130	1.58714501
527.00	-8.9	-31.9	0.36756	317.3	0.00304622	1.59019123
520.50	-9.4	-32.7	0.34210	317.8	0.00235346	1.59254469
513.00	-9.9	-33.3	0.32635	318.5	0.00255784	1.59510253
507.00	-10.3	-34.7	0.28176	319.1	0.00186156	1.59696410
501.00	-10.6	-36.0	0.24972	319.9	0.00162700	1.59859110
495.00	-11.0	-38.2	0.19682	320.5	0.00136698	1.59995808
489.00	-11.6	-40.0	0.16302	320.9	0.00110155	1.60105962
484.00	-12.0	-41.0	0.14725	321.4	0.00079150	1.60185113
479.00	-12.5	-41.5	0.13978	321.7	0.00073222	1.60258335
473.50	-13.2	-41.4	0.14361	321.8	0.00079523	1.60337858


20μg/g
10
5
2
1
.2
.5
ASCENT DESCENT
147 169
127 149
20 20
(IN M ATM-CM)
TOTAL OZONE
INTEGRATED OZONE
RESIDUAL OZONE
PARTIAL PRESSURE OF OZONE (μmb)
0
50
100
150
200
250
FROST-PT TEMP
AIR TEMP
WASHINGTON
10/21/68
1755 GMT
MIXING RATIO
10
10⁻⁶
10⁻⁵
PRESSURE (MILLIBARS)
20
40
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100
200
400
600
800
1000
TEMPERATURE (°C)
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-60
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0
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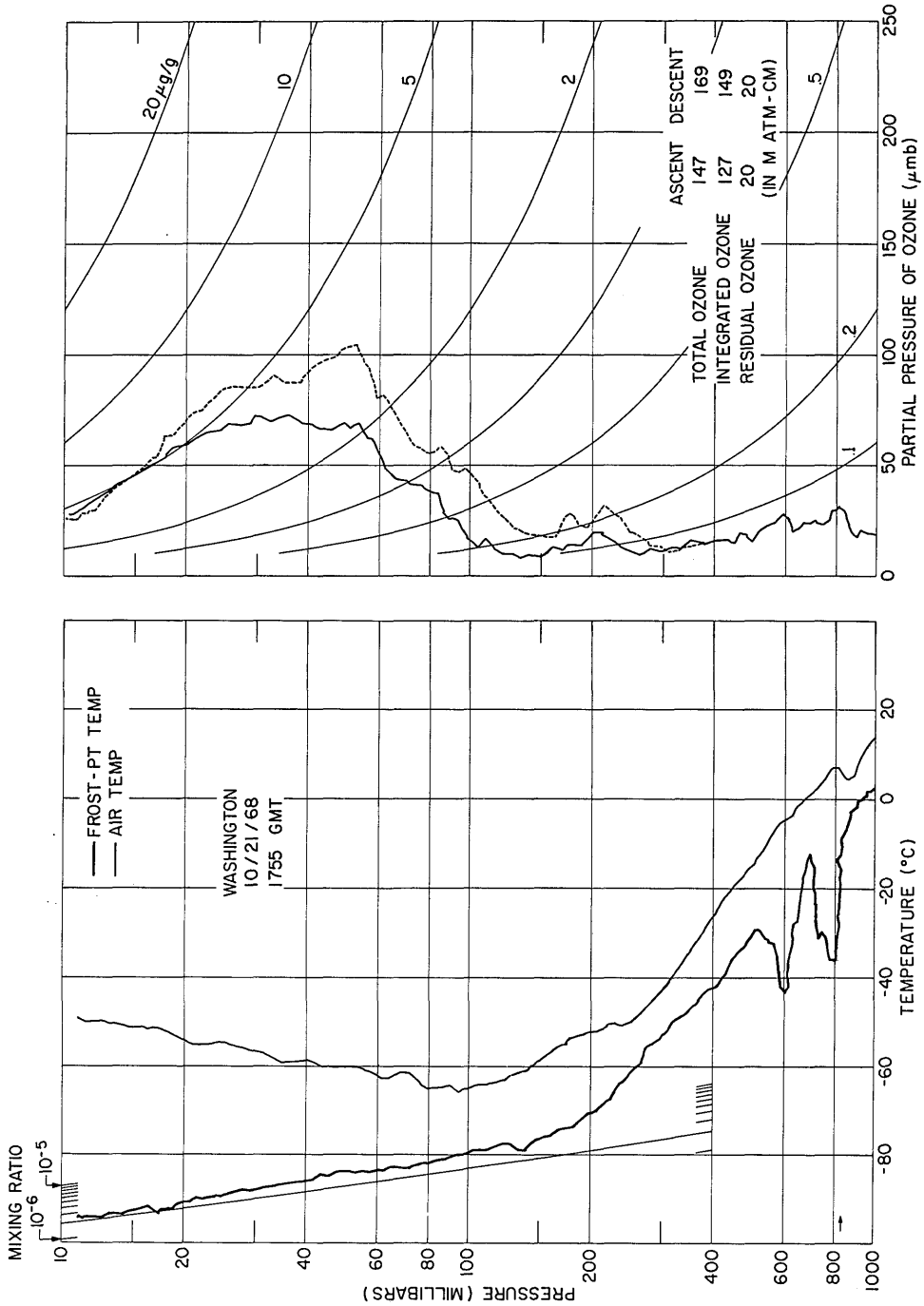
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TEMPERATURE (°C)
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-20
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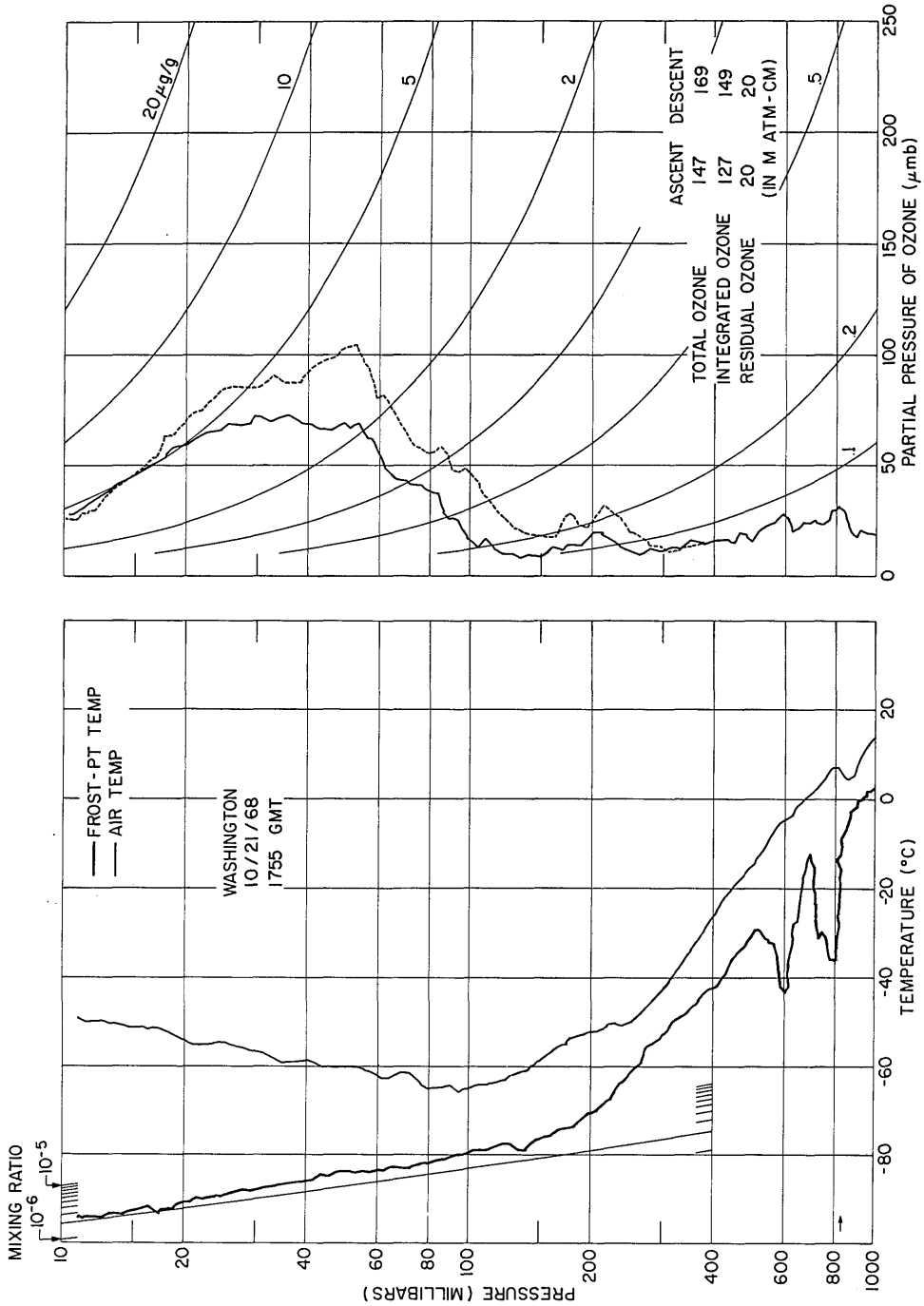
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TEMPERATURE (°C)
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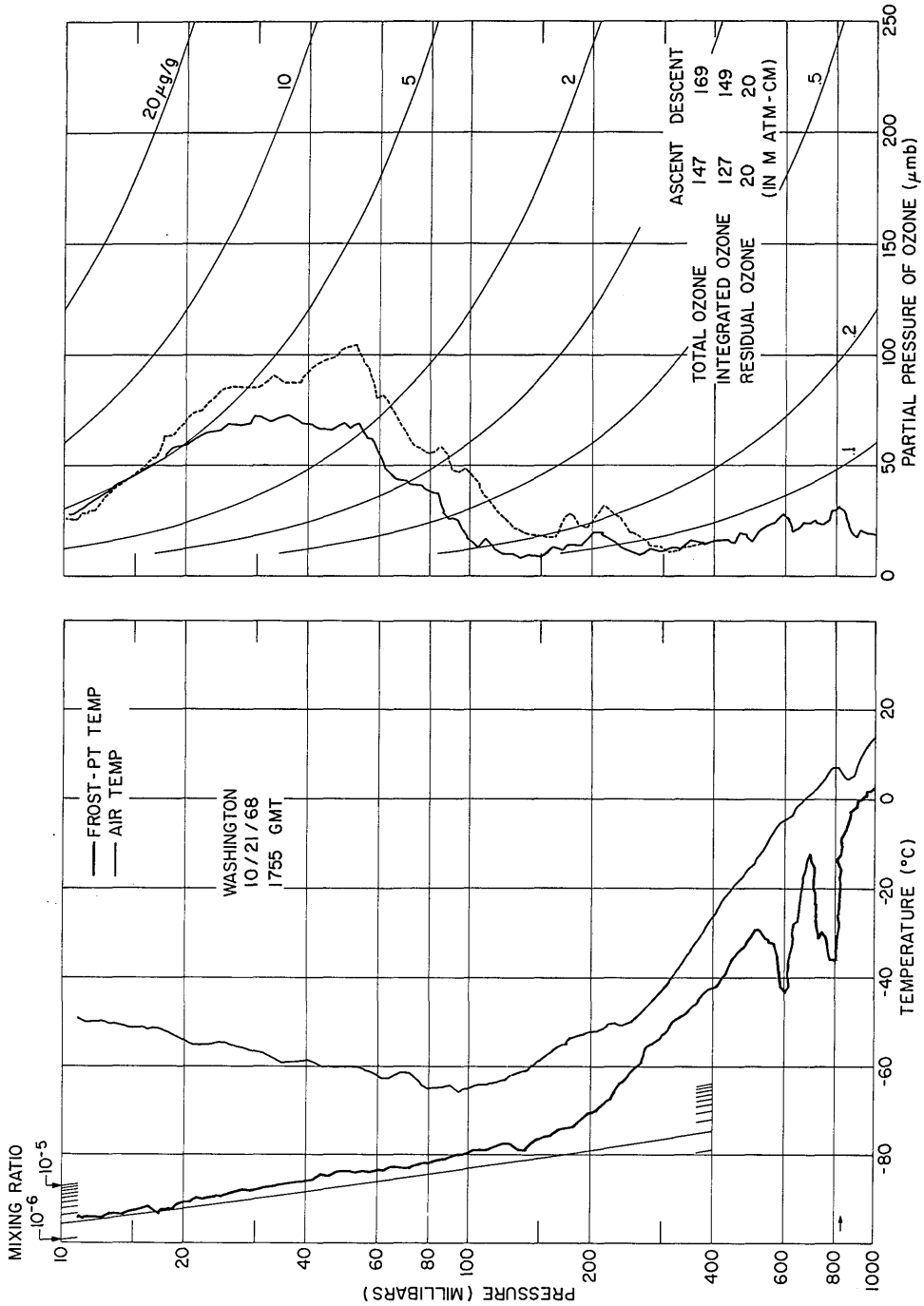
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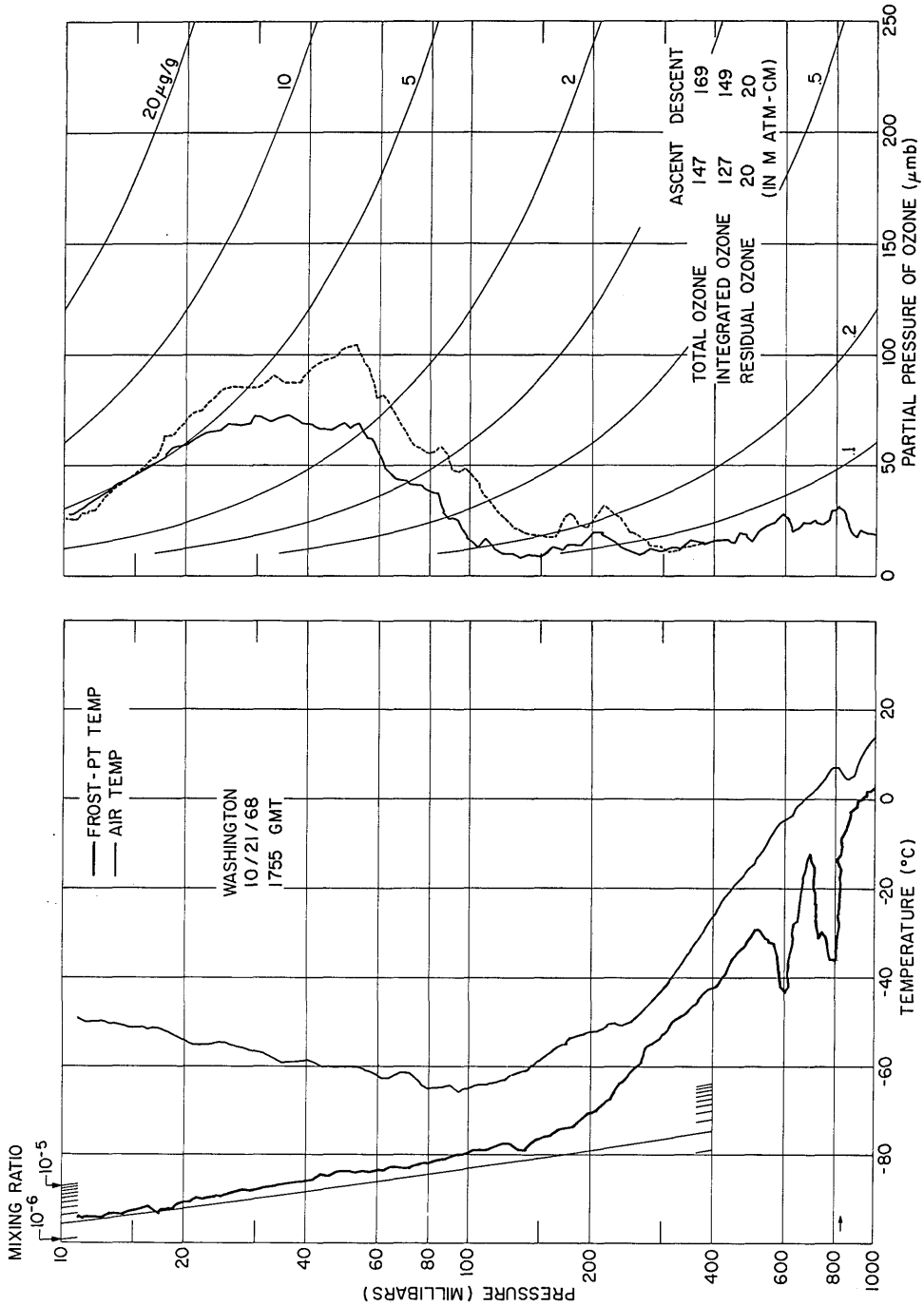
TEMPERATURE (°C)
-80
-60
-40
-20
0
20

WASHINGTON,D.C. 8/6/66 1450Z OZONE DATA ASCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
55.90	140.97	.12050	-55.2	496.9	4.17863
52.80	144.90	.12703	-54.2	507.4	4.54741
50.30	151.75	.13284	-53.0	517.3	4.99887
47.80	153.55	.13902	-52.2	526.7	5.32274
45.00	156.24	.14647	-51.9	536.8	5.75318
42.40	157.62	.15388	-51.5	546.9	6.15971
41.20	157.94	.15746	-51.1	552.3	6.35216
38.70	163.17	.16552	-50.9	562.7	6.98629
36.10	160.19	.17432	-50.6	575.0	7.35283
34.10	159.70	.18151	-50.6	584.4	7.76035
32.10	159.59	.18912	-50.4	595.1	8.23802
30.40	159.74	.19598	-49.7	606.4	8.70678
28.70	156.78	.20311	-49.5	616.9	9.05157
27.80	159.08	.20711	-49.3	623.0	9.48197
26.50	156.61	.21303	-48.6	633.6	9.79276
24.90	155.73	.22069	-47.7	647.4	10.36327
23.40	151.78	.22814	-46.7	662.0	10.74793
22.70	153.29	.23181	-46.6	668.3	11.18914
22.00	150.91	.23554	-46.7	673.8	11.36657
20.30	143.22	.24464	-47.7	686.3	11.69063
18.60	138.08	.25417	-44.9	712.5	12.30118
17.50	137.69	.26080	-44.8	725.6	13.03704
17.10	130.18	.26318	-44.4	731.4	12.61411
16.20	130.31	.26874	-43.7	745.4	13.32847
15.30	126.23	.27444	-43.3	758.7	13.67126
14.20	118.74	.28143	-43.2	775.5	13.85604
13.20	111.45	.28786	-42.7	793.5	13.99025
12.50	107.07	.29247	-41.9	808.7	14.19375
11.90	100.31	.29636	-41.5	821.7	13.96734
10.90	96.29	.30303	-39.8	848.6	14.63770
10.20	88.19	.30766	-39.1	867.6	14.32678
9.45	77.80	.31235	-38.5	888.9	13.64258
8.95	73.96	.31552	-37.7	906.1	13.69310
8.55	71.62	.31811	-37.1	920.3	13.87949
8.35	71.83	.31945	-36.4	929.3	14.25457
8.00	66.99	.32171	-35.4	944.7	13.87575
7.70	64.47	.32366	-34.3	959.5	13.87418
7.50	65.30	.32502	-33.6	969.5	14.42712


20μg/g
10
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.2
.5
ASCENT DESCENT
147 169
127 149
20 20
(IN M ATM-CM)
TOTAL OZONE
INTEGRATED OZONE
RESIDUAL OZONE
PARTIAL PRESSURE OF OZONE (μmb)
0
50
100
150
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FROST-PT TEMP
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WASHINGTON
10/21/68
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MIXING RATIO
10
10⁻⁶
10⁻⁵
PRESSURE (MILLIBARS)
20
40
60
80
100
200
400
600
800
1000
TEMPERATURE (°C)
-80
-60
-40
-20
0
20

WASHINGTON,D.C. 8/6/66 1450Z OZONE DATA DESCENT

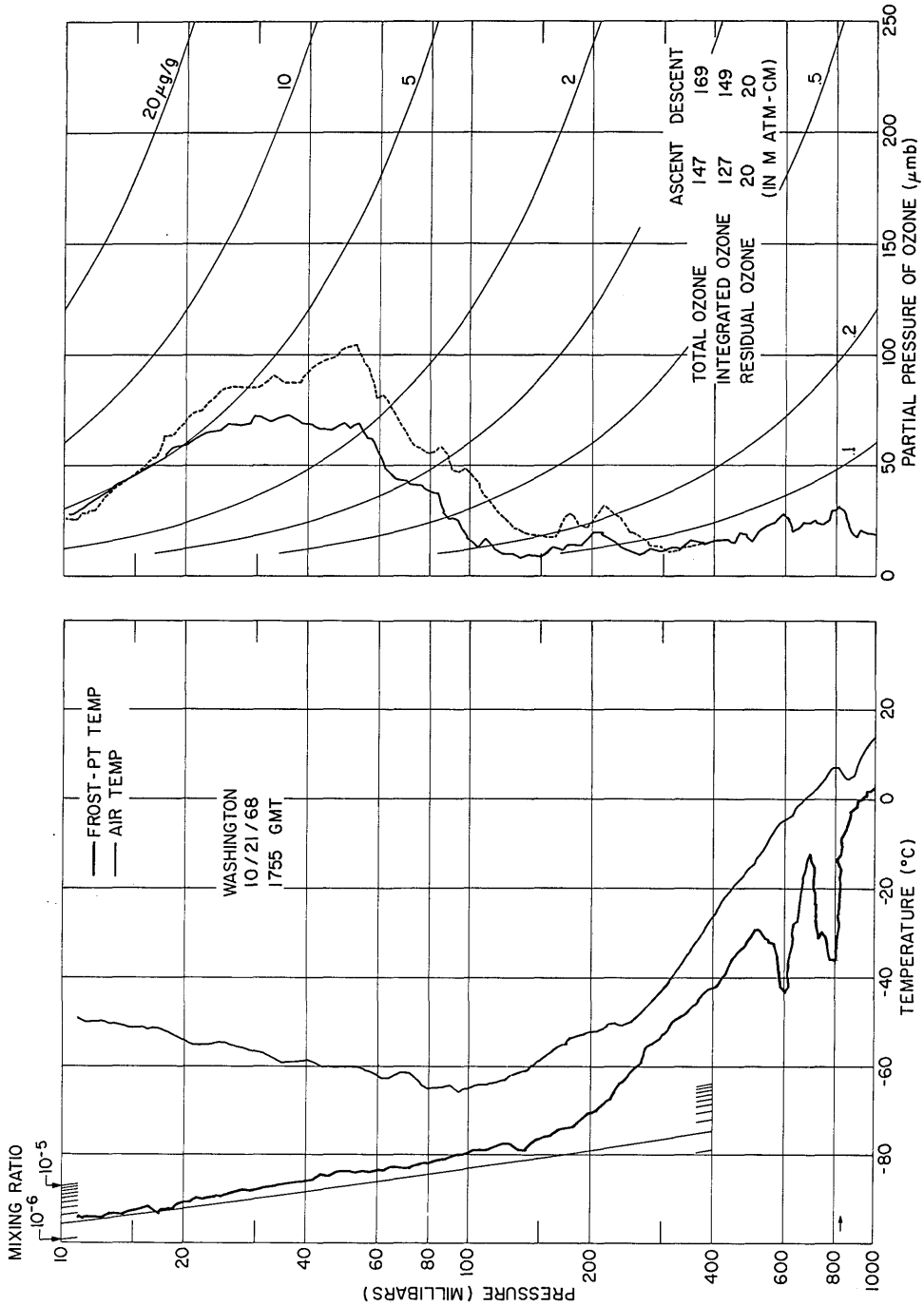
PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
197.50	36.32	.03250	-55.2	346.5	.30472
190.00	45.72	.03389	-55.2	350.3	.39872
186.00	51.46	.03476	-54.4	353.8	.45844
179.00	49.38	.03625	-53.2	359.6	.45710
175.00	43.50	.03703	-52.2	363.5	.41185
168.50	33.08	.03802	-52.4	367.2	.32532
162.00	33.18	.03905	-53.4	369.7	.33933
155.50	33.85	.04014	-54.0	373.0	.36068
152.00	34.31	.04076	-54.6	374.4	.37401
149.50	36.16	.04123	-55.2	375.2	.40078
143.50	46.06	.04272	-56.4	377.4	.53189
137.00	52.67	.04465	-57.3	381.0	.63701
131.00	50.42	.04643	-57.9	384.7	.63773
123.50	53.01	.04890	-58.4	390.4	.71121
121.00	54.06	.04977	-58.6	392.3	.74034
118.00	57.39	.05091	-59.5	393.5	.80590
115.50	56.58	.05186	-60.0	395.0	.81174
110.00	61.14	.05422	-60.0	400.6	.92094
104.50	64.13	.05681	-60.9	404.7	1.01692
100.00	72.35	.05933	-62.1	407.5	1.19886
97.50	80.14	.06093	-62.4	409.9	1.36198
95.00	80.98	.06259	-62.6	412.5	1.41254
90.20	89.22	.06624	-60.9	422.1	1.63897
87.70	100.12	.06846	-59.3	428.7	1.89168
83.50	108.26	.07266	-57.7	438.0	2.14830
79.50	110.25	.07693	-57.3	445.0	2.29783
77.50	105.18	.07905	-56.8	449.2	2.24872
73.70	113.92	.08357	-56.2	457.0	2.56122
69.80	113.22	.08843	-55.4	466.0	2.68782
66.20	107.43	.09292	-54.6	474.8	2.68889
64.60	113.94	.09512	-54.6	478.1	2.92261
61.00	120.06	.10056	-55.2	484.7	3.26137
57.20	127.35	.10702	-55.6	492.8	3.68907
53.90	134.56	.11334	-55.0	502.6	4.13661
50.90	138.02	.11958	-53.6	514.2	4.49296
48.00	140.39	.12608	-53.4	523.3	4.84640
45.80	143.61	.13140	-53.2	530.8	5.19565
44.30	144.35	.13519	-53.2	535.9	5.39933
40.50	152.40	.14599	-51.1	555.0	6.23516
38.00	152.00	.15363	-50.0	568.0	6.62817
35.30	150.54	.16239	-50.0	580.1	7.06638
33.90	147.76	.16711	-50.0	586.8	7.22226
32.60	151.61	.17179	-50.0	593.4	7.70583
31.20	151.22	.17704	-49.8	601.4	8.03107
30.00	154.31	.18181	-49.5	609.1	8.52297
27.50	148.20	.19200	-48.6	626.9	8.92991
25.30	145.50	.20158	-47.7	644.5	9.52913
23.20	137.77	.21100	-47.9	660.2	9.83955
21.20	135.38	.22064	-46.7	680.9	10.58126
19.50	127.27	.22904	-44.6	704.0	10.81431
18.00	122.39	.23677	-43.5	723.8	11.26673
16.50	115.92	.24474	-43.0	743.5	11.64097
15.10	109.25	.25238	-42.7	763.6	11.98813
14.00	100.83	.25841	-41.8	783.4	11.93373
13.50	94.99	.26113	-41.5	792.6	11.65893

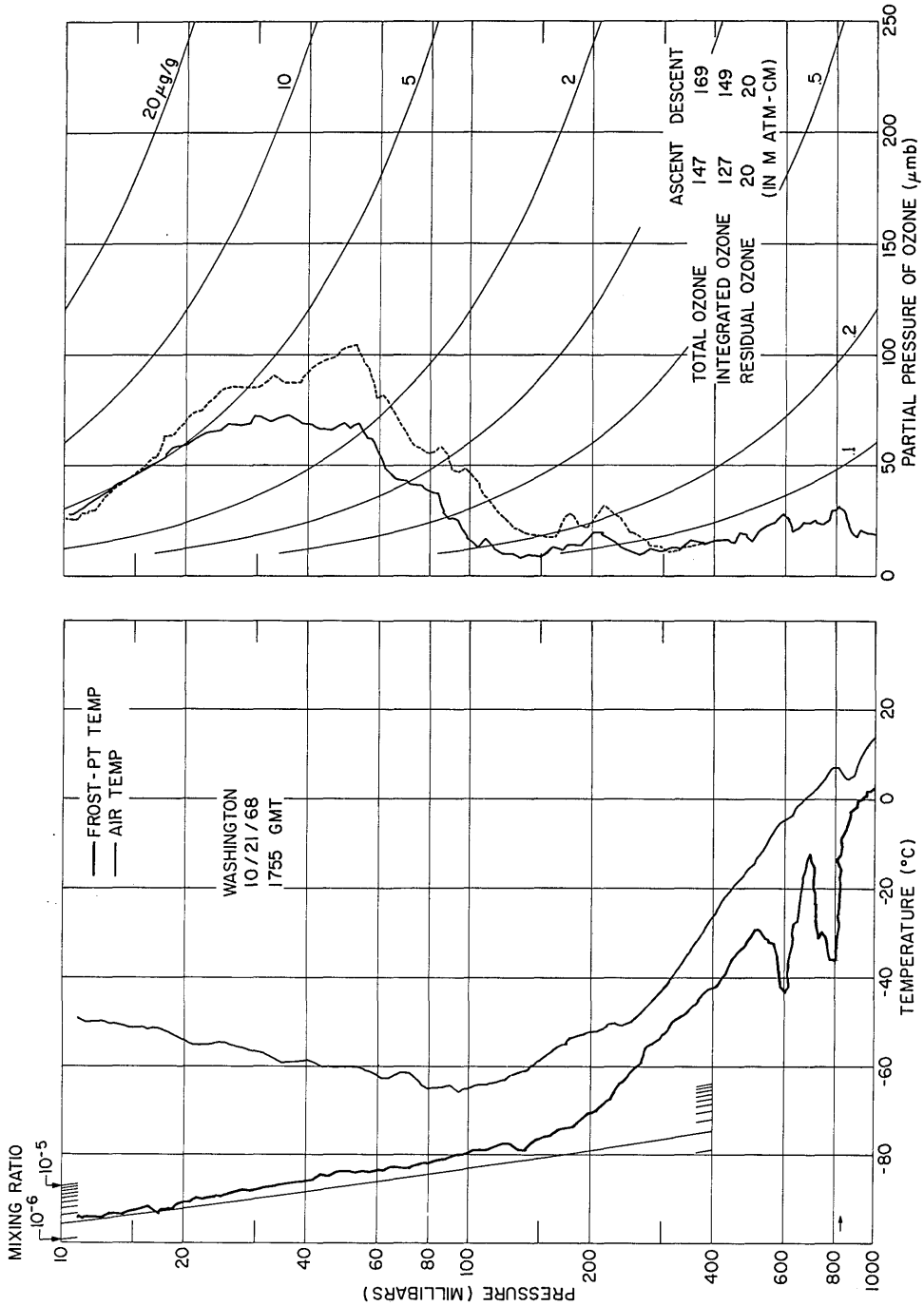
WASHINGTON,D.C. 8/6/66 1450Z OZONE DATA DESCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
13.10	95.50	.26340	-41.3	800.0	12.07916
12.30	87.43	.26775	-40.6	817.2	11.77760
11.60	81.11	.27150	-39.8	833.6	11.58549
10.80	77.58	.27588	-38.7	855.1	11.90249
10.20	76.00	.27931	-37.4	874.0	12.34691
9.45	71.93	.28365	-36.8	895.4	12.61243
8.55	66.95	.28894	-35.7	925.8	12.97559
8.05	64.04	.29198	-34.7	945.7	13.18090
7.65	65.70	.29463	-33.7	963.5	14.23138

WASHINGTON,D.C. 3/10/67 1650Z WATER VAPOR DATA

P (mb)	T (°C)	F (°C)	w (g/kg)	θ (°K)	M (cm)	ΣM (cm)
1019.50	17.2	3.1	4.68791	288.8		
1004.50	16.0	2.2	4.46369	288.8	.07003744	.07003744
990.00	14.8	2.2	4.52954	288.8	.06653124	.13656868
972.00	15.3	-5.7	2.42379	290.8	.06385681	.20042549
954.00	14.4	-1.7	3.46576	291.4	.05408746	.25451295
937.50	12.9	-3.1	3.13291	291.4	.05554986	.31006281
920.00	11.6	-4.5	2.85231	291.6	.05343927	.36350209
903.80	10.5	-4.5	2.90367	292.0	.04757477	.41107686
887.00	9.2	-5.1	2.79981	292.1	.04888684	.45996369
871.00	7.8	-6.3	2.56633	292.3	.04380511	.50376880
855.00	6.5	-7.5	2.36375	292.4	.04024543	.54401423
838.00	5.1	-7.5	2.41189	292.7	.04142118	.58543541
823.00	4.0	-8.6	2.22951	293.0	.03552078	.62095618
809.00	2.7	-9.1	2.16260	293.1	.03137207	.65232825
795.00	2.2	-10.2	2.00868	294.0	.02979472	.68212298
780.00	1.3	-14.7	1.35417	294.7	.02573599	.70785896
765.00	.5	-19.5	.87774	295.4	.01708087	.72493984
752.00	-.3	-21.5	.74259	296.0	.01074705	.73568688
738.00	-.7	-22.9	.65451	297.1	.00997928	.74566616
724.00	-1.4	-26.2	.48415	298.0	.00813328	.75379944
710.00	-1.6	-26.4	.48176	299.5	.00689934	.76069878
697.00	-2.0	-22.9	.69306	300.7	.00779216	.76849094
683.00	-2.2	-12.6	1.88615	302.1	.01842284	.78691378
671.00	-2.8	-10.7	2.27551	303.0	.02547948	.81239326
659.00	-3.7	-10.2	2.42484	303.5	.02877754	.84117080
645.50	-4.8	-9.6	2.59252	304.1	.03455818	.87572898
632.00	-6.0	-9.1	2.77096	304.6	.03694217	.91267115
620.00	-7.0	-10.7	2.46344	305.1	.03204717	.94471832
608.00	-8.4	-11.6	2.30452	305.2	.02919140	.97390972
595.00	-9.8	-17.4	1.37859	305.4	.02442865	.99833837
582.00	-10.9	-27.1	.54588	306.2	.01276429	1.01110266
571.00	-11.9	-34.6	.25357	306.6	.00448671	1.01558937
560.00	-13.0	-39.9	.14417	307.0	.00223221	1.01782158
548.80	-14.3	-42.0	.11523	307.3	.00148226	1.01930384
536.00	-15.2	-44.3	.09115	308.3	.00134774	1.02065158
525.00	-16.2	-46.1	.07493	308.9	.00093205	1.02158363
513.00	-17.3	-49.8	.04878	309.6	.00075740	1.02234103
502.50	-18.6	-49.8	.04980	309.9	.00052811	1.02286914
496.00	-20.1	-51.7	.03988	309.2	.00029743	1.02316657
489.00	-20.7	-52.0	.03908	309.7	.00028200	1.02344857
482.00	-21.4	-52.6	.03662	310.1	.00027035	1.02371892
475.00	-22.3	-52.8	.03633	310.3	.00026053	1.02397946
468.00	-23.2	-53.1	.03525	310.5	.00025564	1.02423510
461.00	-23.8	-53.5	.03423	311.1	.00024813	1.02448323
454.00	-24.6	-53.7	.03400	311.5	.00024366	1.02472690
448.00	-24.9	-53.8	.03407	312.3	.00020836	1.02493526
441.00	-25.4	-53.8	.03423	313.1	.00024390	1.02517916
435.00	-26.0	-54.1	.03358	313.5	.00020757	1.02538674
429.00	-26.8	-53.2	.03804	313.8	.00021924	1.02560598
422.50	-27.4	-45.9	.09564	314.3	.00044331	1.02604929
416.00	-28.2	-37.6	.25238	314.7	.00115415	1.02720344
410.50	-28.8	-37.4	.26024	315.1	.00143847	1.02864191
404.00	-29.7	-37.6	.25988	315.4	.00172488	1.03036679
400.00	-30.5	-37.6	.26248	315.2	.00106604	1.03143284
392.00	-31.4	-36.9	.28686	315.9	.00224219	1.03367503
386.00	-32.4	-37.6	.27201	316.0	.00171079	1.03538582


20μg/g
10
5
2
1
.2
.5
ASCENT DESCENT
147 169
127 149
20 20
(IN M ATM-CM)
TOTAL OZONE
INTEGRATED OZONE
RESIDUAL OZONE
PARTIAL PRESSURE OF OZONE (μmb)
0
50
100
150
200
250
FROST-PT TEMP
AIR TEMP
WASHINGTON
10/21/68
1755 GMT
MIXING RATIO
10
10⁻⁶
10⁻⁵
PRESSURE (MILLIBARS)
20
40
60
80
100
200
400
600
800
1000
TEMPERATURE (°C)
-80
-60
-40
-20
0
20


20μg/g
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5
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ASCENT DESCENT
147 169
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(IN M ATM-CM)
TOTAL OZONE
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RESIDUAL OZONE
PARTIAL PRESSURE OF OZONE (μmb)
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FROST-PT TEMP
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WASHINGTON
10/21/68
1755 GMT
MIXING RATIO
10
10⁻⁶
10⁻⁵
PRESSURE (MILLIBARS)
20
40
60
80
100
200
400
600
800
1000
TEMPERATURE (°C)
-80
-60
-40
-20
0
20

WASHINGTON,D.C. 3/10/67 1650Z WATER VAPOR DATA

P (mb)	T (°C)	F (°C)	w (g/kg)	θ (°K)	M (cm)	ΣM (cm)
22.20	-49.0	-91.5	.00204	665.2	.00000229	1.05345576
21.25	-49.5	-92.0	.00196	672.0	.00000194	1.05345769
20.30	-49.4	-92.1	.00202	681.4	.00000192	1.05345961
19.53	-48.7	-92.3	.00201	691.1	.00000158	1.05346119
18.70	-48.0	-92.6	.00197	701.8	.00000168	1.05346288
17.95	-47.5	-93.0	.00193	711.7	.00000149	1.05346437
17.20	-47.3	-93.2	.00193	720.9	.00000148	1.05346584
16.54	-47.3	-93.4	.00192	729.0	.00000130	1.05346714
15.90	-47.3	-93.7	.00191	737.3	.00000125	1.05346839
15.25	-47.5	-93.8	.00195	745.6	.00000127	1.05346966
14.70	-47.2	-94.5	.00176	754.6	.00000103	1.05347069
14.14	-46.8	-94.6	.00179	764.1	.00000101	1.05347170
13.55	-46.2	-94.9	.00178	775.7	.00000107	1.05347277
13.05	-45.7	-95.1	.00176	785.8	.00000089	1.05347367
12.60	-45.4	-95.4	.00174	794.8	.00000079	1.05347446
12.17	-45.2	-95.5	.00176	803.3	.00000076	1.05347522
11.75	-45.2	-95.7	.00173	811.4	.00000075	1.05347596
11.35	-45.2	-96.0	.00170	819.4	.00000070	1.05347666
10.95	-45.2	-96.1	.00172	827.9	.00000069	1.05347735
10.55	-45.2	-96.5	.00165	836.7	.00000069	1.05347803
10.20	-45.2	-96.7	.00166	844.8	.00000058	1.05347861
10.00	-45.2	-96.8	.00165	849.6	.00000033	1.05347894

WASHINGTON,D.C. 3/10/67 1650Z OZONE DATA ASCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
1019.50					
990.00	18.81	.00044	14.7	288.7	.03148
972.00	40.06	.00102	15.5	291.0	.06830
937.00	56.05	.00264	12.9	291.4	.09911
904.00	49.76	.00405	10.5	292.0	.09120
870.00	47.45	.00548	9.0	293.6	.09037
838.00	43.90	.00678	5.1	292.7	.08680
821.50	48.07	.00754	3.9	293.0	.09697
794.00	40.51	.00862	2.0	293.9	.08454
763.00	33.52	.00968	.4	295.5	.07279
736.00	31.37	.01057	-.9	297.2	.07063
708.00	30.12	.01149	-1.6	299.8	.07049
679.00	30.43	.01250	-2.5	302.3	.07426
657.00	26.67	.01319	-4.0	303.5	.06727
628.00	24.93	.01408	-6.2	304.9	.06579
603.00	20.95	.01475	-8.9	305.3	.05758
578.00	24.80	.01558	-11.3	306.3	.07110
557.00	21.70	.01621	-13.3	307.2	.06454
532.00	23.05	.01705	-15.7	308.4	.07178
509.00	21.20	.01779	-17.8	309.7	.06902
487.00	19.54	.01847	-20.1	310.9	.06649
466.00	17.07	.01906	-22.7	311.5	.06071
442.00	18.39	.01983	-25.6	312.6	.06896
419.00	19.50	.02065	-28.0	314.3	.07713
408.00	20.04	.02107	-29.5	314.8	.08137
389.00	20.56	.02184	-32.1	315.7	.08757
367.00	18.69	.02270	-35.6	316.3	.08437
359.00	16.42	.02299	-37.0	316.4	.07578
340.00	16.98	.02372	-39.9	317.5	.08274
330.00	21.07	.02421	-41.4	318.2	.10580
312.00	18.39	.02503	-44.7	318.6	.09765
297.00	16.66	.02567	-46.7	320.4	.09297
279.00	13.40	.02633	-50.1	321.3	.07960
272.00	10.57	.02655	-51.9	321.0	.06439
249.00	13.52	.02749	-56.5	322.3	.08997
233.00	14.90	.02827	-60.0	323.2	.10598
220.00	38.48	.03001	-56.7	333.6	.28980
208.00	48.86	.03218	-54.1	343.0	.38920
202.00	42.69	.03316	-54.3	345.6	.35016
196.00	39.57	.03410	-54.5	348.3	.33456
190.00	41.71	.03513	-55.1	350.4	.36376
184.50	40.04	.03605	-54.9	353.7	.35963
175.50	33.25	.03737	-55.1	358.5	.31397
170.00	28.63	.03809	-55.9	360.4	.27901
161.00	27.61	.03927	-56.7	364.7	.28411
156.50	26.82	.03987	-57.4	366.6	.28401
148.00	25.75	.04101	-59.1	369.5	.28834
141.00	23.23	.04189	-60.0	373.1	.27300
137.00	21.71	.04239	-60.4	375.4	.26264
129.50	25.05	.04350	-61.6	379.3	.32048
123.00	31.34	.04477	-62.8	382.8	.42220
119.00	34.61	.04568	-63.1	385.9	.48197
115.00	31.74	.04653	-63.6	388.8	.45736
111.00	27.61	.04731	-64.4	391.3	.41215
108.00	27.08	.04789	-65.1	392.9	.41545
105.00	28.51	.04852	-65.1	396.1	.44988

WASHINGTON,D.C. 3/10/67 1650Z OZONE DATA ASCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
99.70	41.07	.05020	-65.1	402.0	.68258
95.10	49.35	.05204	-65.4	406.9	.85989
92.20	50.12	.05327	-65.9	409.5	.90077
90.10	49.35	.05417	-65.9	412.2	.90754
85.40	53.82	.05644	-66.5	417.4	1.04434
83.20	55.82	.05759	-66.5	420.5	1.11163
81.10	60.51	.05881	-66.2	424.2	1.23635
77.00	59.34	.06124	-65.4	432.2	1.27705
75.20	62.52	.06241	-65.1	435.7	1.37750
73.40	74.95	.06384	-65.4	438.2	1.69206
71.50	69.91	.06529	-65.7	440.9	1.62015
68.20	67.15	.06780	-65.7	446.9	1.63145
66.60	67.11	.06906	-64.4	452.8	1.66977
64.90	72.01	.07053	-62.8	459.5	1.83847
63.20	85.91	.07233	-63.1	462.4	2.25232
61.80	91.69	.07395	-63.1	465.4	2.45835
60.30	147.60	.07681	-62.3	470.3	4.05598
57.40	161.95	.08311	-59.1	484.3	4.67520
54.40	149.64	.08946	-57.8	494.8	4.55810
53.20	172.86	.09250	-58.0	497.5	5.38410
52.00	160.59	.09539	-57.2	502.7	5.11738
49.60	152.68	.10109	-56.1	512.0	5.10048
48.40	150.16	.10399	-55.7	516.5	5.14068
46.00	164.74	.11061	-54.9	526.0	5.93416
45.00	155.35	.11330	-54.9	529.3	5.72024
43.20	160.15	.11847	-55.9	533.1	6.14288
41.90	163.65	.12241	-55.9	537.8	6.47188
40.90	156.88	.12541	-55.9	541.5	6.35586
40.00	242.89	.12967	-55.9	544.9	10.06174
38.40	187.50	.13572	-57.6	547.1	8.09065
37.80	192.86	.13811	-56.9	551.2	8.45435
36.80	171.68	.14175	-55.9	558.1	7.73025
33.50	148.27	.15275	-55.5	574.3	7.33381
31.00	133.86	.16094	-54.3	590.4	7.15500
29.40	122.48	.16607	-53.0	603.1	6.90306
28.80	187.03	.16911	-53.0	606.6	10.76079
27.50	142.95	.17433	-52.6	615.8	8.61334
26.90	141.39	.17679	-53.0	618.6	8.70921
26.40	129.19	.17870	-53.9	619.2	8.10872
25.30	126.14	.18294	-52.4	631.1	8.26120
24.80	125.75	.18492	-52.1	635.8	8.40192
24.20	118.86	.18722	-53.4	636.5	8.13816
23.20	115.73	.19108	-53.2	644.8	8.26547
22.80	105.97	.19253	-52.4	650.2	7.70132
21.80	103.89	.19621	-50.4	664.5	7.89634
21.30	96.99	.19799	-50.3	669.5	7.54505
20.90	104.30	.19955	-49.5	675.2	8.26889
20.00	103.98	.20316	-48.7	686.4	8.61446
19.65	106.21	.20464	-48.7	689.9	8.95598
18.90	101.79	.20777	-48.9	697.1	8.92439
18.00	96.26	.21148	-49.0	706.3	8.86106
17.20	88.18	.21464	-49.0	715.5	8.49536
16.80	87.54	.21627	-48.9	720.9	8.63367
16.15	90.27	.21908	-47.7	732.9	9.26211
15.80	90.18	.22064	-47.0	739.7	9.45704

WASHINGTON,D.C. 3/10/67 1650Z OZONE DATA ASCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
15.10	85.84	.22371	-46.0	752.6	9.41921
14.55	80.21	.22606	-47.3	756.2	9.13512
13.95	70.94	.22842	-47.5	764.8	8.42651
13.30	66.89	.23094	-46.0	780.4	8.33415
12.75	63.48	.23305	-45.9	790.4	8.25048
12.20	59.30	.23512	-44.4	805.5	8.05474
11.70	55.89	.23696	-43.7	818.0	7.91545
11.20	53.12	.23880	-44.3	826.0	7.85907
10.70	48.84	.24056	-44.7	835.1	7.56333
10.30	45.22	.24192	-45.1	843.1	7.27451
9.90	44.41	.24331	-44.9	853.3	7.43375

WASHINGTON,D.C. 3/10/67 1650Z OZONE DATA DESCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
389.00					
368.00	19.85	.00087	-35.1	316.8	.08937
357.00	20.87	.00137	-36.9	317.1	.09685
350.00	18.39	.00166	-38.2	317.2	.08708
339.00	13.91	.00201	-39.9	317.7	.06799
327.00	12.60	.00236	-41.4	319.0	.06386
312.00	12.89	.00284	-44.4	319.0	.06844
299.00	11.81	.00324	-46.7	319.8	.06544
295.00	10.27	.00335	-47.8	319.4	.05768
285.00	11.66	.00366	-49.4	320.3	.06777
274.00	12.73	.00406	-51.1	321.4	.07699
264.00	12.70	.00443	-53.4	321.6	.07973
250.00	14.63	.00506	-56.5	321.9	.09696
241.00	17.54	.00557	-58.4	322.4	.12062
236.00	22.42	.00594	-58.9	323.7	.15743
232.00	33.75	.00639	-58.6	325.6	.24105
227.00	50.86	.00727	-58.2	328.3	.37125
222.00	55.05	.00824	-56.9	332.4	.41087
218.00	47.31	.00891	-56.1	335.4	.35962
213.00	38.36	.00962	-56.1	337.6	.29838
205.00	37.25	.01074	-55.5	342.3	.30106
198.00	32.89	.01164	-54.3	347.6	.27525
190.00	28.00	.01256	-54.3	351.7	.24422
182.00	24.99	.01340	-54.7	355.4	.22750
177.50	23.19	.01386	-54.7	358.0	.21646
170.00	20.19	.01455	-54.7	362.4	.19677
166.50	17.75	.01484	-54.9	364.2	.17665
163.00	16.72	.01512	-55.3	365.8	.16996
156.00	14.81	.01563	-57.6	366.6	.15734
150.00	13.35	.01605	-58.4	369.2	.14745
142.00	12.28	.01658	-59.5	373.1	.14326
135.50	13.60	.01708	-60.4	376.5	.16633
132.50	15.36	.01735	-61.4	377.3	.19208
129.20	20.69	.01776	-62.6	377.9	.26532
126.50	26.52	.01820	-62.8	379.7	.34737
124.00	37.41	.01879	-63.3	381.0	.49986
121.00	21.67	.01921	-63.8	382.7	.29678
115.50	21.30	.01999	-64.4	386.9	.30564
112.50	23.38	.02048	-64.4	389.8	.34440
110.00	26.46	.02095	-64.9	391.3	.39854
107.00	34.78	.02171	-65.1	393.9	.53856
104.50	35.63	.02237	-65.1	396.6	.56489
101.00	50.69	.02374	-65.4	400.0	.83164
98.00	86.50	.02579	-65.7	402.9	1.46262
96.20	37.97	.02635	-65.7	405.0	.65406
90.40	41.93	.02841	-65.9	411.8	.76856
88.00	47.55	.02942	-65.9	414.9	.89529
83.40	49.51	.03152	-65.1	423.0	.98370
79.00	54.48	.03385	-65.1	429.6	1.14279
76.80	58.69	.03516	-65.9	431.4	1.26621
74.80	62.89	.03647	-65.7	435.2	1.39309
70.60	92.85	.04070	-65.4	443.1	2.17916
69.40	122.93	.04237	-65.4	445.2	2.93508
66.70	143.55	.04686	-64.1	453.2	3.56627
64.80	167.85	.05069	-62.6	460.2	4.29203
62.80	186.99	.05532	-60.9	468.1	4.93375

WASHINGTON,D.C. 3/10/67 1650Z OZONE DATA DESCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
61.10	191.82	.05948	-59.5	474.8	5.20217
59.80	188.46	.06268	-58.6	479.7	5.22218
57.80	167.09	.06716	-57.8	486.3	4.79010
56.00	180.56	.07167	-58.0	490.2	5.34260
52.60	184.71	.08081	-58.4	498.1	5.81862
51.00	181.71	.08524	-58.2	503.0	5.90382
49.00	191.57	.09129	-57.4	510.8	6.47820
44.40	194.58	.10644	-57.2	525.9	7.26162
42.80	199.22	.11221	-58.0	529.4	7.71289
42.20	203.20	.11448	-58.2	531.0	7.97854
41.30	182.27	.11758	-58.2	534.3	7.31285
40.00	163.38	.12170	-57.2	541.8	6.76781
38.60	161.48	.12625	-56.1	550.0	6.93178
35.70	154.71	.13579	-54.9	565.5	7.18066
34.50	151.55	.13988	-54.9	571.1	7.27902
33.00	155.63	.14534	-54.9	578.4	7.81465
31.90	152.02	.14941	-54.3	585.6	7.89664
30.40	155.46	.15532	-53.7	595.3	8.47343
29.30	156.47	.15987	-53.7	601.6	8.84876
26.60	133.97	.17010	-53.2	620.0	8.34534
24.10	121.03	.17953	-51.1	643.7	8.32152
21.90	108.49	.18773	-49.4	666.8	8.20874
20.10	100.84	.19456	-49.2	683.9	8.31334
18.50	102.09	.20125	-47.8	704.5	9.14359
17.70	92.39	.20447	-47.5	714.5	8.64922
16.30	81.62	.20978	-47.5	731.5	8.29691
14.50	70.55	.21630	-47.0	758.1	8.06225
13.40	65.05	.22035	-46.0	778.7	8.04396
12.50	58.53	.22357	-45.4	796.6	7.75890
11.60	56.07	.22687	-45.2	814.4	8.00991
10.80	52.93	.22986	-45.2	831.2	8.12078
10.40	52.90	.23144	-45.2	840.2	8.42877
10.10	52.25	.23264	-45.2	847.2	8.57146
9.90	50.86	.23345	-45.1	852.7	8.51252

WASHINGTON,D.C. 5/18/67 1920Z WATER VAPOR DATA

P (mb)	T (°C)	F (°C)	w (g/kg)	θ (°K)	M (cm)	ΣM (cm)
1015.50	17.8	2.5	4.45864	289.6		
1005.00	17.2	2.5	4.50556	290.0	0.04802245	0.04802245
1001.00	16.5	1.7	4.27140	289.6	0.01791214	0.06593460
980.00	15.8	2.5	4.62135	290.7	0.09527938	0.16121398
955.00	15.0	3.3	5.03220	291.9	0.12313197	0.28434596
947.00	16.0	4.2	5.39418	293.7	0.04255666	0.32690262
932.00	15.0	3.3	5.15741	294.0	0.08075202	0.40765464
921.00	13.8	2.5	4.91974	293.8	0.05655544	0.46421008
910.00	12.6	1.7	4.70176	293.6	0.05399821	0.51820829
900.00	11.6	0.9	4.49634	293.5	0.04692908	0.56513737
889.00	10.5	0.9	4.55238	293.4	0.05078360	0.61592097
878.00	9.3	0.2	4.36624	293.1	0.05005347	0.66597444
866.00	8.3	-0.5	4.22416	293.3	0.05259430	0.71856874
855.00	7.4	-1.9	3.81335	293.4	0.04510848	0.76367722
843.00	6.5	-2.6	3.65938	293.6	0.04575138	0.80942860
832.00	5.6	-3.2	3.51277	293.8	0.04025187	0.84968047
821.00	4.7	-5.6	2.90229	294.0	0.03600292	0.88568339
811.00	4.0	-6.2	2.79963	294.2	0.02909145	0.91477484
802.00	3.1	-8.3	2.35599	294.3	0.02367379	0.93844863
790.00	2.7	-11.1	1.86107	295.1	0.02581874	0.96426737
780.00	2.3	-14.0	1.44954	295.7	0.01689087	0.98115823
770.00	2.0	-16.5	1.15862	296.5	0.01330693	0.99446516
760.00	1.3	-14.0	1.48778	296.8	0.01350202	1.00796718
750.00	0.6	-14.0	1.50766	297.2	0.01528288	1.02325006
740.00	0.0	-17.9	1.06309	297.7	0.01311612	1.03636618
730.00	-0.8	-20.0	0.87691	298.0	0.00989797	1.04626415
720.00	-1.4	-23.3	0.64620	298.5	0.00777094	1.05403509
710.00	-2.0	-31.2	0.29461	299.0	0.00480003	1.05883512
700.00	-2.6	-31.3	0.29325	299.6	0.00299927	1.06183439
690.00	-3.5	-31.2	0.30315	299.8	0.00304286	1.06487725
680.50	-3.9	-29.7	0.35890	300.5	0.00320892	1.06808617
671.00	-4.7	-31.2	0.31174	300.9	0.00325055	1.07133672
661.50	-5.4	-31.2	0.31622	301.3	0.00304368	1.07438040
652.00	-6.2	-29.9	0.36725	301.7	0.00331272	1.07769311
644.00	-6.9	-25.9	0.55581	301.9	0.00376757	1.08146069
636.00	-7.7	-29.3	0.39972	302.1	0.00390010	1.08536079
627.50	-8.2	-27.9	0.46819	302.6	0.00376389	1.08912467
619.00	-9.0	-29.1	0.41909	302.9	0.00384792	1.09297260
611.00	-9.8	-29.9	0.39191	303.2	0.00331020	1.09628279
603.00	-10.4	-34.8	0.23497	303.6	0.00255867	1.09884147
595.00	-10.9	-34.2	0.25472	304.2	0.00199874	1.10084020
588.00	-11.7	-33.2	0.28594	304.3	0.00193093	1.10277113
580.00	-12.3	-32.4	0.31692	304.8	0.00246065	1.10523179
572.00	-12.9	-31.5	0.35226	305.3	0.00273135	1.10796313
565.00	-13.6	-29.9	0.42384	305.6	0.00277177	1.11073490
558.00	-14.2	-30.6	0.39697	306.0	0.00293143	1.11366633
550.50	-14.9	-26.4	0.62162	306.3	0.00389764	1.11756397
542.00	-15.7	-24.6	0.75976	306.7	0.00599067	1.12355465
536.00	-16.4	-25.0	0.73266	306.8	0.00456865	1.12812329
529.00	-17.3	-26.8	0.61881	307.0	0.00482671	1.13295000
522.50	-18.0	-27.3	0.59972	307.2	0.00404107	1.13699108
516.00	-18.9	-28.5	0.53474	307.2	0.00376225	1.14075333
509.00	-19.5	-29.1	0.50974	307.7	0.00373027	1.14448360
503.00	-20.2	-30.4	0.44899	307.8	0.00293486	1.14741847
496.00	-21.1	-31.2	0.42180	308.0	0.00310996	1.15052843

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P (mb)	T (°C)	F (°C)	w (g/kg)	θ (°K)	M (cm)	ΣM (cm)
488.00	-21.7	-32.2	0.38360	308.7	0.00328737	1.15381580
481.50	-22.5	-33.4	0.34315	308.8	0.00241015	1.15622594
475.00	-23.1	-35.0	0.29340	309.3	0.00211100	1.15833695
468.00	-23.9	-36.0	0.26569	309.7	0.00199673	1.16033368
462.00	-24.7	-36.0	0.26914	309.7	0.00163721	1.16197089
456.00	-25.5	-34.8	0.31075	310.0	0.00177518	1.16374606
450.00	-26.3	-34.5	0.32563	310.1	0.00194811	1.16569417
443.00	-27.3	-34.7	0.32527	310.2	0.00232463	1.16801880
436.00	-28.3	-36.0	0.28519	310.4	0.00218022	1.17019902
429.50	-29.2	-35.9	0.29420	310.6	0.00192146	1.17212048
423.00	-30.2	-36.0	0.29396	310.7	0.00195054	1.17407101
416.50	-31.1	-37.9	0.24391	310.9	0.00178376	1.17585478
410.00	-32.1	-40.3	0.18800	311.0	0.00143235	1.17728713
405.50	-33.0	-42.9	0.14132	310.8	0.00075608	1.17804321
398.00	-34.0	-43.6	0.13328	311.1	0.00105076	1.17909397
391.00	-34.9	-42.9	0.14656	311.5	0.00099943	1.18009340
384.00	-35.9	-42.7	0.15317	311.9	0.00107047	1.18116386
378.90	-36.9	-42.6	0.15728	311.7	0.00080781	1.18197167
373.00	-37.9	-46.8	0.09737	311.9	0.00076655	1.18273823
367.00	-38.7	-46.0	0.10881	312.3	0.00063116	1.18336939
361.00	-39.5	-47.3	0.09381	312.6	0.00062027	1.18398965
355.30	-40.3	-50.1	0.06809	312.9	0.00047083	1.18446049
350.00	-41.2	-50.3	0.06763	313.2	0.00036699	1.18482748
344.20	-42.1	-49.8	0.07262	313.3	0.00041504	1.18524252
338.00	-43.0	-48.0	0.09246	313.8	0.00052219	1.18576471
333.00	-43.9	-46.6	0.11167	313.9	0.00052073	1.18628544
328.00	-44.8	-47.1	0.10568	314.1	0.00055445	1.18683989
323.00	-45.2	-50.5	0.07095	314.8	0.00045057	1.18729046
318.00	-46.0	-51.5	0.06407	315.2	0.00034442	1.18763487
313.00	-46.7	-52.5	0.05739	315.5	0.00030982	1.18794470
307.50	-47.7	-53.4	0.05214	315.8	0.00030735	1.18825204
303.00	-48.6	-54.2	0.04731	315.8	0.00022834	1.18848038
297.50	-49.6	-54.9	0.04446	316.1	0.00025753	1.18873791
292.00	-50.4	-55.0	0.04440	316.7	0.00024936	1.18898726
287.00	-51.2	-56.2	0.03893	317.0	0.00021258	1.18919984
282.00	-51.9	-56.5	0.03809	317.7	0.00019649	1.18939633
221.00	-57.2	-66.5	0.01231	332.5	0.00156871	1.19096503
217.00	-58.0	-66.4	0.01266	333.0	0.00005096	1.19101599
213.00	-58.4	-66.2	0.01327	334.1	0.00005292	1.19106891
209.00	-58.8	-66.7	0.01265	335.3	0.00005290	1.19112182
205.00	-57.0	-67.5	0.01138	340.0	0.00004905	1.19117086
201.00	-55.5	-73.4	0.00486	344.3	0.00003314	1.19120400
196.70	-54.9	-75.7	0.00347	347.3	0.00001827	1.19122227
193.00	-54.7	-76.7	0.00302	349.5	0.00001226	1.19123453
189.50	-55.1	-76.9	0.00297	350.7	0.00001071	1.19124524
186.00	-55.5	-77.0	0.00296	352.0	0.00001060	1.19125583
182.20	-56.2	-77.6	0.00275	352.9	0.00001108	1.19126691
178.00	-55.5	-78.2	0.00256	356.5	0.00001139	1.19127830
174.50	-54.9	-78.9	0.00234	359.4	0.00000876	1.19128706
171.00	-54.7	-79.0	0.00233	361.8	0.00000835	1.19129541
167.50	-55.1	-79.2	0.00232	363.3	0.00000832	1.19130372
164.00	-55.5	-79.5	0.00226	364.9	0.00000818	1.19131190
160.60	-55.5	-79.6	0.00225	367.1	0.00000782	1.19131972
157.00	-55.5	-79.7	0.00227	369.5	0.00000830	1.19132802
153.20	-55.6	-79.8	0.00230	371.8	0.00000886	1.19133688

WASHINGTON,D.C. 5/18/67 1920Z WATER VAPOR DATA

P (mb)	T (°C)	F (°C)	w (g/kg)	θ (°K)	M (cm)	ΣM (cm)
149.30	-56.4	-80.1	0.00224	373.2	0.00000903	1.19134591
145.40	-56.8	-80.6	0.00213	375.4	0.00000870	1.19135461
142.00	-56.8	-80.7	0.00212	377.9	0.00000738	1.19136199
138.50	-56.8	-80.7	0.00218	380.6	0.00000768	1.19136967
135.00	-56.8	-80.9	0.00218	383.4	0.00000778	1.19137744
132.00	-56.8	-81.1	0.00214	385.9	0.00000661	1.19138405
129.00	-56.8	-81.2	0.00216	388.4	0.00000658	1.19139063
125.70	-56.6	-81.2	0.00222	391.7	0.00000737	1.19139800
122.00	-56.4	-81.6	0.00214	395.4	0.00000822	1.19140621
119.70	-56.2	-81.8	0.00212	397.9	0.00000499	1.19141120
117.00	-56.4	-81.9	0.00214	400.1	0.00000586	1.19141707
113.80	-56.6	-81.9	0.00217	403.0	0.00000703	1.19142409
111.00	-55.5	-82.0	0.00219	408.0	0.00000623	1.19143032
108.00	-54.9	-82.1	0.00222	412.2	0.00000676	1.19143708
105.00	-53.8	-82.1	0.00229	417.6	0.00000690	1.19144397
102.20	-53.1	-82.0	0.00238	422.2	0.00000667	1.19145064
99.50	-53.1	-82.0	0.00245	425.4	0.00000665	1.19145729
97.10	-53.6	-82.2	0.00244	427.4	0.00000598	1.19146326
94.80	-54.5	-82.4	0.00243	428.6	0.00000571	1.19146897
92.40	-55.1	-82.5	0.00242	430.6	0.00000594	1.19147491
90.00	-55.8	-82.8	0.00238	432.4	0.00000588	1.19148079
87.60	-56.4	-82.9	0.00241	434.6	0.00000587	1.19148667
85.10	-57.0	-82.9	0.00245	437.1	0.00000620	1.19149287
83.00	-57.6	-83.4	0.00230	439.0	0.00000509	1.19149796
80.80	-57.4	-83.7	0.00226	442.8	0.00000512	1.19150309
78.50	-56.8	-83.9	0.00226	447.7	0.00000531	1.19150839
76.10	-56.2	-84.0	0.00230	452.8	0.00000558	1.19151398
74.00	-55.5	-84.0	0.00236	458.1	0.00000499	1.19151897
71.90	-55.3	-84.0	0.00243	462.2	0.00000514	1.19152411
69.60	-54.7	-84.0	0.00251	467.7	0.00000580	1.19152991
67.00	-54.5	-84.0	0.00261	473.2	0.00000679	1.19153670
65.10	-54.5	-84.1	0.00265	477.1	0.00000509	1.19154179
63.00	-54.4	-84.2	0.00265	482.0	0.00000568	1.19154747
61.00	-54.4	-84.6	0.00258	486.5	0.00000534	1.19155281
59.00	-54.5	-84.6	0.00266	490.8	0.00000535	1.19155816
56.90	-54.7	-84.8	0.00268	495.4	0.00000572	1.19156388
55.00	-54.9	-84.9	0.00273	499.9	0.00000524	1.19156912
53.10	-55.1	-85.0	0.00274	504.5	0.00000530	1.19157442
51.30	-54.9	-85.2	0.00275	509.9	0.00000504	1.19157946
49.60	-54.5	-85.6	0.00266	515.7	0.00000469	1.19158415
48.00	-54.4	-85.8	0.00267	521.0	0.00000435	1.19158850
46.40	-53.8	-86.0	0.00267	527.3	0.00000435	1.19159286
44.70	-53.5	-86.1	0.00272	533.9	0.00000468	1.19159753
43.20	-52.8	-86.3	0.00268	540.8	0.00000414	1.19160167
41.70	-52.4	-86.5	0.00269	547.2	0.00000411	1.19160578
40.30	-51.7	-86.7	0.00269	554.3	0.00000384	1.19160962
38.80	-51.7	-86.9	0.00270	560.3	0.00000412	1.19161374
37.45	-51.9	-87.1	0.00270	565.6	0.00000372	1.19161745
36.20	-52.1	-87.4	0.00265	570.6	0.00000341	1.19162086
35.05	-52.1	-87.6	0.00264	575.9	0.00000310	1.19162396
34.00	-52.4	-87.8	0.00262	580.0	0.00000282	1.19162678
33.05	-52.6	-88.1	0.00256	584.3	0.00000251	1.19162930
32.10	-51.7	-88.3	0.00254	591.5	0.00000247	1.19163176
31.30	-51.2	-88.5	0.00251	597.1	0.00000206	1.19163382
30.40	-50.6	-88.9	0.00244	603.9	0.00000227	1.19163609

WASHINGTON,D.C. 5/18/67 1920Z WATER VAPOR DATA

P (mb)	T (°C)	F (°C)	w (g/kg)	θ (°K)	M (cm)	ΣM (cm)
29.25	-49.9	-89.1	0.00244	612.4	0.00000286	1.19163896
28.30	-49.4	-89.4	0.00238	619.6	0.00000233	1.19164129
26.90	-48.9	-89.7	0.00236	630.0	0.00000338	1.19164467
25.80	-48.8	-90.0	0.00231	638.0	0.00000262	1.19164729
24.70	-48.6	-90.4	0.00227	646.5	0.00000257	1.19164986
23.50	-48.4	-90.6	0.00229	656.2	0.00000279	1.19165265
22.50	-48.3	-91.0	0.00224	664.9	0.00000231	1.19165496
21.50	-48.1	-91.2	0.00225	674.0	0.00000229	1.19165725
20.50	-48.0	-91.7	0.00216	683.7	0.00000225	1.19165950
19.70	-47.7	-91.9	0.00215	692.5	0.00000176	1.19166126
19.00	-47.2	-92.3	0.00208	701.2	0.00000151	1.19166276
18.30	-46.7	-92.7	0.00201	710.2	0.00000146	1.19166422
17.65	-46.3	-93.0	0.00194	719.0	0.00000131	1.19166553
16.80	-46.0	-93.3	0.00194	730.2	0.00000168	1.19166721
16.30	-45.4	-93.7	0.00185	738.5	0.00000097	1.19166818
15.60	-45.1	-93.8	0.00189	748.8	0.00000133	1.19166951
15.00	-44.6	-93.8	0.00196	758.7	0.00000118	1.19167069
14.40	-44.3	-94.0	0.00199	768.6	0.00000121	1.19167190

WASHINGTON,D.C. 5/18/67 1500Z OZONE DATA ASCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
1017.00					
995.00	30.21	.00052	12.7	286.2	.05031
953.00	45.16	.00206	10.8	287.9	.07851
919.00	48.83	.00346	9.7	289.7	.08805
888.50	51.21	.00482	7.8	290.7	.09550
876.50	52.81	.00539	7.0	290.9	.09983
863.00	48.58	.00599	5.8	290.9	.09328
823.00	46.96	.00774	3.3	292.3	.09455
783.00	43.66	.00946	.5	293.5	.09240
746.50	39.25	.01094	-1.8	295.0	.08713
719.00	35.88	.01200	-3.5	296.3	.08270
692.50	36.98	.01310	-4.6	298.3	.08849
654.00	38.77	.01485	-7.7	299.7	.09822
641.00	36.37	.01543	-8.6	300.4	.09402
629.00	36.96	.01598	-9.8	300.7	.09737
603.00	32.13	.01705	-11.6	302.3	.08829
579.00	33.21	.01811	-14.0	303.0	.09505
554.50	24.39	.01895	-17.1	303.1	.07289
530.00	26.01	.01987	-19.7	303.9	.08132
519.00	33.59	.02043	-20.5	304.7	.10725
484.00	32.51	.02222	-24.4	306.1	.11131
462.00	23.61	.02309	-27.2	306.7	.08468
441.00	25.87	.02404	-29.7	307.6	.09719
420.50	22.38	.02488	-32.3	308.5	.08817
399.00	21.44	.02577	-35.1	309.5	.08903
381.00	18.98	.02646	-38.0	309.9	.08256
363.00	16.13	.02707	-40.9	310.2	.07362
343.00	14.89	.02774	-44.1	311.0	.07192
323.00	16.13	.02850	-47.1	312.3	.08276
302.00	16.22	.02936	-49.9	314.4	.08899
293.00	23.68	.02993	-51.3	315.1	.13389
267.00	18.59	.03129	-55.1	318.0	.11537
251.00	18.13	.03218	-57.3	320.4	.11971
235.00	29.18	.03370	-57.5	326.1	.20572
220.00	59.06	.03677	-57.3	332.7	.44485
206.00	68.65	.04033	-55.7	341.5	.55222
198.50	70.94	.04241	-54.4	347.3	.59219
192.00	68.54	.04421	-53.8	351.5	.59147
186.00	72.66	.04603	-53.4	355.3	.64727
179.00	66.45	.04805	-53.1	359.8	.61508
167.00	54.83	.05105	-53.6	366.1	.54401
160.50	62.31	.05300	-54.7	368.4	.64327
155.00	49.26	.05436	-55.1	371.4	.52658
150.00	48.11	.05560	-55.7	373.9	.53140
145.50	51.30	.05684	-56.1	376.5	.58423
141.00	42.38	.05789	-56.5	379.2	.49798
132.00	50.77	.06053	-56.7	386.0	.63731
127.50	48.95	.06187	-56.9	389.5	.63620
123.50	54.27	.06324	-56.9	393.1	.72819
120.00	52.11	.06442	-54.9	399.9	.71960
116.00	54.86	.06589	-53.2	407.0	.78358
112.50	67.36	.06752	-53.8	409.5	.99207
109.00	62.14	.06907	-54.7	411.4	.94471
105.00	71.88	.07119	-55.7	414.0	1.13426
102.00	68.11	.07275	-56.7	415.5	1.10651
99.60	72.67	.07411	-55.9	419.9	1.20894

WASHINGTON,D.C. 5/18/67 1500Z OZONE DATA ASCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
97.10	69.83	.07551	-55.1	424.5	1.19167
94.60	90.20	.07737	-53.2	431.4	1.57992
92.10	90.56	.07929	-52.0	437.2	1.62934
89.50	80.07	.08110	-52.9	439.0	1.48242
87.00	79.12	.08286	-53.2	441.8	1.50686
82.00	87.84	.08697	-54.2	447.5	1.77493
79.60	87.34	.08902	-55.1	449.3	1.81812
77.00	70.79	.09087	-55.9	452.0	1.52343
74.80	70.00	.09248	-56.5	454.5	1.55067
70.00	76.70	.09649	-57.3	461.4	1.81558
67.60	123.21	.09989	-57.5	465.6	3.02022
63.90	81.77	.10352	-57.3	473.6	2.12028
62.10	78.30	.10529	-57.3	477.5	2.08918
58.00	93.54	.11033	-56.1	489.6	2.67231
54.30	96.44	.11535	-55.3	500.7	2.94285
50.80	107.86	.12102	-54.7	511.7	3.51804
50.00	101.27	.12229	-54.7	514.0	3.35620
47.70	111.68	.12644	-55.7	518.7	3.87952
45.30	111.11	.13097	-55.9	525.9	4.06420
43.10	105.75	.13513	-55.3	534.9	4.06546
41.00	113.57	.13961	-54.0	545.9	4.58974
37.80	110.76	.14671	-52.9	561.6	4.85518
35.90	113.03	.15132	-52.3	571.3	5.21707
34.90	105.09	.15366	-52.3	576.0	4.98951
34.10	104.57	.15557	-52.7	578.8	5.08113
33.20	106.03	.15781	-52.9	582.8	5.29178
31.50	101.18	.16201	-51.8	594.5	5.32237
30.60	101.59	.16434	-51.8	599.5	5.50112
28.90	99.48	.16883	-52.1	608.4	5.70400
27.30	94.23	.17307	-52.3	617.8	5.71965
25.80	92.34	.17719	-52.1	628.4	5.93051
24.50	88.72	.18081	-51.8	638.8	6.00028
23.10	84.58	.18474	-51.4	650.6	6.06720
21.80	81.59	.18847	-49.7	666.7	6.20187
20.50	82.00	.19245	-48.5	682.1	6.62831
19.30	77.51	.19614	-48.2	695.0	6.65443
18.25	73.23	.19937	-48.2	706.2	6.64892
17.25	71.41	.20255	-47.9	718.7	6.85989
16.20	69.02	.20597	-47.1	734.3	7.05999
15.30	65.79	.20894	-46.2	749.0	7.12542
14.30	61.45	.21222	-46.2	763.7	7.12082
13.50	57.29	.21483	-45.9	777.4	7.03170
12.70	51.36	.21730	-44.5	796.0	6.70098
11.95	47.72	.21959	-43.8	812.6	6.61673
11.25	47.56	.22186	-43.8	826.8	7.00485
10.60	45.74	.22401	-43.6	841.5	7.14984
9.90	44.76	.22642	-42.6	862.0	7.49128
9.35	43.79	.22840	-40.9	882.4	7.75957
8.70	40.20	.23069	-39.7	905.7	7.65559
8.20	37.54	.23244	-38.0	927.8	7.58485
8.00	33.80	.23310	-36.6	939.9	7.00179
7.87	32.23	.23351	-36.4	944.9	6.78518

WASHINGTON,D.C. 5/18/67 1500Z OZONE DATA DESCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
970.00					
948.00	40.26	.00009	12.4	289.9	.07037
941.00	38.57	.00011	11.7	289.9	.06792
923.50	38.33	.00018	10.8	290.5	.06877
896.00	41.58	.00030	9.5	291.7	.07689
867.00	41.66	.00042	7.3	292.1	.07963
852.00	38.89	.00049	5.8	292.0	.07564
839.00	39.22	.00054	4.8	292.2	.07746
813.00	33.17	.00064	2.9	292.9	.06761
785.00	11.36	.00068	.8	293.6	.02397
773.00	5.65	.00069	-.4	293.5	.01211
752.00	2.05	.00069	-.7	295.6	.00451
733.00	1.09	.00069	-.9	297.6	.00247
713.00	1.14	.00070	-3.8	296.7	.00266
705.00	3.22	.00070	-4.3	297.1	.00756
693.00	.43	.00070	-5.0	297.3	.00103
684.00	1.85	.00070	-5.7	298.2	.00449
664.00	2.75	.00071	-6.8	299.4	.00685
655.00	.00	.00071	-7.6	299.7	.00000
637.00	.91	.00071	-8.6	300.9	.00237
620.00	.00	.00071	-10.3	301.3	.00000
602.00	1.43	.00071	-11.7	302.3	.00392
593.00	5.36	.00072	-12.6	302.5	.01497
584.00	2.11	.00072	-13.4	302.9	.00597
567.50	.22	.00072	-15.3	303.1	.00064
550.00	3.47	.00073	-16.9	303.9	.01045
542.00	13.96	.00075	-17.8	304.2	.04268
502.00	19.80	.00089	-22.3	305.5	.06536
486.00	20.21	.00095	-24.1	306.0	.06891
479.00	22.66	.00098	-24.8	306.5	.07837
471.00	23.89	.00102	-25.5	307.1	.08406
463.00	22.32	.00106	-26.7	307.2	.07989
456.00	19.07	.00108	-27.5	307.4	.06928
450.00	20.89	.00111	-28.3	307.6	.07692
442.00	18.61	.00114	-29.3	307.9	.06976
434.00	19.39	.00117	-30.1	308.5	.07405
420.00	19.11	.00123	-32.0	308.9	.07538
404.00	16.66	.00129	-33.5	310.5	.06835
390.00	14.91	.00134	-36.3	310.0	.06333
382.00	12.40	.00136	-37.4	310.4	.05378
362.00	14.70	.00144	-40.5	311.0	.06728
348.00	14.83	.00149	-42.7	311.6	.07062
340.50	11.78	.00151	-43.8	312.1	.05733
328.00	11.86	.00155	-46.2	312.0	.05993
314.00	12.75	.00161	-48.7	312.5	.06730
302.00	19.60	.00168	-50.9	312.9	.10753
290.00	16.47	.00174	-52.3	314.5	.09410
279.00	17.20	.00180	-53.8	315.9	.10217
267.00	18.43	.00188	-55.3	317.7	.11437
262.00	21.34	.00191	-55.7	318.8	.13494
250.00	27.47	.00203	-56.9	321.3	.18206
244.00	29.55	.00210	-57.7	322.4	.20070
238.50	39.03	.00218	-57.9	324.2	.27115
233.00	44.82	.00228	-58.1	326.0	.31877
228.00	57.23	.00240	-57.3	329.3	.41592
223.00	61.94	.00252	-56.5	332.6	.46023

WASHINGTON,D.C. 5/18/67 1500Z OZONE DATA DESCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
218.00	64.87	.00266	-55.7	336.0	.49305
208.00	64.90	.00294	-55.1	341.5	.51700
202.00	62.34	.00311	-54.9	344.6	.51134
197.50	64.85	.00325	-53.8	348.7	.54406
193.00	58.36	.00338	-52.9	352.5	.50104
188.50	57.37	.00350	-52.9	354.8	.50428
184.00	53.63	.00362	-52.9	357.3	.48299
179.00	54.35	.00376	-53.2	359.5	.50309
170.50	60.92	.00404	-54.7	362.1	.59203
162.00	55.52	.00430	-55.3	366.4	.56791
153.00	46.33	.00455	-55.7	371.8	.50178
148.50	44.27	.00467	-56.5	373.6	.49397
144.50	46.62	.00479	-56.5	376.5	.53461
141.00	52.34	.00491	-55.9	380.2	.61513
137.00	76.36	.00512	-55.7	383.7	.92351
133.50	115.32	.00539	-55.5	386.9	1.43140
130.00	209.32	.00591	-55.9	389.1	2.66808
126.00	57.63	.00608	-56.5	391.6	.75792
122.50	63.95	.00625	-56.5	394.7	.86496
119.50	60.22	.00639	-56.3	397.9	.83505
113.00	64.45	.00673	-56.1	404.7	.94501
106.50	75.39	.00714	-54.9	413.8	1.17292
103.50	86.09	.00737	-54.9	417.2	1.37833
101.00	84.21	.00756	-54.9	420.1	1.38162
97.60	88.65	.00785	-54.9	424.3	1.50502
91.80	86.18	.00834	-53.6	434.4	1.55555
86.20	89.10	.00886	-54.2	441.1	1.71270
83.80	92.27	.00911	-54.7	443.5	1.82439
81.80	69.20	.00926	-55.3	445.4	1.40175
79.00	69.94	.00949	-56.3	447.8	1.46692
74.10	83.39	.00999	-57.9	452.7	1.86484
69.80	99.85	.01055	-57.9	460.5	2.37040
67.20	115.20	.01095	-57.3	466.8	2.84065
65.00	88.96	.01123	-56.9	472.2	2.26782
60.70	101.02	.01188	-55.5	484.6	2.75776
58.70	111.98	.01223	-55.1	490.1	3.16090
56.80	117.05	.01259	-54.9	495.2	3.41467
55.00	118.14	.01294	-54.7	500.2	3.55914
53.20	146.42	.01340	-54.7	505.0	4.56042
51.30	108.39	.01376	-54.7	510.3	3.50091
48.00	128.59	.01456	-54.7	520.1	4.43889
46.40	138.57	.01500	-54.7	525.1	4.94851
44.80	157.02	.01552	-53.6	533.2	5.80762
43.20	119.31	.01592	-52.9	540.6	4.57641
41.80	116.21	.01628	-52.1	547.5	4.60689
40.40	102.91	.01661	-51.8	553.7	4.22068
38.80	110.92	.01702	-52.7	557.9	4.73688
36.00	111.42	.01781	-53.8	567.1	5.12850
33.00	108.65	.01869	-53.6	581.8	5.45547
30.00	98.22	.01956	-53.1	599.4	5.42495
26.80	92.28	.02054	-52.1	621.6	5.70535
24.00	88.21	.02145	-49.9	648.1	6.09050
22.70	84.11	.02188	-48.7	662.0	6.13961
20.40	72.82	.02261	-48.5	683.0	5.91486
18.35	62.93	.02323	-48.2	705.1	5.68218

WASHINGTON,D.C. 5/18/67 1500Z OZONE DATA DESCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
16.80	58.53	.02372	-46.2	729.3	5.77261
15.40	54.83	.02416	-45.6	749.7	5.89978
14.10	53.41	.02460	-43.9	774.6	6.27664
13.00	50.48	.02498	-43.5	794.4	6.43432
12.60	50.36	.02513	-43.8	800.4	6.62317
12.10	47.25	.02531	-43.9	809.2	6.46998
11.30	44.39	.02559	-42.9	829.0	6.50931
10.60	40.08	.02583	-40.7	852.4	6.26565
9.90	37.34	.02607	-39.5	873.4	6.25036
9.40	33.90	.02623	-38.0	892.3	5.97550
9.15	33.88	.02632	-37.3	901.9	6.13523
8.90	31.11	.02640	-37.0	910.1	5.79266
8.70	31.20	.02646	-37.1	915.5	5.94219
8.50	29.82	.02653	-37.3	921.1	5.81320
8.30	29.32	.02659	-36.6	930.1	5.85346
8.10	29.67	.02666	-36.0	938.7	6.06991
7.95	30.61	.02671	-36.2	943.2	6.37984
7.66	31.21	.02682	-36.3	952.8	6.75235

WASHINGTON,D.C. 7/5/67 1550Z WATER VAPOR DATA

P (mb)	T (°C)	F (°C)	w (g/kg)	θ (°K)	M (cm)	ΣM (cm)
1018.10	18.6	13.5	9.46002	290.2		
1003.00	17.7	12.1	8.78042	290.6	0.14052584	0.14052584
992.00	17.0	10.8	8.14979	290.9	0.09501650	0.23554234
982.00	16.4	10.8	8.23388	291.0	0.08359019	0.31913253
973.00	15.7	9.6	7.65613	291.1	0.07296434	0.39209687
963.00	14.7	9.6	7.73662	291.0	0.07853443	0.47063130
952.00	13.9	9.6	7.82714	291.1	0.08734762	0.55797892
940.00	13.1	8.5	7.32775	291.4	0.09278504	0.65076396
927.00	11.7	7.4	6.88978	291.1	0.09429999	0.74506395
911.00	10.6	6.3	6.51908	291.4	0.10946014	0.85452409
893.00	9.7	5.3	6.20021	292.1	0.11680984	0.97133393
876.50	8.8	4.4	5.90328	292.7	0.10189161	1.07322554
860.00	7.9	2.5	5.28796	293.4	0.09421193	1.16743747
845.00	6.7	2.5	5.38264	293.6	0.08166273	1.24910020
830.00	5.5	1.7	5.15310	293.9	0.08063069	1.32973089
813.50	4.4	0.1	4.67354	294.4	0.08272430	1.41245519
796.50	3.2	-0.7	4.53106	295.0	0.07983583	1.49229102
782.00	2.8	-1.5	4.33701	296.1	0.06560567	1.55789669
770.00	2.7	-3.6	3.68972	297.2	0.04914328	1.60703997
757.00	2.5	-4.8	3.35929	298.5	0.04675363	1.65379361
743.00	2.5	-9.9	2.19868	300.1	0.03969978	1.69349339
731.00	2.1	-11.8	1.87997	301.1	0.02497130	1.71846469
718.00	1.8	-12.3	1.83655	302.3	0.02465037	1.74311506
705.00	1.3	-16.4	1.28026	303.3	0.02067271	1.76378776
689.00	2.1	-17.9	1.14253	306.2	0.01977787	1.78356563
680.50	1.8	-19.2	1.01601	307.0	0.00936102	1.79292665
672.00	1.4	-19.9	0.96653	307.6	0.00859773	1.80152438
664.50	0.7	-20.5	0.91958	307.8	0.00721724	1.80874161
658.00	0.2	-21.1	0.87491	308.1	0.00595110	1.81469272
649.00	-0.5	-23.4	0.70770	308.5	0.00726710	1.82195982
640.00	-0.9	-28.8	0.41866	309.3	0.00517210	1.82713192
630.00	-1.3	-32.9	0.27546	310.2	0.00354147	1.83067338
621.00	-2.1	-35.5	0.21197	310.6	0.00223823	1.83291162
613.50	-2.5	-34.7	0.23465	311.2	0.00170903	1.83462065
606.00	-3.3	-34.5	0.24192	311.4	0.00182361	1.83644426
597.00	-3.8	-30.1	0.39383	312.1	0.00291926	1.83936352
590.00	-4.6	-29.0	0.44420	312.3	0.00299296	1.84235648
583.00	-5.2	-29.2	0.43974	312.6	0.00315691	1.84551339
577.00	-6.3	-29.4	0.43470	312.3	0.00267685	1.84819024
569.00	-7.6	-29.4	0.44082	312.0	0.00357355	1.85176378
561.00	-8.3	-31.2	0.36981	312.4	0.00330868	1.85507247
555.00	-9.0	-32.9	0.31271	312.6	0.00208933	1.85716180
548.00	-10.0	-34.3	0.27248	312.5	0.00208994	1.85925174
540.50	-10.6	-35.5	0.24356	313.0	0.00197462	1.86122637
533.00	-11.5	-36.1	0.23032	313.2	0.00181332	1.86303969
527.00	-12.4	-36.4	0.22508	313.2	0.00139408	1.86443377
520.00	-13.0	-39.2	0.16727	313.6	0.00140122	1.86583498
513.70	-13.9	-43.1	0.10893	313.6	0.00088777	1.86672275
507.00	-14.7	-44.9	0.08890	313.8	0.00067624	1.86739899
501.00	-15.4	-45.3	0.08649	314.1	0.00053690	1.86793588
495.00	-16.2	-44.6	0.09474	314.1	0.00055479	1.86849067
489.00	-17.2	-45.2	0.08978	314.0	0.00056486	1.86905553
483.00	-17.7	-43.9	0.10524	314.5	0.00059701	1.86965253
476.50	-18.7	-40.9	0.15206	314.4	0.00085329	1.87050582
470.00	-19.4	-40.5	0.16123	314.9	0.00103895	1.87154477

WASHINGTON,D.C. 7/5/67 1550Z WATER VAPOR DATA

P (mb)	T (°C)	F (°C)	w (g/kg)	θ (°K)	M (cm)	ΣM (cm)
464.00	-20.1	-46.7	0.07906	315.1	0.00073557	1.87228034
457.50	-21.0	-48.2	0.06664	315.3	0.00048319	1.87276353
450.00	-21.7	-45.6	0.09261	315.9	0.00060939	1.87337292
443.00	-22.6	-44.2	0.11169	316.2	0.00072963	1.87410255
436.40	-23.6	-45.2	0.10060	316.2	0.00071485	1.87481740
430.00	-24.3	-45.5	0.09818	316.8	0.00064909	1.87546649
423.00	-25.1	-47.5	0.07851	317.1	0.00063103	1.87609753
416.00	-26.0	-49.6	0.06205	317.5	0.00050197	1.87659950
409.50	-26.7	-50.5	0.05614	318.1	0.00039193	1.87699143
403.00	-26.7	-51.7	0.04924	319.6	0.00034947	1.87734090
396.00	-26.6	-52.5	0.04536	321.3	0.00033784	1.87767874
390.00	-26.8	-52.5	0.04605	322.4	0.00027982	1.87795857
383.50	-27.6	-52.2	0.04841	322.9	0.00031326	1.87827183
378.00	-28.2	-51.1	0.05680	323.4	0.00029522	1.87856705
372.00	-29.0	-49.8	0.06778	323.9	0.00038137	1.87894842
367.00	-29.5	-51.5	0.05530	324.4	0.00031398	1.87926240
360.50	-30.1	-50.4	0.06450	325.4	0.00039730	1.87965970
355.00	-30.6	-52.1	0.05288	326.1	0.00032938	1.87998908
349.70	-31.5	-52.7	0.04970	326.2	0.00027737	1.88026645
344.00	-32.6	-53.3	0.04733	326.3	0.00028217	1.88054863
339.00	-33.4	-52.4	0.05357	326.6	0.00025739	1.88080602
333.00	-34.2	-50.2	0.07146	327.1	0.00038273	1.88118875
329.00	-34.8	-51.5	0.06168	327.5	0.00027172	1.88146046
324.00	-35.5	-49.9	0.07693	328.0	0.00035359	1.88181406
318.00	-36.2	-50.1	0.07570	328.8	0.00046721	1.88228127
313.00	-37.2	-49.0	0.08851	328.9	0.00041890	1.88270017
307.50	-38.2	-49.9	0.08012	329.2	0.00047319	1.88317335
302.00	-39.0	-49.9	0.08253	329.6	0.00045641	1.88362976
297.00	-40.1	-51.1	0.07148	329.7	0.00039288	1.88402264
292.00	-41.1	-51.2	0.07189	329.9	0.00036572	1.88438836
287.00	-42.2	-49.9	0.08584	330.0	0.00040236	1.88479072
282.00	-43.3	-53.9	0.05297	330.1	0.00035412	1.88514484
276.00	-44.4	-54.7	0.04919	330.5	0.00031275	1.88545758
270.00	-45.2	-54.9	0.04872	331.4	0.00029972	1.88575730
265.30	-46.5	-55.0	0.04906	331.2	0.00023448	1.88599179
261.00	-47.7	-55.6	0.04636	331.0	0.00020934	1.88620112
255.40	-48.2	-57.1	0.03896	332.3	0.00024377	1.88644489
250.00	-49.2	-58.8	0.03158	332.7	0.00019436	1.88663926
246.00	-50.0	-59.7	0.02850	333.2	0.00012261	1.88676187
241.50	-51.0	-60.2	0.02710	333.3	0.00012764	1.88688951
237.50	-51.4	-60.2	0.02755	334.4	0.00011153	1.88700104
233.00	-51.6	-60.8	0.02571	335.9	0.00012230	1.88712333
228.80	-52.3	-61.4	0.02422	336.5	0.00010701	1.88723034
224.00	-53.3	-61.7	0.02380	337.1	0.00011760	1.88734793
220.50	-53.5	-61.8	0.02394	338.3	0.00008525	1.88743318
217.00	-53.5	-62.9	0.02084	339.9	0.00007996	1.88751314
213.00	-53.9	-64.1	0.01785	341.1	0.00007895	1.88759209
209.00	-54.3	-64.9	0.01639	342.3	0.00006987	1.88766196
205.20	-54.3	-66.6	0.01303	344.1	0.00005704	1.88771900
202.00	-53.9	-68.1	0.01072	346.3	0.00003877	1.88775778
197.80	-54.1	-68.2	0.01074	348.1	0.00004598	1.88780376
194.00	-54.7	-69.2	0.00938	349.0	0.00003900	1.88784276
190.50	-55.3	-70.4	0.00809	349.9	0.00003119	1.88787396
187.00	-55.9	-70.8	0.00769	350.7	0.00002818	1.88790213
183.30	-56.6	-71.0	0.00762	351.7	0.00002890	1.88793103

WASHINGTON,D.C. 7/5/67 1550Z WATER VAPOR DATA

P (mb)	T (°C)	F (°C)	w (g/kg)	θ (°K)	M (cm)	ΣM (cm)
180.00	-57.2	-71.4	0.00731	352.5	0.00002513	1.88795616
175.70	-56.3	-73.3	0.00558	356.3	0.00002828	1.88798444
172.00	-54.3	-75.2	0.00430	361.9	0.00001866	1.88800311
168.00	-53.5	-76.1	0.00383	365.7	0.00001659	1.88801970
164.00	-53.7	-76.3	0.00375	367.9	0.00001547	1.88803517
160.20	-53.9	-76.8	0.00356	370.0	0.00001418	1.88804935
156.50	-55.1	-77.2	0.00344	370.4	0.00001322	1.88806257
153.00	-55.7	-77.2	0.00352	371.8	0.00001244	1.88807501
149.70	-56.8	-77.3	0.00352	372.3	0.00001186	1.88808687
146.50	-57.2	-77.7	0.00336	373.9	0.00001124	1.88809811
143.00	-57.4	-78.1	0.00325	376.1	0.00001182	1.88810993
140.00	-57.6	-78.4	0.00314	378.0	0.00000978	1.88811971
137.00	-57.8	-78.7	0.00306	379.9	0.00000949	1.88812920
133.80	-58.5	-79.1	0.00295	381.3	0.00000982	1.88813902
130.00	-59.2	-79.3	0.00293	383.3	0.00001142	1.88815044
127.30	-59.6	-79.4	0.00293	384.8	0.00000807	1.88815851
124.00	-60.1	-79.5	0.00297	386.8	0.00000992	1.88816843
121.00	-60.3	-79.7	0.00293	389.1	0.00000903	1.88817747
118.50	-60.1	-79.8	0.00296	391.9	0.00000752	1.88818499
115.70	-59.6	-80.0	0.00292	395.4	0.00000840	1.88819339
113.00	-57.6	-81.0	0.00255	401.8	0.00000754	1.88820093
110.20	-56.1	-81.4	0.00245	407.5	0.00000714	1.88820807
107.50	-56.6	-81.8	0.00236	409.6	0.00000663	1.88821470
105.00	-57.2	-82.3	0.00220	411.2	0.00000582	1.88822051
102.00	-57.8	-82.6	0.00215	413.4	0.00000666	1.88822717
99.60	-58.3	-82.6	0.00223	415.3	0.00000536	1.88823254
97.50	-58.3	-82.3	0.00237	417.9	0.00000493	1.88823747
95.20	-58.3	-82.5	0.00237	420.7	0.00000556	1.88824303
92.90	-58.1	-82.9	0.00227	424.1	0.00000544	1.88824846
90.40	-58.1	-83.0	0.00230	427.4	0.00000582	1.88825429
88.00	-57.8	-83.0	0.00233	431.2	0.00000567	1.88825995
85.90	-57.4	-83.2	0.00232	435.0	0.00000498	1.88826493
83.80	-56.6	-83.5	0.00225	439.9	0.00000490	1.88826984
81.50	-56.1	-83.9	0.00216	444.2	0.00000518	1.88827501
79.10	-56.1	-84.2	0.00213	448.0	0.00000526	1.88828027
77.10	-55.9	-84.4	0.00210	451.8	0.00000432	1.88828459
75.00	-55.3	-84.0	0.00231	456.6	0.00000473	1.88828931
72.90	-54.7	-84.0	0.00238	461.6	0.00000503	1.88829434
70.90	-54.5	-84.5	0.00225	465.8	0.00000472	1.88829907
69.00	-54.7	-84.3	0.00241	469.0	0.00000452	1.88830358
67.00	-54.3	-84.3	0.00248	473.8	0.00000499	1.88830857
65.10	-54.1	-84.8	0.00231	478.1	0.00000465	1.88831322
63.30	-53.9	-85.4	0.00214	482.4	0.00000409	1.88831731
61.50	-53.7	-85.3	0.00227	486.8	0.00000405	1.88832136
59.60	-53.9	-84.8	0.00252	490.8	0.00000465	1.88832600
57.80	-54.3	-85.0	0.00253	494.2	0.00000464	1.88833064
56.10	-54.3	-85.5	0.00238	498.4	0.00000425	1.88833489
54.60	-54.1	-85.5	0.00244	502.8	0.00000369	1.88833858
53.00	-53.9	-85.5	0.00252	507.5	0.00000405	1.88834263
51.50	-53.9	-85.4	0.00263	511.7	0.00000394	1.88834657
50.00	-53.3	-85.7	0.00259	517.4	0.00000400	1.88835057
48.60	-52.7	-85.7	0.00266	523.0	0.00000375	1.88835432
47.20	-52.2	-85.9	0.00266	528.8	0.00000380	1.88835813
45.70	-51.6	-86.1	0.00266	535.0	0.00000408	1.88836220
44.30	-51.4	-86.2	0.00267	540.3	0.00000381	1.88836601

WASHINGTON,D.C. 7/5/67 1550Z WATER VAPOR DATA

P (mb)	T (°C)	F (°C)	w (g/kg)	θ (°K)	M (cm)	ΣM (cm)
42.90	-51.2	-86.8	0.00250	545.7	0.00000369	1.88836970
41.50	-50.9	-86.2	0.00284	551.8	0.00000382	1.88837352
39.70	-50.5	-86.5	0.00284	559.8	0.00000522	1.88837874
38.30	-50.3	-87.0	0.00267	566.0	0.00000394	1.88838267
36.90	-50.0	-87.1	0.00273	573.0	0.00000386	1.88838653
35.50	-50.1	-87.2	0.00279	578.9	0.00000394	1.88839047
34.00	-50.5	-87.3	0.00287	585.1	0.00000433	1.88839480
32.50	-77.0	-99.4	0.00030	522.2	0.00000242	1.88839723
31.25	-51.0	-87.6	0.00297	597.9	0.00000208	1.88839931
30.00	-50.5	-88.1	0.00284	606.4	0.00000371	1.88840302
28.70	-50.0	-88.1	0.00297	615.6	0.00000386	1.88840687
27.50	-49.2	-88.2	0.00305	625.2	0.00000368	1.88841056
26.30	-47.8	-88.3	0.00313	637.1	0.00000378	1.88841434
25.10	-46.7	-88.5	0.00317	649.1	0.00000386	1.88841820
24.25	-45.3	-88.9	0.00301	659.3	0.00000268	1.88842088
23.20	-44.4	-89.3	0.00292	670.5	0.00000318	1.88842406
22.40	-43.3	-89.8	0.00276	680.6	0.00000232	1.88842638
21.50	-42.2	-89.9	0.00282	691.9	0.00000257	1.88842894
20.65	-41.6	-89.3	0.00329	701.7	0.00000265	1.88843159
19.80	-41.4	-89.6	0.00324	710.7	0.00000283	1.88843442
19.10	-41.6	-89.4	0.00349	717.5	0.00000240	1.88843683
17.90	-41.0	-90.5	0.00308	732.9	0.00000402	1.88844085
17.30	-40.5	-90.4	0.00325	741.5	0.00000194	1.88844279
16.70	-40.7	-90.4	0.00337	748.5	0.00000203	1.88844482
16.10	-40.7	-90.5	0.00343	756.4	0.00000208	1.88844690
15.60	-40.1	-90.7	0.00340	765.2	0.00000174	1.88844864
15.10	-39.5	-90.5	0.00366	774.3	0.00000180	1.88845044
14.60	-38.6	-92.4	0.00262	784.7	0.00000160	1.88845204
13.70	-36.9	-91.2	0.00351	805.0	0.00000281	1.88845486
12.90	-35.9	-91.2	0.00373	822.4	0.00000295	1.88845781
12.40	-35.9	-91.2	0.00388	831.7	0.00000194	1.88845975
12.07	-35.9	-91.4	0.00383	838.2	0.00000130	1.88846105
11.70	-35.7	-91.4	0.00395	846.1	0.00000147	1.88846252
11.35	-35.7	-91.4	0.00407	853.5	0.00000143	1.88846395
11.00	-35.6	-91.4	0.00420	861.7	0.00000148	1.88846543
10.70	-34.9	-91.7	0.00414	871.1	0.00000128	1.88846670
10.40	-34.6	-91.5	0.00435	879.2	0.00000130	1.88846800
10.15	-34.2	-91.4	0.00455	886.9	0.00000114	1.88846914
9.90	-33.5	-91.3	0.00476	895.8	0.00000119	1.88847033

WASHINGTON,D.C. 7/5/67 1550Z OZONE DATA ASCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
1018.10					
999.00	46.44	.00069	17.5	290.8	.07702
987.00	47.71	.00115	16.2	290.4	.08010
969.00	47.54	.00184	15.2	291.0	.08129
958.00	44.80	.00224	14.4	291.1	.07749
933.00	47.63	.00324	12.3	291.2	.08458
900.00	45.32	.00453	10.1	292.0	.08343
868.00	45.50	.00583	8.3	293.1	.08685
836.00	41.00	.00704	6.0	293.8	.08127
804.00	42.80	.00836	3.8	294.8	.08821
774.00	39.73	.00955	2.7	296.8	.08505
748.50	38.63	.01057	2.6	299.5	.08552
722.00	39.46	.01170	1.9	301.8	.09055
696.00	42.47	.01293	1.2	304.3	.10111
680.50	42.23	.01368	.5	305.4	.10284
670.00	38.20	.01414	.2	306.5	.09448
656.50	37.46	.01475	-.6	307.4	.09456
632.00	38.36	.01590	-2.5	308.6	.10056
620.00	35.99	.01644	-3.4	309.2	.09618
609.00	36.51	.01696	-4.3	309.8	.09934
575.00	35.13	.01855	-7.9	310.7	.10122
551.00	34.20	.01970	-10.2	311.8	.10286
527.00	29.15	.02073	-12.5	313.0	.09165
514.00	26.33	.02124	-13.7	313.8	.08487
491.00	27.01	.02222	-16.6	314.4	.09114
481.00	22.61	.02259	-17.7	314.8	.07790
449.00	27.80	.02410	-20.6	317.5	.10260
427.50	34.38	.02543	-22.5	319.6	.13324
415.00	34.99	.02625	-23.6	320.8	.13970
403.00	24.28	.02681	-24.6	322.2	.09984
384.00	19.94	.02757	-26.7	324.0	.08605
363.50	20.96	.02848	-29.0	326.0	.09553
354.00	18.79	.02887	-30.3	326.7	.08795
335.00	20.40	.02976	-33.1	328.1	.10090
314.00	13.99	.03047	-36.4	329.6	.07382
295.00	18.14	.03136	-39.8	330.8	.10192
284.50	18.12	.03188	-41.7	331.5	.10554
276.50	16.55	.03225	-43.3	331.9	.09918
258.50	19.08	.03327	-46.5	333.6	.12232
242.00	17.37	.03417	-49.4	335.6	.11894
227.00	23.32	.03535	-52.5	337.0	.17020
212.50	27.79	.03680	-53.5	341.9	.21672
205.50	41.60	.03790	-53.5	345.2	.33544
198.00	48.55	.03932	-53.9	348.3	.40634
191.70	49.95	.04060	-54.1	351.2	.43178
180.00	49.16	.04304	-54.3	357.3	.45258
173.50	50.13	.04450	-54.7	360.4	.47875
167.00	55.37	.04617	-55.1	363.6	.54940
163.00	55.34	.04722	-55.3	365.8	.56256
158.00	58.14	.04865	-55.7	368.4	.60974
152.50	56.38	.05023	-56.3	371.1	.61263
147.00	34.50	.05123	-57.2	373.5	.38884
142.50	22.87	.05179	-57.4	376.5	.26595
138.50	20.29	.05225	-57.8	378.8	.24269
130.00	24.70	.05348	-59.2	383.3	.31487
122.50	27.32	.05477	-60.6	387.3	.36960

WASHINGTON,D.C. 7/5/67 1550Z OZONE DATA ASCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
115.00	31.53	.05634	-59.6	396.1	.45432
111.50	39.09	.05729	-58.1	402.6	.58097
107.00	54.59	.05907	-57.4	408.6	.84532
103.50	60.67	.06066	-57.8	411.7	.97127
100.20	62.46	.06226	-58.1	415.1	1.03298
97.00	60.02	.06379	-58.3	418.5	1.02521
90.30	67.36	.06760	-58.1	427.6	1.23597
84.60	72.18	.07132	-57.4	437.0	1.41373
80.10	87.36	.07509	-56.5	445.6	1.80717
77.40	71.45	.07702	-56.1	450.8	1.52952
73.40	76.81	.08024	-55.9	458.2	1.73404
71.20	101.14	.08267	-55.3	463.5	2.35379
69.50	109.95	.08477	-54.5	468.4	2.62147
66.30	108.16	.08879	-55.1	473.5	2.70319
64.40	112.16	.09137	-55.1	477.4	2.88586
61.20	87.36	.09488	-55.3	484.0	2.36537
59.80	89.79	.09652	-55.1	487.6	2.48786
58.20	118.45	.09906	-54.1	493.7	3.37234
56.80	121.06	.10138	-53.3	498.9	3.53158
55.30	118.55	.10389	-53.5	502.3	3.55223
52.60	129.29	.10900	-53.5	509.5	4.07285
50.20	123.29	.11355	-53.3	516.9	4.06939
49.90	119.75	.11411	-53.1	518.2	3.97660
47.90	131.51	.11836	-52.3	526.1	4.54924
45.50	116.54	.12309	-52.0	534.8	4.24421
43.50	141.28	.12810	-51.6	542.6	5.38153
41.60	119.71	.13233	-51.4	550.1	4.76845
40.70	135.48	.13466	-51.4	553.5	5.51575
38.80	110.16	.13882	-51.2	561.6	4.70469

WASHINGTON, D.C. 9/7/67 1545Z WATER VAPOR DATA

P (mb)	T (°C)	F (°C)	w (g/kg)	θ (°K)	M (cm)	ΣM (cm)
1017.00	24.5	13.2	9.33270	296.2		
1003.00	23.5	11.9	8.65097	296.4	0.12845477	0.12845477
988.00	22.6	10.6	8.06000	296.8	0.12789006	0.25634483
972.00	21.7	10.6	8.19442	297.3	0.13268913	0.38903396
960.00	20.6	10.6	8.29822	297.2	0.10097534	0.49000930
948.00	19.8	10.6	8.40468	297.4	0.10226263	0.59227193
935.00	18.7	9.4	7.84793	297.5	0.10779790	0.70006983
921.00	17.4	7.1	6.82073	297.4	0.10477615	0.80484597
908.00	16.5	5.1	5.98864	297.8	0.08496011	0.88980608
895.40	15.5	5.1	6.07373	297.9	0.07754383	0.96734991
882.00	14.5	4.1	5.75809	298.2	0.08089104	1.04824096
870.00	13.9	1.4	4.81313	298.7	0.06472174	1.11296270
856.00	12.9	0.6	4.60490	299.1	0.06727162	1.18023432
842.00	12.2	-0.2	4.45336	299.7	0.06470183	1.24493615
829.00	11.2	-1.0	4.23941	300.0	0.05765613	1.30259227
816.00	10.6	-2.5	3.80263	300.7	0.05334006	1.35593234
804.50	9.7	-4.6	3.23674	301.0	0.04130242	1.39723476
791.00	9.1	-4.6	3.29228	301.8	0.04497027	1.44220503
780.00	8.1	-5.2	3.15805	301.9	0.03620078	1.47840581
769.00	6.7	-5.8	3.03373	301.7	0.03474977	1.51315558
758.00	6.1	-7.1	2.77035	302.3	0.03257392	1.54572950
747.00	5.3	-8.8	2.42021	302.6	0.02913070	1.57486021
736.00	5.0	-9.8	2.23396	303.6	0.02612034	1.60098055
725.00	4.3	-12.3	1.81551	304.1	0.02272657	1.62370712
715.00	3.7	-12.3	1.84097	304.7	0.01865550	1.64236262
704.00	3.3	-11.8	1.95185	305.6	0.02128627	1.66364889
693.00	2.5	-10.9	2.16572	306.1	0.02310880	1.68675769
683.00	2.0	-10.9	2.19754	306.9	0.02226149	1.70901918
673.00	1.6	-12.3	1.95622	307.7	0.02119265	1.73021183
663.00	1.5	-13.2	1.82633	308.9	0.01929873	1.74951056
654.00	1.6	-15.0	1.57853	310.2	0.01563457	1.76514513
644.00	1.1	-18.8	1.11848	311.0	0.01376029	1.77890542
636.00	0.4	-15.8	1.50431	311.3	0.01070526	1.78961068
628.00	-0.4	-15.0	1.64406	311.5	0.01285048	1.80246116
619.00	-0.7	-17.4	1.33599	312.5	0.01368390	1.81614505
610.00	-1.0	-18.8	1.18094	313.5	0.01155733	1.82770239
600.00	-1.8	-20.8	0.98861	314.0	0.01106916	1.83877155
592.00	-2.6	-22.1	0.88683	314.3	0.00765487	1.84642642
585.00	-3.4	-19.8	1.11548	314.4	0.00715112	1.85357753
578.00	-4.4	-18.1	1.33431	314.3	0.00874926	1.86232679
570.50	-5.1	-21.8	0.94834	314.7	0.00873461	1.87106140
563.00	-5.9	-20.5	1.08732	314.9	0.00778951	1.87885091
556.00	-6.4	-19.8	1.17377	315.5	0.00807535	1.88692626
549.00	-7.1	-20.2	1.15112	315.8	0.00830321	1.89522947
541.00	-7.6	-23.0	0.88872	316.5	0.00832591	1.90355538
533.00	-8.2	-25.2	0.72254	317.1	0.00657658	1.91013196
526.00	-8.7	-26.3	0.65941	317.7	0.00493552	1.91506748
519.00	-9.1	-27.7	0.57516	318.5	0.00440917	1.91947664
513.00	-9.8	-29.8	0.47097	318.7	0.00320245	1.92267909
506.00	-10.1	-30.0	0.46683	319.5	0.00334928	1.92602837
499.00	-10.4	-29.4	0.50684	320.5	0.00347737	1.92950574
492.00	-11.0	-30.2	0.46948	321.0	0.00348683	1.93299257
485.00	-11.9	-29.8	0.49818	321.2	0.00345593	1.93644850
478.00	-12.9	-30.0	0.49419	321.3	0.00354420	1.93999270
471.00	-13.8	-30.9	0.45898	321.6	0.00340419	1.94339689

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P (mb)	T (°C)	F (°C)	w (g/kg)	θ (°K)	M (cm)	ΣM (cm)
463.00	-14.7	-31.3	0.44709	322.1	0.00369825	1.94709514
457.00	-15.5	-31.9	0.42491	322.3	0.00266940	1.94976454
450.00	-16.1	-31.5	0.45025	322.9	0.00312558	1.95289012
443.50	-16.6	-33.8	0.35704	323.7	0.00267723	1.95556735
437.00	-17.3	-35.0	0.31647	324.1	0.00223358	1.95780092
430.50	-18.4	-35.6	0.30366	324.2	0.00205656	1.95985748
424.00	-19.0	-37.1	0.26183	324.8	0.00187535	1.96173283
418.00	-19.7	-37.7	0.24760	325.1	0.00155947	1.96329229
412.00	-20.5	-38.8	0.22292	325.5	0.00144036	1.96473265
406.00	-21.5	-40.4	0.18897	325.6	0.00126090	1.96599355
400.00	-22.5	-40.1	0.19805	325.6	0.00118478	1.96717832
394.50	-23.5	-40.5	0.19141	325.6	0.00109289	1.96827121
389.00	-24.4	-40.9	0.18514	325.7	0.00105666	1.96932787
383.00	-25.3	-42.6	0.15418	326.0	0.00103875	1.97036662
377.00	-26.2	-42.9	0.15206	326.3	0.00093747	1.97130409
371.00	-26.7	-44.1	0.13366	327.1	0.00087464	1.97217872
365.00	-27.5	-46.1	0.10735	327.6	0.00073778	1.97291651
359.00	-28.4	-46.3	0.10625	327.9	0.00065390	1.97357041
353.00	-29.2	-46.5	0.10662	328.5	0.00065167	1.97422208
348.00	-30.0	-44.3	0.14048	328.7	0.00063037	1.97485245
343.00	-30.7	-44.7	0.13471	329.2	0.00070202	1.97555447
337.00	-31.7	-45.6	0.12445	329.4	0.00079334	1.97634780
331.00	-32.6	-45.7	0.12498	330.0	0.00076355	1.97711135
326.00	-33.4	-46.5	0.11546	330.3	0.00061337	1.97772472
321.00	-34.3	-47.0	0.10974	330.4	0.00057447	1.97829919
315.50	-35.3	-47.6	0.10459	330.7	0.00060142	1.97890062
310.00	-36.1	-48.1	0.09980	331.2	0.00057355	1.97947417
305.00	-37.0	-48.6	0.09519	331.5	0.00049744	1.97997161
299.00	-37.9	-49.8	0.08364	332.2	0.00054744	1.98051905
293.00	-39.0	-50.4	0.07934	332.5	0.00049891	1.98101796
288.00	-40.2	-51.2	0.07334	332.4	0.00038949	1.98140744
283.00	-41.1	-51.2	0.07463	332.8	0.00037748	1.98178493
278.00	-42.0	-51.4	0.07420	333.2	0.00037968	1.98216460
273.00	-43.0	-52.8	0.06344	333.6	0.00035113	1.98251573
268.00	-43.9	-54.1	0.05453	334.0	0.00030096	1.98281669
263.00	-44.9	-54.6	0.05198	334.4	0.00027172	1.98308842
258.00	-46.0	-55.4	0.04800	334.5	0.00025506	1.98334348
254.00	-46.8	-56.8	0.04059	334.8	0.00018080	1.98352427
249.00	-47.9	-58.6	0.03251	335.2	0.00018647	1.98371075
245.00	-48.7	-58.9	0.03170	335.4	0.00013103	1.98384178
240.00	-50.0	-59.9	0.02831	335.5	0.00015309	1.98399487
235.50	-50.9	-60.1	0.02798	336.0	0.00012924	1.98412411
231.00	-51.8	-60.3	0.02795	336.4	0.00012842	1.98425253
227.00	-53.1	-60.7	0.02704	336.1	0.00011222	1.98436475
222.00	-53.9	-61.0	0.02655	337.0	0.00013669	1.98450144
218.00	-54.5	-60.6	0.02844	337.9	0.00011222	1.98461366
214.00	-55.1	-61.0	0.02726	338.7	0.00011368	1.98472734
209.00	-55.8	-63.1	0.02109	340.0	0.00012335	1.98485069
205.00	-56.6	-63.6	0.01986	340.6	0.00008357	1.98493426
201.00	-57.4	-64.8	0.01729	341.2	0.00007581	1.98501007
197.00	-57.9	-65.7	0.01537	342.4	0.00006665	1.98507672
192.50	-58.3	-66.8	0.01342	344.0	0.00006610	1.98514282
188.00	-58.8	-67.3	0.01282	345.6	0.00006026	1.98520308
184.00	-59.5	-67.6	0.01259	346.6	0.00005187	1.98525495
180.00	-59.9	-67.9	0.01225	348.1	0.00005071	1.98530565

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(mb)	T (°C)	F (°C)	w (g/kg)	θ (°K)	M (cm)	ΣM (cm)
176.00	-60.4	-68.3	0.01193	349.5	0.00004934	1.98535500
172.00	-60.9	-68.7	0.01138	351.0	0.00004757	1.98540257
168.00	-61.3	-69.3	0.01076	352.6	0.00004520	1.98544776
164.00	-62.1	-69.8	0.01028	353.8	0.00004295	1.98549072
160.50	-62.6	-70.6	0.00922	355.1	0.00003484	1.98552555
157.00	-63.1	-71.6	0.00819	356.5	0.00003110	1.98555665
153.00	-63.4	-72.5	0.00729	358.7	0.00003158	1.98558823
149.50	-64.1	-73.1	0.00680	359.8	0.00002515	1.98561338
146.00	-64.4	-73.2	0.00682	361.7	0.00002432	1.98563770
143.00	-64.4	-73.6	0.00661	363.9	0.00002056	1.98565825
139.50	-64.7	-74.7	0.00573	366.0	0.00002204	1.98568029
136.00	-64.7	-75.1	0.00546	368.7	0.00001998	1.98570028
133.00	-64.7	-74.8	0.00589	371.0	0.00001737	1.98571765
130.00	-64.7	-75.4	0.00547	373.4	0.00001739	1.98573503
126.50	-64.9	-76.2	0.00500	375.9	0.00001869	1.98575373
123.00	-64.9	-76.5	0.00487	378.9	0.00001761	1.98577134
120.00	-64.9	-76.7	0.00483	381.6	0.00001484	1.98578618
117.00	-65.2	-77.1	0.00463	383.9	0.00001448	1.98580066
114.00	-65.8	-77.2	0.00470	385.7	0.00001429	1.98581495
111.00	-65.2	-77.3	0.00478	389.7	0.00001451	1.98582946
108.50	-65.2	-77.8	0.00452	392.2	0.00001186	1.98584132
106.00	-64.9	-77.8	0.00458	395.4	0.00001160	1.98585292
102.50	-63.9	-78.2	0.00447	401.2	0.00001615	1.98586907
99.00	-63.9	-78.3	0.00453	405.2	0.00001607	1.98588514
96.40	-63.6	-78.7	0.00439	408.8	0.00001183	1.98589697
94.00	-63.4	-79.5	0.00392	412.3	0.00001017	1.98590714
91.50	-62.8	-80.1	0.00366	416.5	0.00000966	1.98591680
89.00	-62.3	-80.5	0.00354	420.8	0.00000919	1.98592599
86.60	-62.1	-80.8	0.00343	424.6	0.00000854	1.98593453
84.10	-62.1	-80.8	0.00353	428.2	0.00000888	1.98594341
81.80	-62.3	-81.0	0.00354	431.1	0.00000830	1.98595171
79.40	-61.1	-81.6	0.00331	437.3	0.00000839	1.98596009
77.20	-60.2	-81.6	0.00336	442.8	0.00000748	1.98596757
75.00	-59.0	-81.5	0.00354	448.9	0.00000775	1.98597532
72.90	-58.1	-81.6	0.00356	454.4	0.00000761	1.98598292
70.80	-57.9	-81.7	0.00362	458.7	0.00000768	1.98599061
68.70	-57.7	-81.9	0.00363	463.2	0.00000777	1.98599838
66.60	-57.7	-82.0	0.00366	467.3	0.00000781	1.98600619
64.60	-57.4	-82.2	0.00367	471.9	0.00000748	1.98601366
62.80	-57.0	-82.4	0.00364	476.6	0.00000671	1.98602038
60.80	-56.2	-82.6	0.00361	482.9	0.00000740	1.98602778
59.00	-55.5	-82.9	0.00354	488.5	0.00000657	1.98603435
57.00	-54.9	-83.3	0.00343	494.7	0.00000711	1.98604145
55.00	-54.7	-83.6	0.00341	500.3	0.00000698	1.98604844
53.40	-54.5	-83.9	0.00333	505.0	0.00000551	1.98605394
51.80	-54.7	-84.2	0.00325	508.9	0.00000538	1.98605932
50.10	-54.9	-84.3	0.00332	513.3	0.00000570	1.98606502
48.40	-54.9	-84.7	0.00321	518.4	0.00000566	1.98607068
46.80	-54.5	-84.7	0.00327	524.4	0.00000529	1.98607597
45.00	-53.9	-85.1	0.00317	531.7	0.00000591	1.98608188
43.70	-53.1	-85.5	0.00308	538.1	0.00000415	1.98608603
42.30	-53.3	-85.7	0.00305	542.7	0.00000438	1.98609041
41.10	-53.3	-86.0	0.00301	547.1	0.00000371	1.98609412
40.00	-53.3	-86.1	0.00300	551.4	0.00000337	1.98609749
38.50	-53.3	-86.4	0.00298	557.5	0.00000458	1.98610207

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P (mb)	T (°C)	F (°C)	w (g/kg)	θ (°K)	M (cm)	ΣM (cm)
37.00	-53.0	-86.4	0.00310	564.8	0.00000465	1.98610672
35.60	-52.8	-86.7	0.00303	571.6	0.00000438	1.98611110
34.20	-52.0	-86.7	0.00316	580.2	0.00000442	1.98611553
32.70	-51.4	-87.0	0.00316	589.1	0.00000483	1.98612036
31.30	-51.1	-87.2	0.00320	597.5	0.00000454	1.98612490
29.80	-51.1	-87.3	0.00331	606.0	0.00000498	1.98612988
28.30	-50.7	-87.6	0.00327	616.0	0.00000504	1.98613492
26.90	-50.0	-87.9	0.00328	627.0	0.00000468	1.98613960
25.50	-49.4	-89.4	0.00262	638.2	0.00000421	1.98614381
24.20	-48.9	-89.3	0.00280	649.4	0.00000360	1.98614741
23.00	-48.2	-90.3	0.00248	660.9	0.00000323	1.98615064
21.90	-47.7	-90.0	0.00275	671.8	0.00000293	1.98615358
20.80	-47.2	-90.5	0.00264	683.3	0.00000303	1.98615660
19.60	-46.7	-90.6	0.00276	696.5	0.00000331	1.98615991
18.80	-46.2	-90.8	0.00277	706.4	0.00000226	1.98616216
17.90	-45.7	-91.1	0.00275	718.0	0.00000254	1.98616470
17.80	-45.0	-91.3	0.00267	721.2	0.00000028	1.98616498
16.40	-44.5	-91.9	0.00258	739.8	0.00000375	1.98616872
15.70	-44.1	-91.9	0.00270	750.7	0.00000188	1.98617061
15.05	-43.4	-91.9	0.00281	761.9	0.00000183	1.98617244
14.40	-43.1	-92.8	0.00251	772.7	0.00000176	1.98617420
13.85	-42.8	-92.8	0.00261	782.4	0.00000144	1.98617564
13.30	-42.6	-93.1	0.00255	792.0	0.00000145	1.98617708
12.80	-42.6	-93.4	0.00249	800.7	0.00000129	1.98617837
12.30	-42.6	-93.7	0.00243	809.9	0.00000126	1.98617963
11.90	-42.8	-93.9	0.00246	817.0	0.00000100	1.98618062
11.50	-42.0	-94.1	0.00244	827.8	0.00000100	1.98618162
11.10	-41.3	-94.3	0.00242	839.0	0.00000099	1.98618261
10.75	-40.5	-94.1	0.00261	849.5	0.00000090	1.98618351
10.45	-39.8	-94.0	0.00274	859.1	0.00000082	1.98618433
10.10	-39.5	-94.2	0.00271	868.6	0.00000097	1.98618530
9.80	-39.5	-94.6	0.00262	876.1	0.00000082	1.98618612
9.55	-38.7	-94.1	0.00293	885.4	0.00000071	1.98618683
9.30	-38.2	-94.4	0.00282	894.4	0.00000073	1.98618756
9.10	-37.9	-95.3	0.00245	901.0	0.00000054	1.98618810

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PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
1017.00					
999.00	29.69	.00042	19.9	293.2	.04924
967.00	36.25	.00135	19.9	295.9	.06212
950.00	38.70	.00189	18.5	296.0	.06751
934.00	34.38	.00235	17.9	296.8	.06099
900.00	36.78	.00343	15.9	297.8	.06771
877.50	33.09	.00409	12.6	296.7	.06248
841.00	29.13	.00507	11.8	299.5	.05740
817.00	26.52	.00567	10.6	300.6	.05379
791.00	23.53	.00627	8.8	301.5	.04929
768.00	21.11	.00676	7.6	302.8	.04555
756.00	18.24	.00699	6.3	302.7	.03997
745.00	19.65	.00722	5.1	302.7	.04371
722.00	21.61	.00775	4.0	304.2	.04958
699.00	23.24	.00834	3.4	306.4	.05509
687.00	27.52	.00872	3.2	307.6	.06637
676.00	22.69	.00901	2.5	308.2	.05561
655.00	14.85	.00938	1.2	309.6	.03757
622.00	10.64	.00981	.4	313.3	.02835
598.00	13.46	.01023	-.8	315.4	.03731
568.00	10.59	.01066	-4.4	315.8	.03090
537.00	9.20	.01107	-6.5	318.5	.02837
516.00	9.09	.01135	-8.5	319.8	.02920
486.00	11.81	.01191	-11.3	321.8	.04027
468.00	13.36	.01231	-13.6	322.5	.04730
449.00	13.35	.01275	-15.8	323.5	.04927
432.00	13.34	.01315	-18.1	324.2	.05117
412.00	75.59	.01598	-20.6	325.4	.30399
392.00	10.65	.01640	-23.2	326.7	.04501
373.00	9.50	.01677	-26.0	327.6	.04220
356.00	5.16	.01696	-29.2	327.7	.02402
338.00	6.61	.01723	-31.6	329.3	.03242
321.00	2.14	.01732	-34.5	330.2	.01107
153.50	14.48	.02575	-61.1	362.2	.15627
144.50	14.55	.02644	-62.8	365.5	.16690
135.50	15.15	.02721	-64.7	369.1	.18529
131.00	18.50	.02771	-65.2	371.7	.23395
123.50	19.07	.02859	-64.7	379.0	.25592
116.50	20.98	.02956	-65.2	384.3	.29835
110.00	24.58	.03067	-64.9	391.2	.37024
107.00	28.97	.03131	-64.4	395.3	.44867
101.00	33.10	.03281	-63.6	403.4	.54306
95.40	35.73	.03442	-63.3	410.6	.62060
90.00	35.89	.03607	-62.6	419.0	.66071
85.00	39.06	.03784	-62.1	426.9	.76149
80.00	40.88	.03979	-61.8	434.9	.84678
76.00	41.50	.04147	-60.6	443.8	.90472
73.60	44.80	.04261	-59.7	449.9	1.00854
70.00	50.77	.04462	-59.0	457.9	1.20169
66.60	65.23	.04718	-58.1	466.3	1.62283
63.20	70.45	.05010	-58.3	472.9	1.84696
60.00	73.05	.05309	-58.1	480.5	2.01753
58.60	73.02	.05445	-57.9	484.2	2.06462
55.80	72.16	.05724	-57.0	493.0	2.14294
54.50	76.80	.05867	-56.0	498.8	2.33502
53.20	78.51	.06017	-55.7	502.7	2.44537

WASHINGTON,D.C. 9/7/67 1545Z OZONE DATA ASCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
50.50	75.70	.06328	-55.1	511.7	2.48383
49.30	74.51	.06470	-54.5	516.6	2.50425
47.00	77.03	.06760	-54.5	523.7	2.71562
44.80	78.43	.07057	-53.7	532.9	2.90070
42.70	81.67	.07366	-52.8	542.7	3.16918
41.80	85.95	.07511	-52.4	546.9	3.40697
39.90	87.20	.07831	-52.6	553.7	3.62128
38.10	88.46	.08154	-52.9	560.1	3.84724
35.50	90.73	.08660	-52.4	573.0	4.23476
33.70	91.73	.09037	-52.2	582.1	4.51011
32.10	91.12	.09387	-51.8	591.3	4.70346
31.20	91.40	.09592	-51.8	596.1	4.85408
29.70	90.56	.09944	-51.6	605.1	5.05237
28.30	88.74	.10282	-51.4	614.0	5.19596
27.00	83.73	.10593	-51.4	622.3	5.13881
26.30	81.56	.10762	-51.3	627.5	5.13850
25.00	81.97	.11090	-51.3	636.7	5.43315
23.80	82.15	.11409	-49.4	650.9	5.71932
23.00	84.87	.11639	-48.7	659.4	6.11441
22.40	81.18	.11808	-48.2	666.0	6.00483
21.50	84.86	.12083	-47.7	675.3	6.54039
20.40	85.13	.12436	-47.0	687.6	6.91463
19.95	89.56	.12593	-47.0	692.0	7.43852
19.05	83.88	.12899	-47.0	701.2	7.29558
18.00	80.50	.13259	-47.0	712.7	7.41047
17.20	78.21	.13540	-46.7	723.1	7.53500
16.30	77.10	.13867	-46.2	735.9	7.83747
15.50	77.32	.14174	-45.7	748.2	8.26579
14.80	80.05	.14466	-45.0	760.3	8.96244
14.00	74.98	.14795	-44.5	774.1	8.87401
13.30	72.31	.15088	-43.9	787.7	9.00867
12.70	69.73	.15342	-43.1	800.9	9.09841
12.10	67.44	.15600	-42.0	815.9	9.23557
11.50	66.75	.15868	-41.9	828.4	9.61780
10.90	62.49	.16132	-42.0	840.6	9.49936
10.40	57.81	.16347	-41.7	853.1	9.21046
9.90	54.02	.16557	-41.7	865.2	9.04210
9.45	50.55	.16742	-41.4	877.9	8.86308
9.00	49.09	.16931	-39.9	896.0	9.03726
8.60	46.34	.17098	-39.5	909.5	8.92775
8.35	43.72	.17199	-38.4	921.2	8.67646
8.20	42.29	.17260	-37.6	929.4	8.54627
8.13	39.74	.17287	-37.0	934.0	8.09997
8.09	39.18	.17302	-36.4	937.5	8.02481

WASHINGTON,D.C. 9/7/67 1545Z OZONE DATA DESCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
1017.00					
1003.00	68.57	.00075	23.5	296.4	.11327
972.00	60.93	.00226	21.5	297.1	.10387
958.00	57.17	.00291	20.5	297.2	.09889
932.00	39.85	.00378	18.5	297.6	.07084
906.00	33.95	.00454	16.2	297.6	.06208
880.00	30.00	.00523	14.4	298.2	.05650
856.00	29.00	.00586	12.8	298.9	.05613
839.00	28.52	.00631	11.7	299.5	.05632
813.00	28.78	.00702	10.2	300.6	.05865
788.00	32.95	.00784	8.5	301.5	.06929
769.00	30.30	.00842	6.9	301.9	.06528
743.00	28.71	.00920	5.3	303.1	.06404
721.00	29.75	.00991	4.1	304.5	.06837
699.00	22.05	.01044	3.0	305.9	.05226
688.00	19.98	.01069	2.0	306.2	.04813
668.00	20.07	.01116	1.5	308.2	.04979
649.00	20.32	.01162	1.6	310.9	.05188
632.00	21.18	.01207	-.4	310.9	.05553
623.00	22.02	.01232	-.6	312.1	.05858
604.00	21.63	.01285	-1.5	313.7	.05935
588.00	20.64	.01328	-3.1	314.3	.05817
573.00	17.44	.01364	-4.7	314.7	.05044
558.00	16.80	.01399	-6.3	315.3	.04990
544.00	13.72	.01426	-7.4	316.2	.04180
528.00	16.72	.01466	-8.1	318.1	.05248
521.00	15.74	.01482	-8.6	318.7	.05005
514.00	18.75	.01502	-9.2	319.2	.06044
508.00	17.71	.01519	-9.6	319.8	.05778
493.00	16.66	.01558	-10.8	321.1	.05598
479.00	17.87	.01599	-12.7	321.4	.06181
464.00	18.88	.01646	-14.6	322.0	.06742
451.00	18.99	.01689	-16.1	322.7	.06976
437.00	18.57	.01735	-17.3	324.1	.07043
425.00	18.56	.01776	-18.9	324.7	.07237
411.00	18.65	.01825	-20.5	325.7	.07520
394.00	19.08	.01888	-23.5	325.7	.08023
383.00	17.59	.01928	-25.3	326.0	.07608
371.00	16.97	.01970	-26.7	327.1	.07579
365.00	15.45	.01990	-27.6	327.4	.07014
353.00	11.32	.02020	-29.2	328.5	.05314
347.00	9.73	.02033	-30.1	328.8	.04645
336.00	10.79	.02061	-31.7	329.7	.05319
325.00	11.78	.02092	-33.5	330.4	.06005
315.00	9.74	.02115	-35.4	330.7	.05123
304.00	8.70	.02140	-37.3	331.5	.04742
292.00	9.70	.02171	-39.3	332.4	.05502
282.00	10.91	.02201	-41.3	332.9	.06411
272.00	15.41	.02244	-43.3	333.5	.09385
266.00	15.93	.02273	-44.4	334.0	.09925
262.00	14.36	.02290	-45.0	334.5	.09079
252.00	10.22	.02321	-47.0	335.3	.06722
243.00	11.89	.02355	-49.3	335.4	.08108
234.00	15.48	.02401	-51.3	336.0	.10959
225.00	16.11	.02451	-53.3	336.6	.11866
216.00	18.48	.02511	-54.9	338.1	.14177

WASHINGTON,D.C. 9/7/67 1545Z OZONE DATA DESCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
207.00	19.14	.02575	-56.2	340.3	.15322
198.50	20.90	.02644	-57.7	342.0	.17448
190.50	20.60	.02711	-58.3	345.0	.17920
186.00	19.52	.02748	-59.2	345.9	.17393
182.00	17.96	.02779	-59.7	347.3	.16352
170.00	19.25	.02882	-60.9	352.2	.18759
162.00	20.87	.02961	-62.3	354.6	.21348
158.50	21.50	.02998	-62.8	356.0	.22472
151.00	24.74	.03093	-63.6	359.6	.27147
144.00	23.19	.03180	-64.4	363.2	.26686
137.00	26.53	.03284	-64.7	367.9	.32084
134.00	30.52	.03338	-64.7	370.2	.37744
131.00	28.88	.03389	-64.9	372.1	.36524
124.00	28.51	.03513	-65.2	377.5	.38095
118.00	29.77	.03629	-65.2	382.9	.41809
111.00	39.87	.03822	-65.2	389.7	.59513
106.50	47.36	.03976	-64.9	394.8	.73685
99.50	46.95	.04228	-63.9	404.7	.78179
94.20	48.82	.04439	-63.3	412.1	.85883
91.80	50.94	.04543	-62.8	416.1	.91950
87.00	54.25	.04773	-62.3	423.6	1.03332
82.00	59.76	.05052	-62.3	430.8	1.20754
77.40	69.04	.05367	-60.4	442.0	1.47809
73.00	76.39	.05720	-58.1	454.3	1.73396
68.70	81.95	.06113	-57.4	463.6	1.97647
66.60	86.15	.06324	-57.4	467.8	2.14336
64.60	86.62	.06532	-57.4	471.9	2.22184
62.90	89.02	.06720	-57.0	476.4	2.34518
59.00	96.77	.07209	-55.5	488.5	2.71775
53.40	89.73	.07915	-54.5	505.0	2.78421
50.10	89.07	.08364	-55.1	512.8	2.94603
47.00	93.10	.08834	-54.7	523.3	3.28232
43.60	96.67	.09407	-53.3	538.0	3.67383
40.00	96.96	.10066	-53.3	551.4	4.01677
35.60	98.29	.10971	-52.8	571.6	4.57504
34.20	98.34	.11282	-52.0	580.2	4.76478
31.30	93.99	.11940	-51.1	597.6	4.97588
28.30	88.83	.12647	-50.9	615.5	5.20099
25.50	87.11	.13363	-49.4	638.2	5.66065
23.00	87.79	.14078	-48.2	661.0	6.32463
20.80	80.40	.14717	-47.2	683.3	6.40513
18.00	70.83	.15525	-45.7	716.9	6.52048
16.40	66.87	.16017	-44.5	739.9	6.75603
15.10	62.86	.16427	-43.3	761.8	6.89745
13.80	58.44	.16842	-42.8	783.2	7.01673
12.80	53.96	.17163	-42.8	800.2	6.98490
11.90	50.36	.17452	-42.8	817.0	7.01277
11.10	47.16	.17712	-41.3	839.0	7.03945
10.50	43.96	.17904	-39.8	858.0	6.93684
9.80	40.54	.18125	-39.6	875.6	6.85441
9.30	38.97	.18286	-38.1	894.4	6.94384
8.90	37.29	.18416	-37.4	908.5	6.94319
8.30	38.61	.18628	-36.3	931.3	7.70870
8.20	38.50	.18665	-35.9	936.2	7.78060
8.11	39.07	.18699	-36.0	938.5	7.98188

WASHINGTON,D.C. 10/3/67 1520Z WATER VAPOR DATA

P (mb)	T (°C)	F (°C)	w (g/kg)	θ (°K)	M (cm)	ΣM (cm)
1018.10	20.2	12.0	8.57537	291.8		
1000.00	19.4	8.1	6.72206	292.6	0.14126706	0.14126706
987.00	18.9	9.0	7.24872	293.2	0.09266335	0.23393041
976.00	18.0	10.0	7.81797	293.2	0.08455794	0.31848835
963.00	17.5	13.1	9.74474	293.8	0.11648732	0.43497567
951.00	17.3	3.3	5.04888	294.7	0.09057313	0.52554881
939.00	17.0	4.8	5.68649	295.4	0.06572675	0.59127555
928.00	16.8	8.1	7.24968	296.2	0.07260097	0.66387653
916.00	16.3	7.3	6.91566	296.8	0.08672657	0.75060310
904.00	15.8	6.4	6.60994	297.4	0.08280977	0.83341287
893.00	15.5	4.0	5.66894	298.1	0.06891208	0.90232494
880.00	14.9	0.6	4.48390	298.8	0.06734031	0.96966525
870.00	14.4	-1.3	3.95331	299.3	0.04304702	1.01271228
859.00	14.0	-7.9	2.26430	299.9	0.03489478	1.04760706
848.00	13.6	-14.4	1.27776	300.6	0.01987893	1.06748599
838.00	13.0	-13.4	1.41997	301.0	0.01376394	1.08124993
826.50	12.7	-9.2	2.10000	301.8	0.02065288	1.10190281
815.00	12.3	-7.9	2.38702	302.7	0.02632688	1.12822968
804.00	12.0	-9.2	2.15897	303.5	0.02551320	1.15374288
793.00	11.4	-10.8	1.89522	304.0	0.02275312	1.17649600
783.00	11.1	-11.6	1.79156	304.8	0.01881013	1.19530612
772.00	10.6	-14.1	1.44779	305.5	0.01818005	1.21348617
762.00	9.8	-15.1	1.33874	305.8	0.01421697	1.22770314
752.00	9.2	-15.1	1.35658	306.3	0.01375159	1.24145473
742.00	8.3	-15.1	1.37490	306.5	0.01393610	1.25539083
732.00	8.0	-15.1	1.39372	307.3	0.01412563	1.26951646
722.00	7.7	-15.4	1.37166	308.2	0.01410912	1.28362559
712.00	6.8	-12.7	1.78327	308.5	0.01609662	1.29972221
704.00	6.0	-9.2	2.46686	308.6	0.01734748	1.31706969
694.00	5.2	-9.6	2.41198	308.9	0.02489202	1.34196171
685.00	4.3	-10.0	2.35665	309.1	0.02189676	1.36385848
676.00	3.4	-10.8	2.22441	309.3	0.02103550	1.38489397
667.00	2.6	-10.0	2.42050	309.6	0.02132867	1.40622264
658.00	1.9	-9.2	2.64005	310.0	0.02323719	1.42945983
650.00	1.0	-9.6	2.57592	310.1	0.02128968	1.45074951
641.00	0.2	-10.0	2.51907	310.4	0.02339540	1.47414491
633.00	-0.9	-12.7	2.00655	310.3	0.01847193	1.49261684
626.00	-1.8	-12.0	2.16799	310.2	0.01490905	1.50752589
617.00	-2.9	-12.7	2.05875	310.2	0.01940850	1.52693440
608.00	-3.6	-13.1	2.02260	310.8	0.01874092	1.54567531
600.00	-4.5	-13.8	1.92321	310.9	0.01610536	1.56178067
592.00	-5.4	-15.1	1.72424	311.0	0.01488754	1.57666822
584.50	-5.8	-16.7	1.51007	311.7	0.01237617	1.58904438
577.00	-6.1	-21.0	1.00812	312.5	0.00963594	1.59868032
569.00	-6.5	-24.7	0.71261	313.3	0.00702339	1.60570371
560.00	-7.1	-29.1	0.46182	314.0	0.00539279	1.61109650
553.00	-7.5	-29.0	0.47626	314.7	0.00335027	1.61444677
546.00	-8.0	-28.1	0.52921	315.2	0.00359095	1.61803772
538.50	-8.8	-26.1	0.65180	315.5	0.00451915	1.62255688
531.00	-9.7	-26.3	0.64790	315.7	0.00497331	1.62753019
524.00	-10.4	-26.5	0.64362	316.0	0.00461255	1.63214274
517.50	-11.3	-26.1	0.67828	316.1	0.00438383	1.63652658
510.50	-12.2	-24.9	0.77781	316.3	0.00520029	1.64172687
504.00	-12.9	-26.1	0.69646	316.5	0.00488916	1.64661603
497.00	-13.7	-28.8	0.53976	316.9	0.00441508	1.65103111

WASHINGTON,D.C. 10/3/67 1520Z WATER VAPOR DATA

P (mb)	T (°C)	F (°C)	w (g/kg)	θ (°K)	M (cm)	ΣM (cm)
490.00	-14.5	-31.3	0.42052	317.1	0.00342956	1.65446067
482.70	-15.3	-31.5	0.41976	317.5	0.00312960	1.65759028
475.00	-16.0	-31.2	0.44121	318.1	0.00338236	1.66097264
468.50	-16.8	-31.6	0.42531	318.4	0.00287366	1.66384630
462.00	-17.5	-33.9	0.33886	318.7	0.00253425	1.66638054
455.00	-18.3	-38.3	0.21338	319.2	0.00197227	1.66835281
448.00	-19.0	-34.5	0.32862	319.7	0.00193568	1.67028849
441.00	-19.7	-35.0	0.31427	320.2	0.00229602	1.67258451
435.00	-20.6	-36.0	0.28735	320.4	0.00184170	1.67442621
428.00	-21.3	-36.6	0.27178	320.9	0.00199689	1.67642310
421.00	-22.2	-39.0	0.21276	321.3	0.00173048	1.67815358
415.00	-22.8	-42.4	0.14575	321.8	0.00109748	1.67925106
409.00	-23.6	-45.7	0.10081	322.2	0.00075478	1.68000583
403.00	-24.3	-46.3	0.09572	322.6	0.00060161	1.68060744
397.00	-25.1	-45.1	0.11111	323.0	0.00063313	1.68124057
390.50	-26.1	-42.1	0.16065	323.2	0.00090123	1.68214181
384.00	-26.9	-41.9	0.16741	323.6	0.00108796	1.68322977
378.00	-27.7	-42.8	0.15250	324.1	0.00097933	1.68420910
372.00	-28.7	-44.0	0.13609	324.2	0.00088344	1.68509255
366.30	-29.7	-44.4	0.13044	324.3	0.00077511	1.68586766
360.00	-30.8	-44.5	0.13120	324.6	0.00084100	1.68670865
355.00	-31.7	-44.4	0.13615	324.6	0.00068203	1.68739068
350.00	-32.8	-44.4	0.13651	324.4	0.00069557	1.68808625
344.00	-33.9	-44.8	0.13268	324.5	0.00082405	1.68891031
338.00	-34.8	-46.2	0.11539	324.9	0.00075940	1.68966971
332.50	-35.6	-48.1	0.09343	325.3	0.00058597	1.69025568
327.00	-36.6	-48.1	0.09500	325.6	0.00052874	1.69078441
321.50	-37.7	-48.7	0.08880	325.6	0.00051575	1.69130016
316.00	-38.7	-48.7	0.09034	325.9	0.00050269	1.69180285
311.00	-39.5	-49.3	0.08533	326.2	0.00044816	1.69225101
306.00	-40.5	-49.3	0.08763	326.3	0.00044124	1.69269226
300.00	-41.5	-49.6	0.08576	326.8	0.00053080	1.69322305
294.00	-42.4	-50.3	0.08061	327.4	0.00050931	1.69373236
289.00	-43.4	-50.3	0.08201	327.5	0.00041485	1.69414721
284.00	-44.5	-50.4	0.08177	327.6	0.00041780	1.69456501
279.00	-45.6	-50.7	0.08074	327.7	0.00041456	1.69497957
274.00	-46.5	-51.9	0.07072	328.1	0.00038638	1.69536595
269.50	-47.3	-52.7	0.06514	328.5	0.00031192	1.69567788
265.00	-48.3	-52.8	0.06495	328.6	0.00029868	1.69597656
260.00	-49.5	-54.6	0.05296	328.7	0.00030081	1.69627737
255.00	-50.5	-55.3	0.04908	329.0	0.00026031	1.69653768
250.00	-51.7	-55.6	0.04819	329.1	0.00024813	1.69678581
245.00	-52.3	-54.8	0.05461	330.2	0.00026225	1.69704806
240.00	-53.2	-56.1	0.04697	330.7	0.00025915	1.69730721
235.00	-53.7	-57.5	0.03974	331.9	0.00022122	1.69752843
230.20	-54.1	-58.9	0.03398	333.3	0.00018055	1.69770899
225.00	-54.7	-59.6	0.03168	334.6	0.00017421	1.69788319
220.50	-55.0	-59.9	0.03086	336.0	0.00014359	1.69802679
216.00	-55.6	-60.5	0.02899	337.1	0.00013741	1.69816419
211.30	-56.0	-61.5	0.02603	338.6	0.00013192	1.69829611
207.00	-56.8	-62.8	0.02227	339.3	0.00010596	1.69840208
206.60	-57.2	-63.8	0.01922	338.9	0.00000847	1.69841055
198.00	-57.4	-64.8	0.01743	342.7	0.00016081	1.69857136
193.50	-57.6	-65.9	0.01518	344.6	0.00007487	1.69864622
189.00	-58.0	-67.3	0.01271	346.3	0.00006403	1.69871026

WASHINGTON,D.C. 10/3/67 1520Z WATER VAPOR DATA

P (mb)	T (°C)	F (°C)	w (g/kg)	θ (°K)	M (cm)	ΣM (cm)
185.50	-58.7	-67.7	0.01233	347.1	0.00004472	1.69875498
182.00	-59.7	-68.1	0.01186	347.3	0.00004320	1.69879818
178.00	-60.4	-68.8	0.01088	348.4	0.00004641	1.69884459
174.00	-61.1	-70.0	0.00930	349.5	0.00004118	1.69888577
170.40	-61.3	-70.6	0.00866	351.3	0.00003299	1.69891876
167.00	-61.5	-70.9	0.00848	352.9	0.00002975	1.69894851
163.00	-61.8	-71.2	0.00834	355.0	0.00003434	1.69898285
159.00	-62.5	-71.5	0.00812	356.3	0.00003359	1.69901644
155.50	-63.2	-72.1	0.00763	357.4	0.00002812	1.69904456
152.00	-63.4	-73.4	0.00637	359.3	0.00002499	1.69906956
148.50	-63.2	-74.4	0.00558	362.1	0.00002133	1.69909088
145.00	-62.7	-74.3	0.00584	365.4	0.00002039	1.69911128
141.50	-62.5	-74.4	0.00585	368.4	0.00002089	1.69913217
138.00	-62.7	-75.4	0.00518	370.6	0.00001970	1.69915186
135.00	-62.9	-76.4	0.00454	372.5	0.00001487	1.69916673
132.00	-63.2	-77.3	0.00401	374.5	0.00001310	1.69917983
129.00	-63.4	-78.0	0.00367	376.5	0.00001177	1.69919159
126.00	-63.7	-78.0	0.00371	378.6	0.00001130	1.69920290
123.00	-63.7	-78.2	0.00371	381.2	0.00001136	1.69921425
120.00	-63.9	-78.3	0.00375	383.5	0.00001142	1.69922567
117.20	-64.2	-78.6	0.00365	385.6	0.00001057	1.69923624
114.00	-64.7	-78.7	0.00370	387.8	0.00001200	1.69924824
111.50	-66.0	-78.8	0.00374	387.8	0.00000949	1.69925773
109.00	-66.0	-78.8	0.00382	390.3	0.00000964	1.69926737
106.20	-66.0	-78.8	0.00392	393.2	0.00001106	1.69927843
104.00	-66.0	-78.7	0.00406	395.6	0.00000896	1.69928739
101.50	-66.2	-78.6	0.00421	397.8	0.00001055	1.69929794
99.10	-66.2	-79.2	0.00389	400.6	0.00000992	1.69930786
97.00	-65.7	-80.2	0.00337	404.1	0.00000778	1.69931563
94.80	-64.9	-81.2	0.00296	408.2	0.00000710	1.69932274
92.40	-63.9	-81.3	0.00299	413.2	0.00000728	1.69933002
90.00	-63.7	-81.5	0.00294	416.8	0.00000726	1.69933728
87.60	-63.7	-82.0	0.00280	420.1	0.00000703	1.69934431
85.20	-63.9	-82.2	0.00276	422.9	0.00000681	1.69935111
83.10	-64.2	-82.5	0.00270	425.4	0.00000585	1.69935696
81.00	-63.9	-82.9	0.00260	429.1	0.00000568	1.69936264
79.00	-63.2	-83.2	0.00251	433.7	0.00000522	1.69936786
76.90	-62.2	-83.5	0.00246	439.0	0.00000532	1.69937318
74.90	-61.3	-84.0	0.00233	444.2	0.00000488	1.69937806
72.80	-60.6	-84.4	0.00224	449.3	0.00000489	1.69938295
70.80	-60.2	-85.0	0.00208	453.8	0.00000441	1.69938735
68.90	-60.0	-85.2	0.00206	457.9	0.00000402	1.69939137
66.90	-59.7	-85.1	0.00216	462.2	0.00000431	1.69939568
65.00	-59.5	-85.0	0.00226	466.5	0.00000429	1.69939997
63.10	-59.5	-85.5	0.00214	470.5	0.00000427	1.69940424
61.00	-59.3	-86.0	0.00202	475.5	0.00000446	1.69940869
59.20	-59.3	-86.3	0.00197	479.6	0.00000367	1.69941236
57.20	-59.5	-86.7	0.00189	483.8	0.00000394	1.69941630
55.50	-60.0	-87.8	0.00160	487.0	0.00000303	1.69941933
53.80	-60.2	-87.9	0.00162	490.9	0.00000280	1.69942213
51.90	-59.5	-87.5	0.00182	497.5	0.00000334	1.69942547
50.10	-58.9	-87.1	0.00204	504.0	0.00000355	1.69942901
48.30	-58.0	-88.1	0.00177	511.3	0.00000350	1.69943251
46.70	-57.6	-88.1	0.00183	517.3	0.00000294	1.69943545
45.00	-57.4	-88.6	0.00171	523.3	0.00000307	1.69943852

WASHINGTON,D.C. 10/3/67 1520Z WATER VAPOR DATA

P (mb)	T (°C)	F (°C)	w (g/kg)	θ (°K)	M (cm)	ΣM (cm)
43.30	-57.4	-88.9	0.00171	529.1	0.00000296	1.69944149
41.60	-57.2	-89.1	0.00170	535.7	0.00000295	1.69944444
40.00	-57.0	-89.6	0.00162	542.2	0.00000271	1.69944715
38.50	-56.8	-89.7	0.00164	548.7	0.00000250	1.69944965
37.00	-56.8	-89.8	0.00167	554.9	0.00000254	1.69945219
35.50	-56.6	-90.2	0.00163	562.1	0.00000253	1.69945471
34.00	-56.2	-90.5	0.00162	570.1	0.00000249	1.69945720
31.50	-55.8	-91.0	0.00159	583.7	0.00000409	1.69946129
29.50	-55.0	-91.4	0.00158	596.9	0.00000323	1.69946452
28.70	-54.8	-91.8	0.00150	602.1	0.00000126	1.69946578
27.80	-54.3	-92.2	0.00143	609.2	0.00000135	1.69946712
26.70	-53.9	-92.5	0.00141	617.3	0.00000160	1.69946872
25.40	-53.7	-92.7	0.00145	626.7	0.00000190	1.69947062
24.30	-53.9	-93.4	0.00132	634.2	0.00000155	1.69947217
23.10	-54.1	-93.7	0.00131	642.9	0.00000161	1.69947377
22.10	-53.9	-94.5	0.00118	651.6	0.00000127	1.69947504
21.10	-53.5	-95.1	0.00109	661.4	0.00000115	1.69947619
20.20	-53.3	-95.5	0.00106	670.2	0.00000099	1.69947718
19.20	-53.0	-95.6	0.00108	681.2	0.00000109	1.69947827
18.45	-51.4	-96.0	0.00105	694.0	0.00000082	1.69947909
17.70	-50.0	-96.2	0.00106	706.7	0.00000081	1.69947990
17.00	-48.6	-96.2	0.00110	719.2	0.00000077	1.69948067
16.30	-47.5	-96.4	0.00111	731.6	0.00000079	1.69948146
15.55	-47.2	-96.4	0.00116	742.6	0.00000087	1.69948233
14.90	-46.8	-96.5	0.00117	752.8	0.00000077	1.69948310
14.30	-46.5	-97.5	0.00102	762.7	0.00000067	1.69948377
13.80	-46.1	-97.1	0.00114	772.1	0.00000055	1.69948432

WASHINGTON,D.C. 10/3/67 1520Z OZONE DATA ASCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
1018.00					
1007.00	11.74	.00010	21.8	294.4	.01932
1000.00	35.28	.00029	19.3	292.4	.05846
960.00	37.54	.00150	19.1	295.7	.06479
921.00	36.92	.00271	16.1	296.2	.06643
892.00	33.88	.00357	14.1	296.8	.06293
865.00	33.90	.00439	12.6	297.9	.06494
852.00	34.49	.00480	12.2	298.7	.06707
828.00	31.07	.00550	12.5	301.5	.06218
804.00	27.36	.00614	12.0	303.5	.05639
793.00	24.63	.00640	10.7	303.4	.05147
767.00	25.84	.00708	10.3	305.7	.05583
740.00	19.62	.00764	9.8	308.4	.04393
710.00	17.41	.00821	8.1	310.2	.04062
683.00	15.12	.00867	5.5	310.7	.03668
671.00	14.65	.00887	4.0	310.6	.03618
646.00	16.20	.00936	1.3	311.0	.04154
617.00	14.48	.00988	-1.7	311.6	.03890
590.00	15.43	.01043	-4.6	312.2	.04333
558.00	14.40	.01106	-7.0	314.5	.04276
542.00	13.61	.01137	-8.4	315.4	.04161
512.00	12.45	.01193	-11.3	317.1	.04029
497.00	11.80	.01221	-12.7	318.1	.03933
475.00	12.46	.01265	-14.9	319.4	.04346
455.00	10.71	.01302	-17.3	320.4	.03901
439.00	10.77	.01332	-19.2	321.2	.04063
425.00	10.97	.01360	-20.9	322.2	.04276
404.00	8.21	.01393	-23.6	323.4	.03368
384.00	8.98	.01429	-26.9	323.6	.03877
365.00	8.97	.01465	-30.1	324.1	.04073
347.00	7.13	.01493	-33.2	324.6	.03406
328.00	3.85	.01510	-36.4	325.5	.01946
311.00	2.51	.01521	-39.4	326.4	.01336
293.00	2.54	.01533	-42.4	327.7	.01436
276.00	3.08	.01547	-45.6	328.8	.01848
259.00	3.20	.01563	-49.0	329.8	.02049
243.00	5.20	.01589	-51.2	332.5	.03545
229.00	3.16	.01604	-52.6	336.1	.02287
214.00	3.25	.01622	-55.0	338.9	.02516
208.00	1.83	.01626	-56.2	339.8	.01456
195.70	3.28	.01641	-58.0	342.8	.02775
190.00	3.71	.01650	-58.7	344.7	.03236
178.00	6.64	.01684	-59.7	349.5	.06185
166.00	9.27	.01735	-61.1	354.3	.09253
157.00	9.15	.01775	-62.7	357.2	.09659
146.00	9.22	.01828	-63.7	363.0	.10463
139.00	10.53	.01869	-62.7	369.9	.12549
130.00	16.77	.01958	-62.7	377.0	.21370
119.00	14.71	.02060	-63.9	384.4	.20489
111.00	14.52	.02140	-64.2	391.7	.21669
104.50	17.61	.02224	-66.0	395.0	.27922
98.70	20.56	.02317	-66.0	401.5	.34521
93.30	22.31	.02416	-66.2	407.5	.39620
90.60	23.93	.02471	-65.2	413.0	.43758
86.00	32.61	.02605	-63.4	422.8	.62830
81.50	34.23	.02750	-62.5	431.3	.69587

WASHINGTON,D.C. 10/3/67 1520Z OZONE DATA ASCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
79.10	34.09	.02831	-62.5	435.0	.71404
75.20	48.13	.03023	-62.5	441.3	1.06059
71.70	60.18	.03249	-59.7	453.1	1.39085
70.00	62.34	.03368	-59.7	456.3	1.47558
68.40	58.48	.03474	-60.0	458.8	1.41670
65.20	58.95	.03697	-59.7	465.6	1.49804
62.10	61.13	.03932	-59.5	472.6	1.63098
59.30	61.63	.04157	-59.5	478.9	1.72207
56.80	63.36	.04372	-59.5	484.8	1.84847
54.20	65.64	.04615	-59.5	491.4	2.00688
51.60	68.07	.04879	-58.2	501.3	2.18590
49.00	64.68	.05143	-59.5	505.7	2.18723
46.70	68.22	.05402	-58.2	515.8	2.42066
44.40	71.89	.05689	-58.2	523.3	2.68294
42.00	73.65	.06012	-58.2	531.7	2.90576
40.20	70.77	.06257	-58.0	538.9	2.91720
38.40	69.66	.06509	-56.8	549.1	3.00591
35.00	66.93	.06998	-55.6	566.9	3.16883
33.00	66.45	.07307	-55.2	577.6	3.33655
24.00	77.02	.09244	-53.2	638.6	5.31729
22.90	72.30	.09512	-53.2	647.2	5.23183
21.70	65.54	.09790	-52.4	659.4	5.00453
20.70	60.81	.10017	-51.7	670.5	4.86762
19.75	53.63	.10215	-51.7	679.6	4.49972
18.90	52.29	.10397	-51.5	688.7	4.58463
18.05	56.11	.10601	-51.5	697.8	5.15087
17.30	55.56	.10787	-50.7	709.1	5.32179
16.50	52.40	.10983	-49.5	722.7	5.26207
15.80	50.68	.11156	-48.1	736.0	5.31454
14.75	47.13	.11412	-46.7	755.5	5.29485
14.10	44.87	.11572	-46.2	766.9	5.27269
13.60	42.64	.11693	-46.2	774.8	5.19526
13.25	41.59	.11779	-46.0	781.2	5.20157
12.75	40.19	.11901	-45.1	793.1	5.22330
12.20	39.72	.12039	-44.2	806.4	5.39512
11.95	38.42	.12102	-44.0	811.7	5.32762
11.50	37.48	.12216	-43.0	824.4	5.40101
11.25	34.86	.12276	-41.9	833.3	5.13497
10.70	31.63	.12401	-41.1	848.6	4.89744
10.40	30.51	.12470	-39.8	860.2	4.86071
9.95	28.56	.12569	-38.5	875.9	4.75594
9.80	27.59	.12602	-38.0	881.8	4.66493
9.60	27.60	.12647	-37.4	889.1	4.76414
9.50	28.00	.12670	-36.9	893.8	4.88379

WASHINGTON,D.C. 10/3/67 1520Z OZONE DATA DESCENT

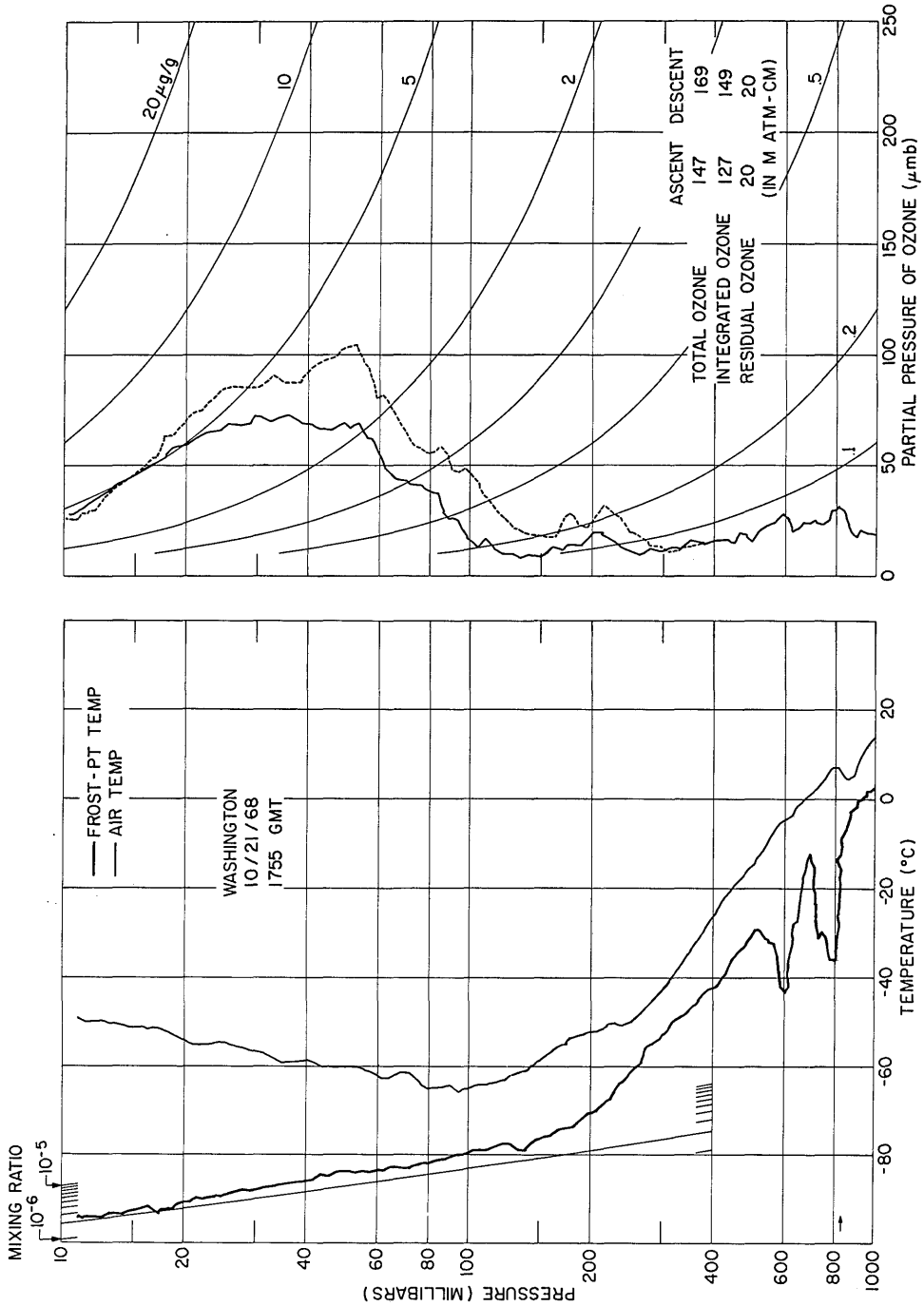
PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
920.00					
895.00	23.85	.00006	15.4	297.9	.04416
872.00	19.96	.00011	14.5	299.1	.03792
850.00	18.35	.00015	13.8	300.6	.03577
828.00	16.75	.00019	12.6	301.6	.03352
804.00	13.25	.00023	12.0	303.5	.02732
783.00	11.16	.00026	11.1	304.8	.02362
762.00	9.15	.00028	9.8	305.8	.01989
741.00	9.33	.00030	8.3	306.6	.02086
720.00	7.86	.00032	7.5	308.3	.01810
703.00	9.64	.00034	5.9	308.6	.02271
682.00	8.68	.00037	4.1	309.4	.02110
665.00	7.62	.00039	2.4	309.7	.01898
646.00	6.55	.00040	.8	310.3	.01679
630.00	4.52	.00041	-1.3	310.2	.01189
613.00	4.03	.00042	-3.2	310.5	.01089
596.00	4.75	.00043	-4.9	311.0	.01320
580.00	4.88	.00045	-6.1	312.1	.01393
564.00	4.91	.00046	-6.8	313.7	.01441
548.00	5.00	.00047	-7.7	315.2	.01511
533.00	4.58	.00048	-9.4	315.7	.01424
519.00	4.62	.00050	-11.1	316.1	.01474
505.00	4.66	.00051	-12.8	316.5	.01530
491.00	4.66	.00052	-14.6	316.9	.01571
476.50	6.55	.00054	-15.9	317.9	.02278
462.00	6.58	.00056	-17.4	318.9	.02361
448.00	6.62	.00057	-18.9	319.8	.02449
431.00	7.16	.00060	-20.4	321.5	.02753
421.00	6.16	.00061	-22.2	321.3	.02423
408.00	4.63	.00063	-23.6	322.4	.01878
396.00	4.11	.00064	-25.2	323.1	.01718
383.00	4.11	.00065	-26.9	323.9	.01776
371.00	4.76	.00066	-28.8	324.3	.02125
360.00	4.34	.00067	-30.6	324.7	.01997
354.00	4.97	.00068	-32.1	324.4	.02326
342.00	3.98	.00069	-34.2	324.7	.01929
331.00	4.01	.00071	-35.6	325.8	.02008
319.00	2.87	.00072	-38.0	326.0	.01491
309.00	1.79	.00072	-39.9	326.2	.00961
291.50	.00	.00072	-43.0	327.4	.00000
281.00	.00	.00072	-45.0	328.0	.00000
271.00	1.14	.00072	-47.2	328.2	.00700
262.00	.58	.00072	-49.0	328.7	.00368
252.00	4.81	.00074	-51.4	328.8	.03164
242.00	5.39	.00076	-53.0	330.2	.03688
227.00	7.24	.00080	-54.5	334.1	.05286
217.00	6.66	.00083	-55.4	336.9	.05089
208.00	6.12	.00086	-56.8	338.8	.04873
199.00	5.57	.00088	-57.2	342.5	.04638
190.00	7.95	.00091	-58.0	345.8	.06933
178.00	7.37	.00096	-60.4	348.4	.06862
170.50	8.51	.00099	-61.3	351.2	.08272
163.00	11.85	.00104	-61.5	355.4	.12044
155.50	10.08	.00109	-63.2	357.4	.10739
148.00	15.30	.00116	-63.2	362.5	.17135
145.00	15.89	.00119	-62.7	365.4	.18164

WASHINGTON,D.C. 10/3/67 1520Z OZONE DATA DESCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
137.50	15.92	.00126	-62.7	371.0	.19183
131.50	25.99	.00137	-63.2	374.9	.32752
122.50	18.66	.00149	-63.7	381.7	.25246
119.50	18.09	.00154	-63.9	383.9	.25078
114.50	18.03	.00161	-64.9	386.8	.26088
108.00	24.21	.00174	-66.0	391.3	.37140
103.00	25.57	.00185	-66.2	396.2	.41136
98.40	31.36	.00198	-66.0	401.9	.52807
94.00	37.80	.00215	-64.4	410.2	.66627
91.60	38.06	.00224	-63.7	414.7	.68853
89.00	40.98	.00235	-63.7	418.2	.76297
86.60	42.31	.00245	-63.7	421.5	.80953
84.20	47.86	.00258	-64.2	423.9	.94184
82.10	56.90	.00271	-64.4	426.4	1.14844
80.00	64.54	.00287	-63.7	431.1	1.33668
78.00	65.93	.00302	-62.5	436.7	1.40067
73.70	61.77	.00335	-61.1	446.8	1.38885
69.60	69.37	.00372	-60.2	456.1	1.65146
65.80	69.90	.00409	-59.5	464.9	1.76031
61.90	71.03	.00449	-59.3	473.5	1.90133
58.00	71.93	.00493	-59.3	482.4	2.05507
54.40	74.90	.00538	-60.2	489.3	2.28149
49.00	81.55	.00618	-58.2	508.7	2.75775
43.80	75.13	.00696	-57.6	526.8	2.84235
40.40	74.50	.00753	-57.2	540.2	3.05544
38.80	67.36	.00778	-56.8	547.5	2.87649
35.90	73.75	.00831	-56.6	560.3	3.40418
32.10	78.80	.00914	-55.8	580.6	4.06749
28.90	77.93	.00990	-54.8	600.9	4.46792
26.90	71.65	.01038	-54.1	615.5	4.41368
24.60	68.34	.01095	-53.9	632.0	4.60295
23.40	63.73	.01125	-54.1	640.5	4.51260
21.30	61.01	.01179	-53.5	659.6	4.74601
19.40	56.58	.01228	-53.0	679.2	4.83280
17.80	52.11	.01270	-50.0	705.6	4.85049
16.35	47.68	.01308	-47.6	730.5	4.83173
14.95	42.68	.01343	-47.0	751.5	4.73045
13.85	38.44	.01371	-46.2	770.8	4.59862
12.85	35.84	.01396	-45.1	791.3	4.62203
12.40	35.84	.01408	-45.1	799.4	4.78976
11.55	31.49	.01429	-44.7	817.4	4.51797
10.80	32.02	.01449	-42.7	840.4	4.91263
10.05	30.48	.01469	-41.1	863.9	5.02613
9.75	28.02	.01477	-39.5	877.3	4.76122
9.53	27.53	.01483	-38.0	888.9	4.78691
9.50	28.00	.01484	-36.9	893.8	4.88379

WASHINHTON,D.C. 12/19/67 1700Z WATER VAPOR DATA

P (mb)	T (°C)	F (°C)	w (g/kg)	θ (°K)	M (cm)	ΣM (cm)
1017.10	10.8	2.6	4.48114	282.6		
1000.00	10.7	2.6	4.55833	283.8	0.07886472	0.07886472
979.00	10.8	-1.1	3.55442	285.7	0.08692228	0.16578700
965.00	10.5	0.3	4.00048	286.6	0.05396358	0.21975058
955.00	9.8	1.8	4.51017	286.7	0.04342171	0.26317228
940.00	9.5	2.6	4.85155	287.7	0.07164586	0.33481814
927.00	9.3	1.8	4.64742	288.7	0.06300339	0.39782153
910.00	8.7	1.0	4.47940	289.6	0.07916118	0.47698272
895.00	8.3	0.3	4.31554	290.5	0.06730821	0.54429092
882.50	8.0	-2.5	3.52750	291.4	0.05001941	0.59431033
870.00	8.0	-6.6	2.51156	292.5	0.03851442	0.63282475
856.00	8.0	-17.2	0.98203	293.9	0.02495424	0.65777899
841.00	8.1	-27.1	0.37938	295.6	0.01041902	0.66819801
827.00	8.0	-26.0	0.43168	296.8	0.00579335	0.67399137
813.00	7.8	-25.7	0.44935	298.1	0.00629311	0.68028448
797.50	7.2	-26.6	0.41826	299.1	0.00686118	0.68714566
785.00	6.9	-27.3	0.39764	300.2	0.00520345	0.69234911
772.00	6.8	-20.9	0.76401	301.4	0.00770485	0.70005396
758.00	6.8	-15.8	1.26327	303.0	0.01448054	0.71453450
745.00	6.7	-12.3	1.77031	304.4	0.02012068	0.73465519
730.00	6.2	-10.1	2.20205	305.7	0.03040077	0.76505595
716.00	5.1	-9.6	2.34064	306.1	0.03244780	0.79750376
704.00	4.1	-10.6	2.19218	306.5	0.02775193	0.82525569
691.00	3.2	-11.0	2.14554	307.2	0.02877054	0.85402623
678.00	2.1	-11.9	2.02178	307.6	0.02764034	0.88166658
664.00	0.7	-12.7	1.91342	307.9	0.02810859	0.90977517
650.00	-0.6	-13.1	1.88350	308.2	0.02712088	0.93689604
638.00	-1.7	-13.5	1.85009	308.6	0.02285872	0.95975476
626.00	-3.0	-14.3	1.75540	308.8	0.02207446	0.98182922
613.00	-4.2	-15.1	1.67226	309.3	0.02273447	1.00456369
600.00	-5.7	-15.4	1.65136	309.5	0.02204439	1.02660808
588.50	-7.1	-16.1	1.57496	309.6	0.01892991	1.04553800
576.00	-8.1	-25.0	0.68060	310.3	0.01438495	1.05992294
563.50	-9.0	-25.0	0.69572	311.2	0.00877756	1.06870050
551.00	-10.3	-20.3	1.13248	311.6	0.01165941	1.08035992
539.00	-11.7	-21.7	1.00907	311.9	0.01311151	1.09347143
528.00	-13.1	-23.1	0.90396	312.1	0.01073638	1.10420781
516.00	-14.4	-24.6	0.79709	312.6	0.01041458	1.11462239
510.00	-15.1	-23.6	0.88980	312.8	0.00516393	1.11978633
504.00	-15.6	-23.6	0.90040	313.2	0.00548020	1.12526653
498.00	-16.3	-24.1	0.86717	313.5	0.00541094	1.13067747
492.00	-16.8	-26.2	0.70956	314.0	0.00482674	1.13550420
485.00	-17.4	-28.1	0.59072	314.5	0.00464386	1.14014806
479.00	-17.8	-28.8	0.56163	315.2	0.00352758	1.14367565
473.00	-18.3	-29.3	0.53477	315.7	0.00335631	1.14703196
467.00	-18.8	-29.7	0.52021	316.2	0.00322954	1.15026150
462.00	-19.4	-30.1	0.50532	316.4	0.00261615	1.15287765
456.00	-20.3	-31.1	0.46451	316.5	0.00296885	1.15584650
450.00	-20.8	-32.1	0.42051	317.1	0.00270925	1.15855574
444.00	-21.4	-33.1	0.38228	317.5	0.00245753	1.16101327
438.00	-22.2	-34.4	0.33710	317.7	0.00220217	1.16321543
432.00	-23.3	-35.5	0.30398	317.5	0.00196249	1.16517793
427.00	-23.8	-36.0	0.29285	318.0	0.00152253	1.16670045
421.00	-24.9	-36.8	0.26988	317.9	0.00172262	1.16842307
416.00	-25.5	-37.5	0.25266	318.2	0.00133301	1.16975608


20μg/g
10
5
2
1
.2
.5
ASCENT DESCENT
147 169
127 149
20 20
(IN M ATM-CM)
TOTAL OZONE
INTEGRATED OZONE
RESIDUAL OZONE
PARTIAL PRESSURE OF OZONE (μmb)
0
50
100
150
200
250
FROST-PT TEMP
AIR TEMP
WASHINGTON
10/21/68
1755 GMT
MIXING RATIO
10
10⁻⁶
10⁻⁵
PRESSURE (MILLIBARS)
20
40
60
80
100
200
400
600
800
1000
TEMPERATURE (°C)
-80
-60
-40
-20
0
20

WASHINGTON, D.C. 12/19/67 1700Z WATER VAPOR DATA

P (mb)	T (°C)	F (°C)	w (g/kg)	θ (°K)	M (cm)	ΣM (cm)
145.00	-61.4	-78.4	0.00304	367.7	0.00001183	1.19072460
141.60	-61.9	-79.0	0.00283	369.3	0.00001019	1.19073479
138.00	-61.9	-79.7	0.00260	372.0	0.00000998	1.19074477
135.00	-61.6	-79.8	0.00259	374.8	0.00000795	1.19075272
132.00	-62.4	-78.8	0.00315	375.9	0.00000879	1.19076151
128.50	-63.4	-77.5	0.00400	376.9	0.00001276	1.19077428
125.00	-64.2	-75.6	0.00556	378.5	0.00001708	1.19079136
122.00	-65.0	-76.5	0.00494	379.6	0.00001608	1.19080743
118.50	-65.6	-79.8	0.00299	381.8	0.00001416	1.19082159
115.50	-66.2	-80.9	0.00254	383.5	0.00000846	1.19083005
112.00	-67.0	-80.1	0.00297	385.3	0.00000984	1.19083989
109.50	-67.3	-79.2	0.00353	387.2	0.00000830	1.19084819
107.00	-67.6	-78.6	0.00398	389.2	0.00000958	1.19085777
104.00	-67.9	-78.3	0.00429	391.8	0.00001266	1.19087043
101.00	-67.6	-78.3	0.00442	395.7	0.00001334	1.19088377
98.10	-67.0	-78.3	0.00455	400.2	0.00001328	1.19089705
95.50	-65.9	-78.3	0.00468	405.5	0.00001224	1.19090929
92.80	-64.8	-80.1	0.00363	411.0	0.00001145	1.19092074
90.00	-65.0	-81.5	0.00293	414.1	0.00000938	1.19093012
87.60	-65.3	-81.9	0.00285	416.8	0.00000708	1.19093720
85.20	-65.9	-81.9	0.00289	418.9	0.00000704	1.19094424
82.80	-66.7	-81.5	0.00318	420.6	0.00000744	1.19095168
80.40	-67.0	-80.7	0.00379	423.6	0.00000854	1.19096022
78.00	-67.3	-80.8	0.00385	426.6	0.00000936	1.19096958
75.50	-67.9	-81.2	0.00368	429.4	0.00000961	1.19097919
73.10	-68.5	-81.7	0.00351	432.1	0.00000881	1.19098800
70.80	-68.2	-82.1	0.00339	436.7	0.00000810	1.19099610
68.60	-67.3	-82.4	0.00331	442.6	0.00000752	1.19100362
66.30	-65.6	-82.7	0.00329	450.7	0.00000774	1.19101136
64.20	-64.2	-82.9	0.00325	457.8	0.00000701	1.19101837
62.20	-64.5	-83.3	0.00313	461.4	0.00000651	1.19102488
60.20	-64.8	-83.6	0.00309	465.1	0.00000635	1.19103123
58.30	-65.9	-84.2	0.00288	466.9	0.00000579	1.19103702
56.40	-66.4	-82.9	0.00370	470.1	0.00000638	1.19104340
54.50	-66.2	-83.6	0.00342	475.3	0.00000690	1.19105030
52.70	-65.9	-84.5	0.00305	480.6	0.00000594	1.19105624
50.80	-65.6	-84.6	0.00307	486.3	0.00000592	1.19106216
49.00	-65.3	-84.8	0.00308	492.0	0.00000565	1.19106781
47.20	-65.0	-85.1	0.00305	498.0	0.00000564	1.19107345
45.60	-65.0	-85.4	0.00302	502.9	0.00000496	1.19107840
43.90	-65.0	-85.5	0.00304	508.4	0.00000525	1.19108365
42.30	-65.0	-86.0	0.00291	513.8	0.00000485	1.19108850
40.80	-65.0	-86.3	0.00287	519.1	0.00000442	1.19109292
39.20	-64.8	-86.5	0.00289	525.8	0.00000470	1.19109762
37.50	-64.2	-86.6	0.00297	533.9	0.00000508	1.19110270
35.90	-63.2	-86.7	0.00305	543.3	0.00000491	1.19110761
34.30	-62.7	-86.3	0.00341	551.8	0.00000527	1.19111288
32.60	-61.9	-87.2	0.00303	561.8	0.00000559	1.19111847
31.30	-60.9	-87.4	0.00305	571.1	0.00000403	1.19112250
29.70	-60.4	-87.8	0.00299	581.0	0.00000493	1.19112743
28.50	-60.2	-88.1	0.00295	588.5	0.00000364	1.19113107
27.25	-59.7	-88.2	0.00303	597.4	0.00000382	1.19113489
26.00	-59.3	-88.6	0.00301	606.8	0.00000385	1.19113874
24.90	-58.4	-89.0	0.00291	617.0	0.00000332	1.19114206
23.80	-58.1	-89.2	0.00293	625.6	0.00000328	1.19114534

WASHINGTON,D.C. 12/19/67 1700Z WATER VAPOR DATA

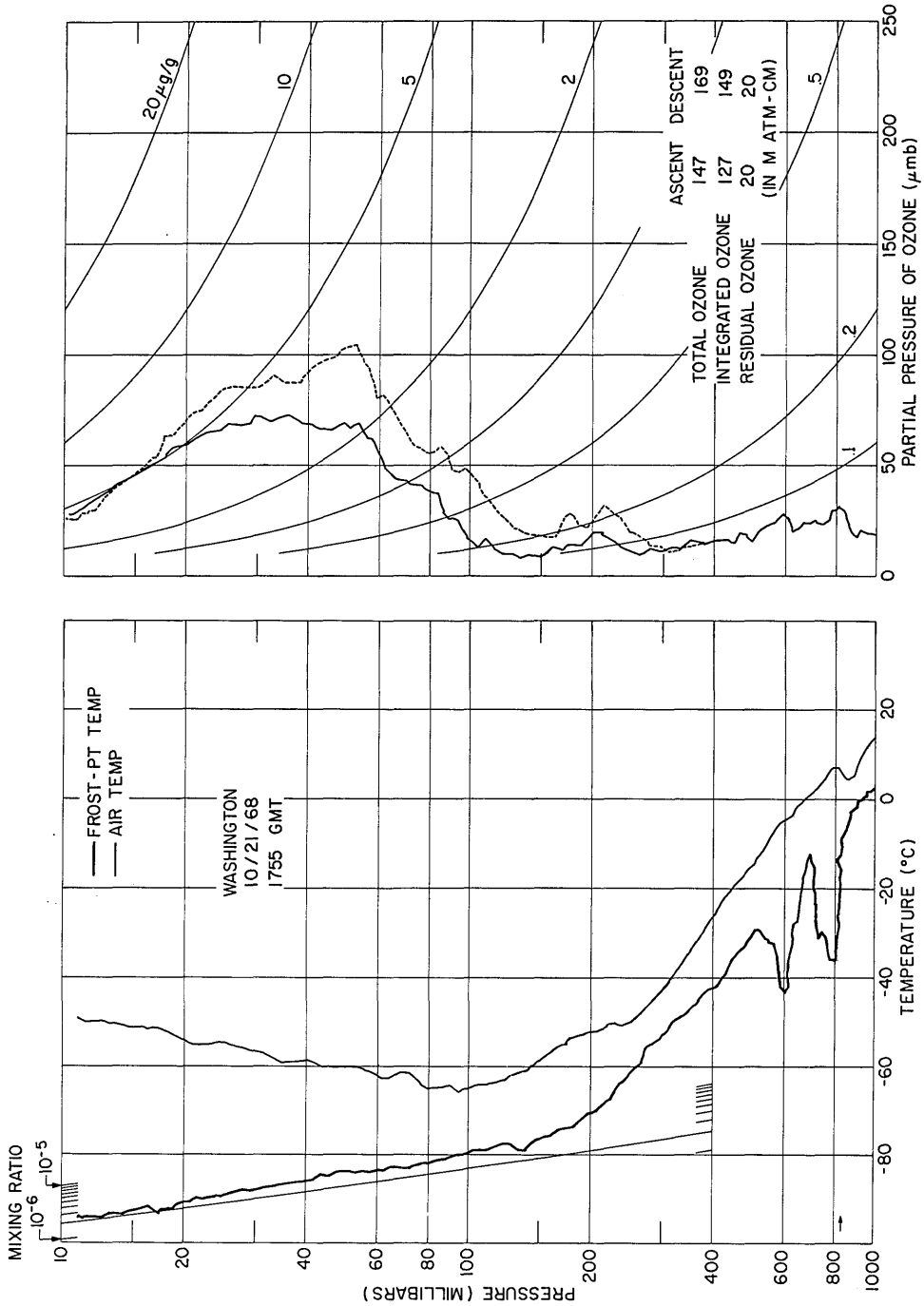
P (mb)	T (°C)	F (°C)	w (g/kg)	θ (°K)	M (cm)	ΣM (cm)
22.80	-57.7	-89.6	0.00283	634.7	0.00000294	1.19114827
21.80	-57.0	-89.9	0.00279	644.8	0.00000286	1.19115114
20.95	-56.2	-90.3	0.00273	654.7	0.00000239	1.19115353
20.20	-55.6	-90.6	0.00266	663.5	0.00000206	1.19115559
19.35	-54.3	-90.2	0.00301	675.5	0.00000246	1.19115805
18.50	-53.3	-90.9	0.00278	687.3	0.00000251	1.19116056
17.80	-52.8	-90.9	0.00289	696.8	0.00000203	1.19116259
17.00	-52.2	-91.2	0.00284	707.8	0.00000234	1.19116492
16.35	-51.6	-91.3	0.00289	717.6	0.00000190	1.19116682
15.70	-51.1	-91.6	0.00288	727.8	0.00000191	1.19116873
15.10	-51.1	-91.8	0.00286	736.0	0.00000176	1.19117049
14.60	-50.9	-91.8	0.00296	743.7	0.00000148	1.19117197
14.10	-50.5	-91.7	0.00313	752.4	0.00000155	1.19117353
13.60	-50.3	-91.7	0.00325	760.8	0.00000163	1.19117515
13.15	-49.4	-90.6	0.00408	771.3	0.00000168	1.19117683
12.70	-48.2	-90.6	0.00423	783.3	0.00000191	1.19117874
12.30	-47.8	-90.6	0.00436	791.7	0.00000175	1.19118050
11.95	-47.7	-92.0	0.00345	798.8	0.00000140	1.19118189

WASHINGTON,D.C. 12/19/67 1700Z OZONE DATA ASCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
1017.00					
984.00	6.34	.00016	10.9	285.3	.01067
944.00	21.88	.00088	9.6	287.5	.03840
915.00	27.57	.00156	8.9	289.3	.04993
886.00	32.27	.00238	8.1	291.2	.06035
846.00	37.96	.00376	8.1	295.1	.07434
819.00	38.41	.00475	8.0	297.7	.07770
790.00	36.33	.00578	7.0	299.6	.07621
764.00	37.07	.00676	6.8	302.4	.08040
736.50	31.90	.00768	6.4	305.1	.07177
697.00	28.77	.00894	3.7	306.9	.06840
670.00	26.77	.00977	1.4	307.9	.06621
632.00	24.25	.01089	-2.4	308.7	.06357
608.00	24.85	.01165	-4.9	309.3	.06773
583.00	25.93	.01251	-7.6	309.8	.07370
559.00	26.68	.01339	-9.5	311.3	.07908
523.00	24.46	.01468	-13.5	312.5	.07749
488.00	23.20	.01595	-17.2	314.1	.07877
466.00	22.27	.01676	-18.9	316.3	.07920
455.00	20.68	.01715	-20.1	316.9	.07531
434.00	19.80	.01788	-22.8	317.8	.07561
414.00	18.37	.01857	-25.7	318.3	.07353
386.00	17.38	.01953	-30.2	318.9	.07460
360.00	15.85	.02040	-33.4	321.0	.07296
344.00	15.38	.02095	-35.6	322.2	.07408
312.00	19.06	.02242	-40.0	325.2	.10124
296.00	16.98	.02313	-41.7	327.8	.09503
289.00	16.84	.02344	-42.0	329.6	.09657
275.00	20.25	.02424	-42.9	333.0	.12199
260.00	17.79	.02503	-46.1	333.6	.11340
246.00	13.77	.02563	-47.7	336.6	.09277
233.00	11.18	.02611	-50.3	337.9	.07948
221.00	12.06	.02661	-52.2	340.2	.09044
210.00	12.55	.02711	-52.9	344.0	.09903
199.50	13.06	.02764	-53.7	347.8	.10849
190.50	12.89	.02811	-54.1	351.8	.11212
177.50	11.91	.02878	-56.2	355.6	.11122
168.00	11.42	.02927	-57.9	358.3	.11265
158.00	14.46	.02997	-59.5	362.0	.15166
149.00	15.91	.03071	-61.1	365.3	.17689
142.00	16.79	.03135	-62.1	368.6	.19591
134.50	15.71	.03202	-62.1	374.3	.19360
131.00	14.20	.03232	-62.4	376.7	.17965
125.00	16.69	.03293	-63.2	380.4	.22121
115.00	19.01	.03418	-65.3	385.6	.27388
109.00	15.82	.03485	-67.0	388.3	.24056
103.00	15.26	.03553	-68.5	391.7	.24552
100.00	14.76	.03588	-68.8	394.5	.24460
97.00	15.23	.03625	-67.3	400.9	.26017
94.40	26.14	.03681	-66.4	405.7	.45878
92.00	42.16	.03766	-65.9	409.9	.75941
89.40	51.30	.03882	-65.9	413.2	.95084
87.20	51.98	.03985	-66.2	415.6	.98782
85.00	51.10	.04088	-66.4	418.1	.99610
80.00	50.69	.04330	-67.3	423.6	1.04994
76.00	55.83	.04556	-67.0	430.4	1.21720

WASHINGTON,D.C. 12/19/67 1700Z OZONE DATA ASCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
71.90	60.12	.04819	-67.0	437.3	1.38545
67.80	52.30	.05062	-68.5	441.4	1.27821
66.00	52.27	.05173	-67.6	446.9	1.31238
62.40	65.39	.05462	-65.9	457.9	1.73652
59.60	89.66	.05787	-65.0	465.9	2.49284
57.40	94.96	.06069	-64.8	471.5	2.74141
55.90	91.79	.06261	-65.3	473.8	2.72083
53.00	89.35	.06637	-65.0	481.8	2.79338
51.40	104.91	.06891	-64.2	487.9	3.38215
49.10	116.32	.07311	-62.6	498.0	3.92564
46.40	130.22	.07893	-64.5	501.7	4.65041
44.20	139.16	.08427	-64.5	508.7	5.21708
43.10	140.59	.08706	-64.2	513.1	5.40504
41.10	143.57	.09245	-63.4	522.1	5.78822
36.90	151.40	.10534	-62.4	541.0	6.79874
36.00	150.22	.10827	-62.1	545.5	6.91423
34.70	148.82	.11259	-62.9	549.3	7.10649
32.60	151.00	.12003	-62.4	560.5	7.67506
31.90	152.80	.12265	-62.1	564.7	7.93681
30.30	152.26	.12884	-61.9	573.7	8.32665
28.60	152.84	.13580	-61.6	584.0	8.85486
27.10	152.80	.14230	-60.7	595.8	9.34260
25.60	151.42	.14911	-60.2	606.9	9.80076
24.20	148.05	.15568	-59.7	618.1	10.13719
22.80	145.19	.16252	-59.0	630.7	10.55185
21.50	143.05	.16915	-58.1	644.1	11.02459
20.20	139.60	.17602	-57.9	656.4	11.45115
19.05	133.40	.18220	-56.2	672.8	11.60355
18.00	132.03	.18811	-53.1	693.4	12.15421
17.05	117.84	.19315	-52.7	705.4	11.45261
16.20	114.10	.19776	-52.7	715.8	11.67076
15.30	109.47	.20270	-52.5	728.3	11.85596
14.50	103.97	.20711	-51.4	743.3	11.88156
13.70	97.13	.21146	-50.5	758.6	11.74716
13.00	90.08	.21519	-50.1	771.3	11.48149
12.40	83.58	.21831	-49.4	784.3	11.16898
11.95	80.34	.22065	-48.2	797.0	11.13947
11.80	79.75	.22145	-47.3	803.0	11.19934


20μg/g
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ASCENT DESCENT
147 169
127 149
20 20
(IN M ATM-CM)
TOTAL OZONE
INTEGRATED OZONE
RESIDUAL OZONE
PARTIAL PRESSURE OF OZONE (μmb)
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FROST-PT TEMP
AIR TEMP
WASHINGTON
10/21/68
1755 GMT
MIXING RATIO
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10⁻⁶
10⁻⁵
PRESSURE (MILLIBARS)
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TEMPERATURE (°C)
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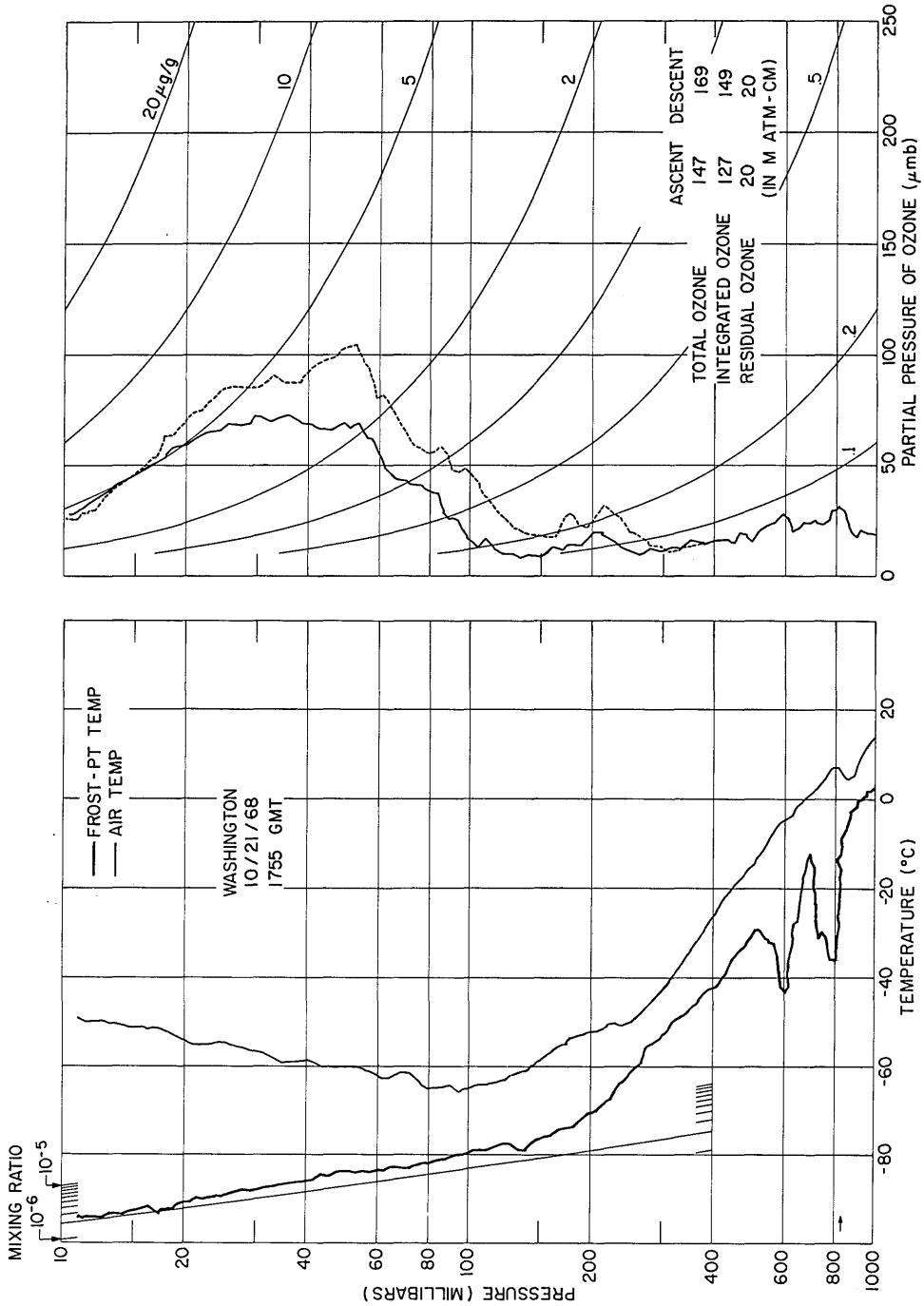
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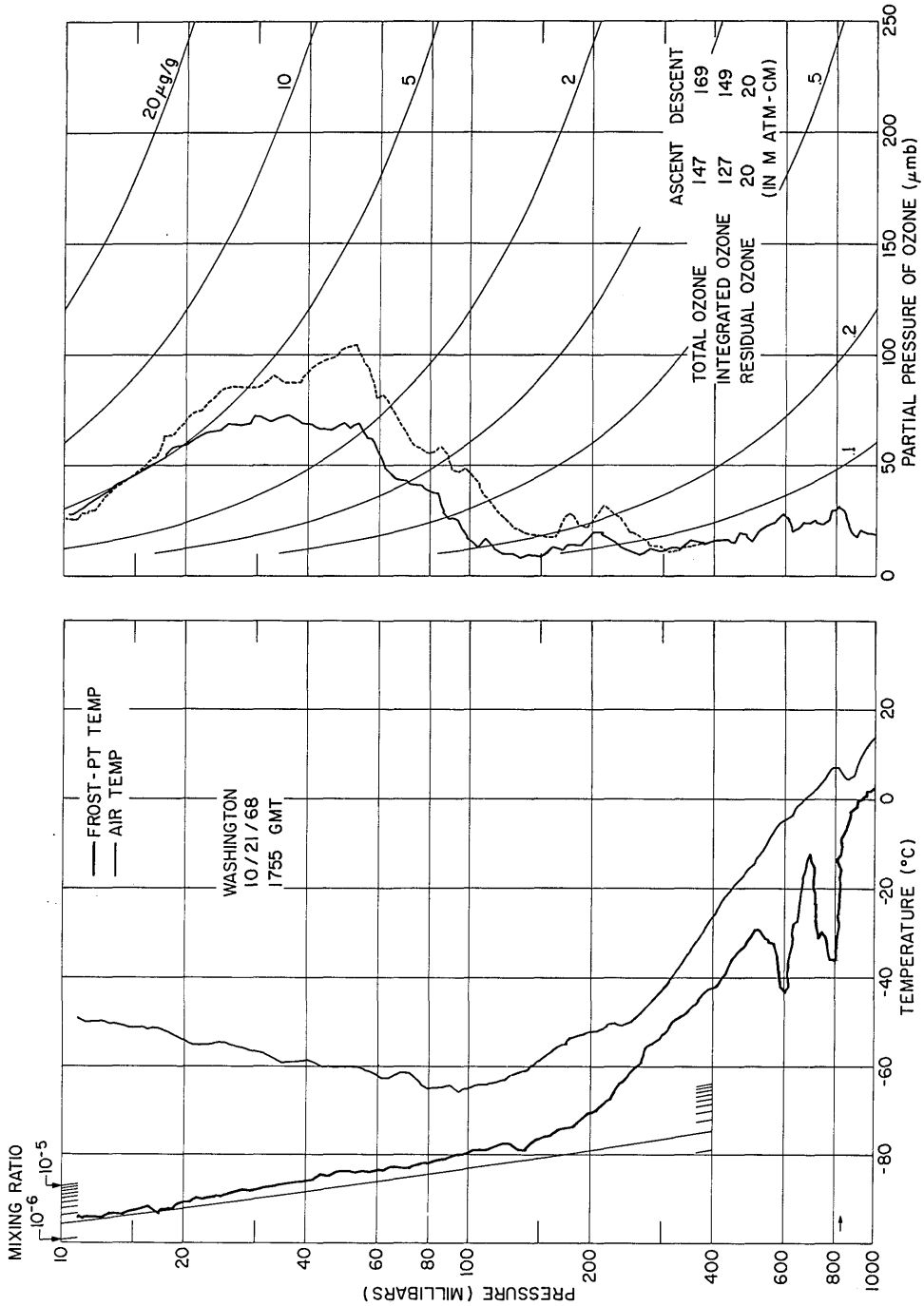
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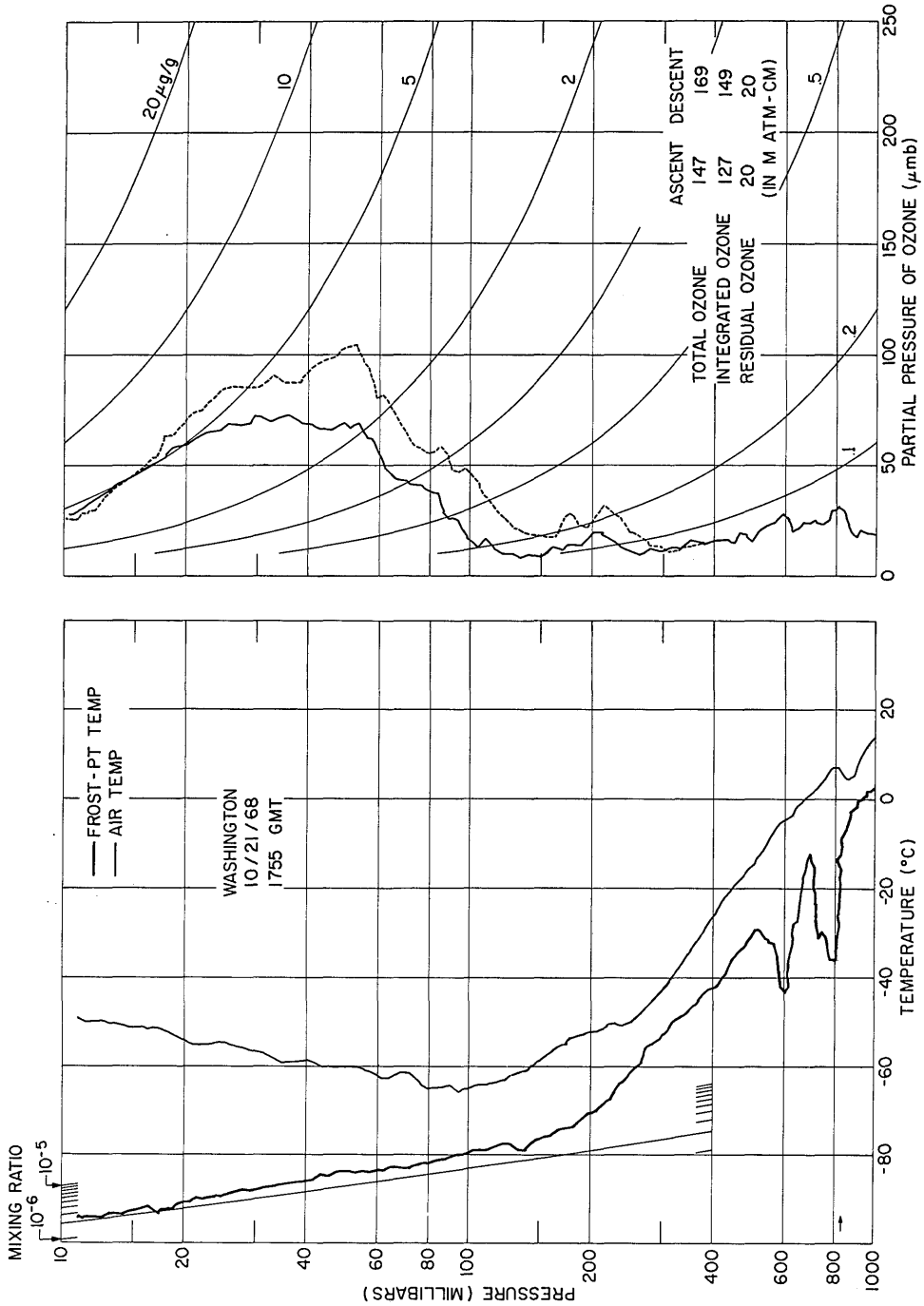
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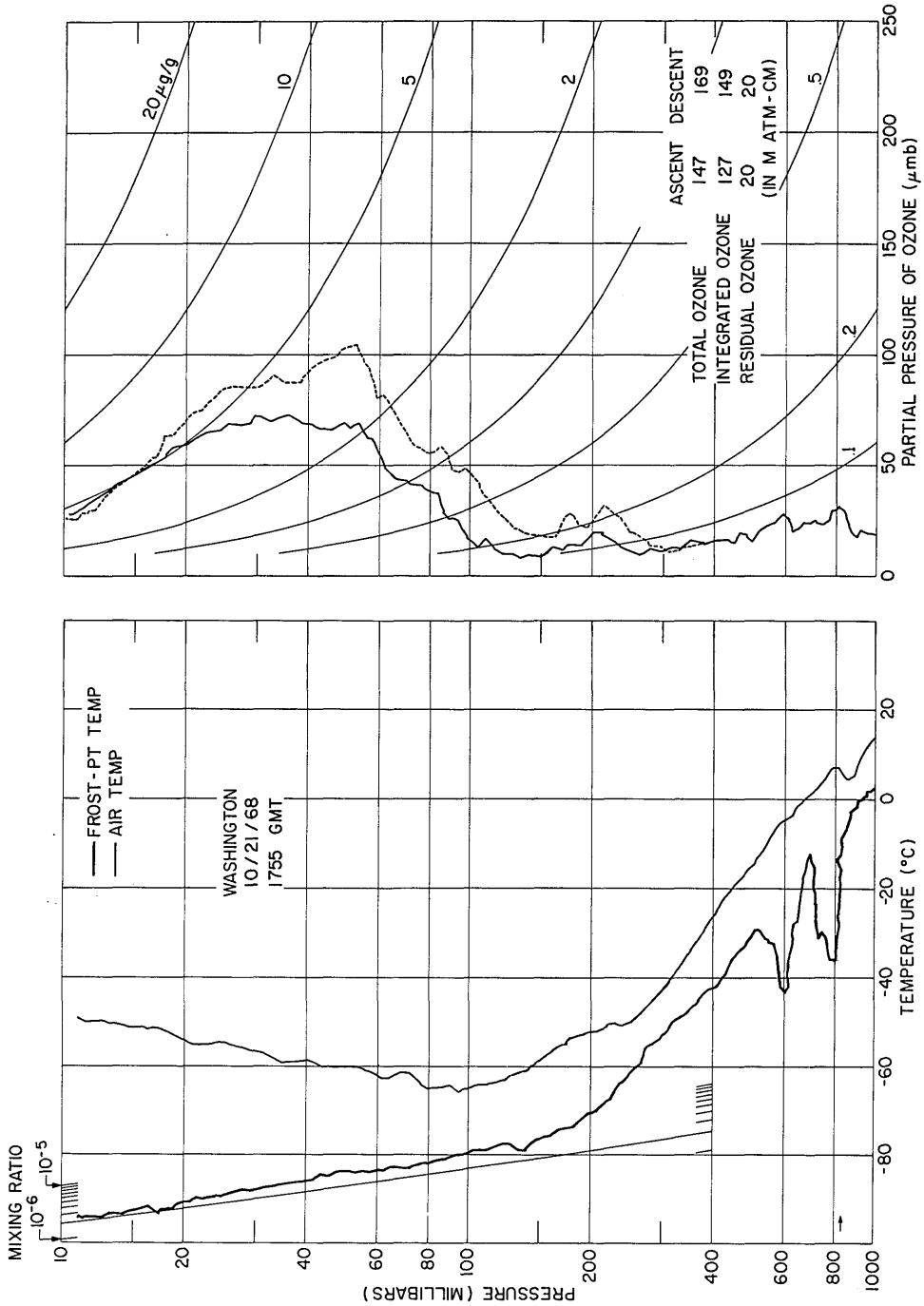
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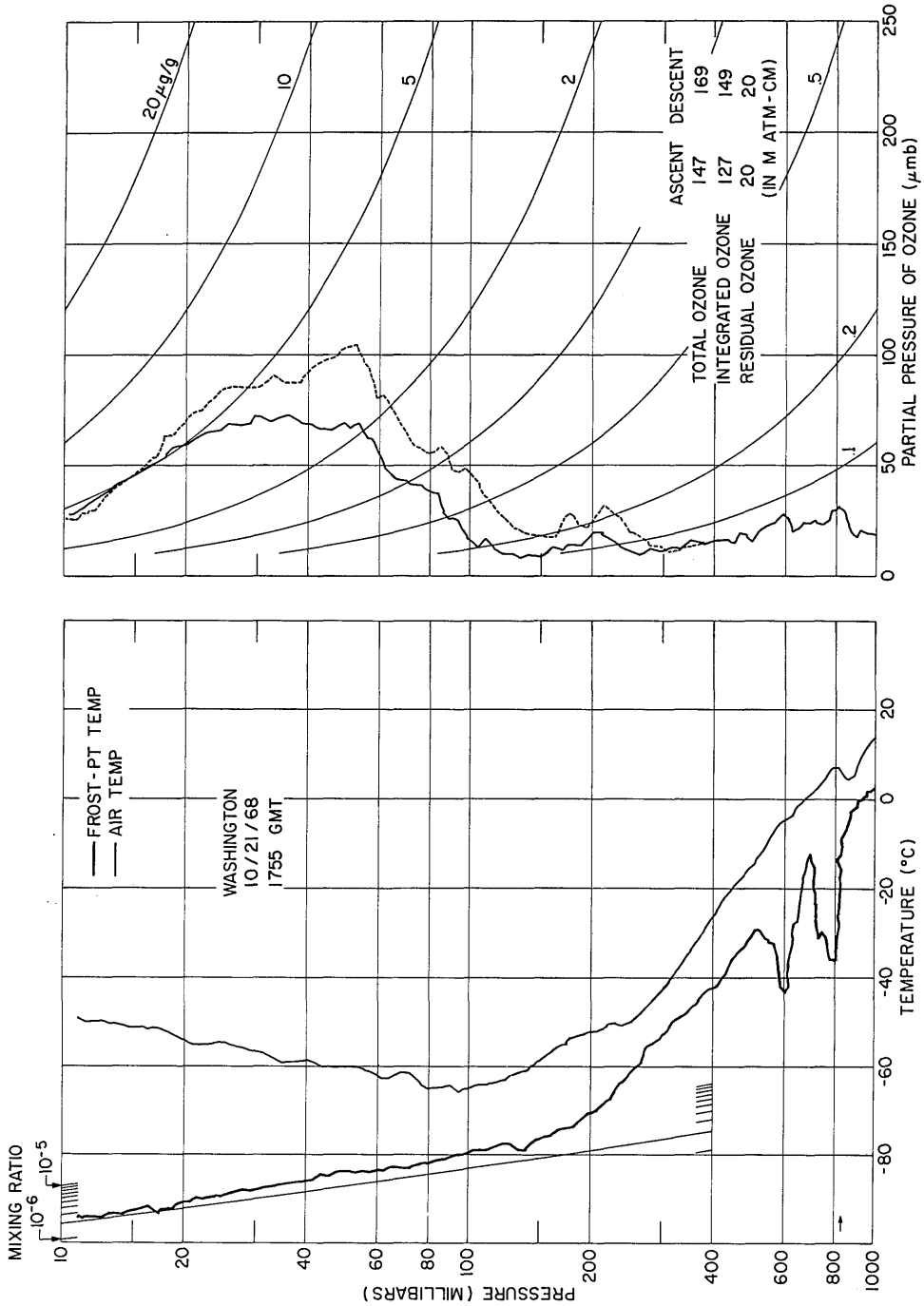
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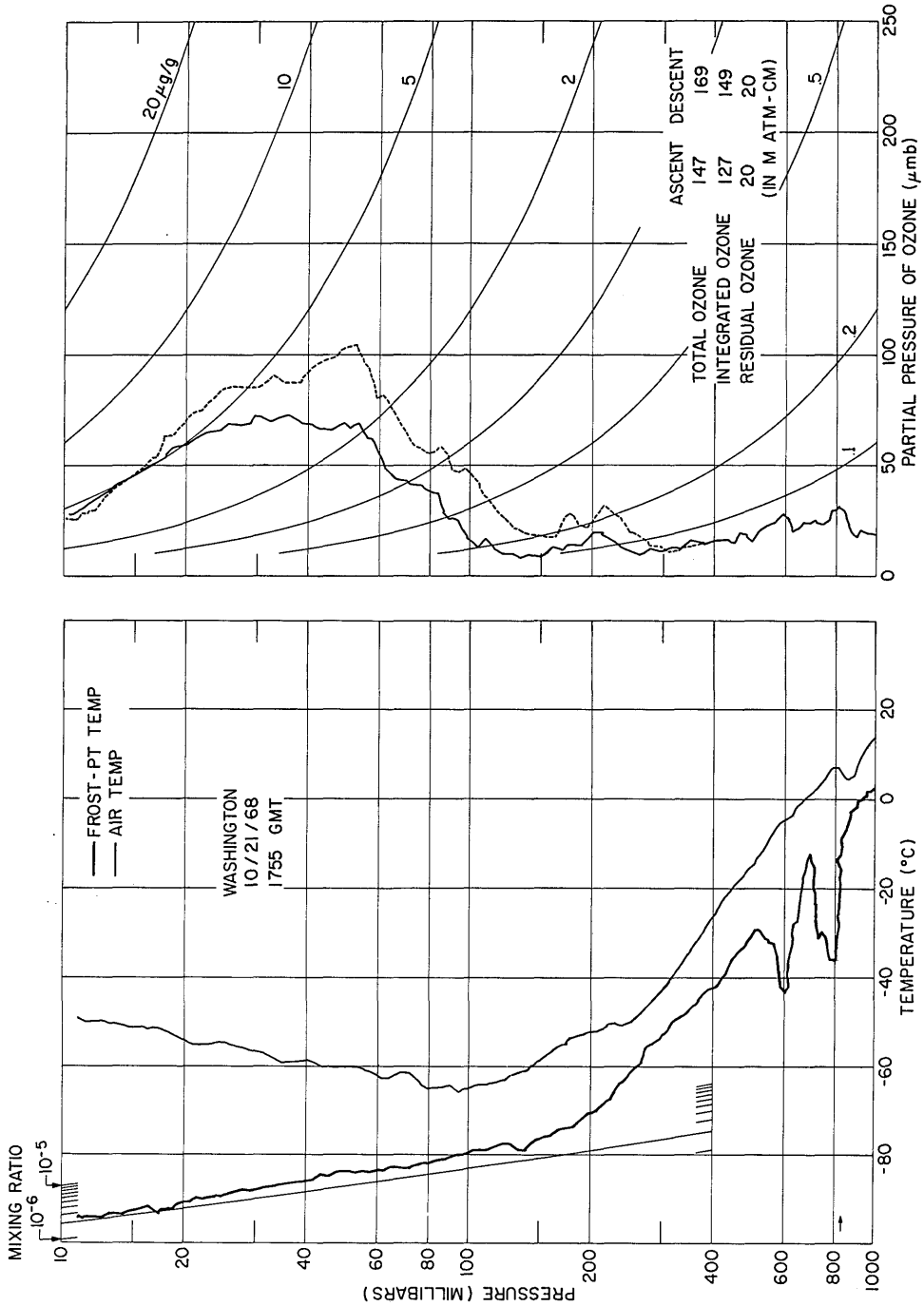
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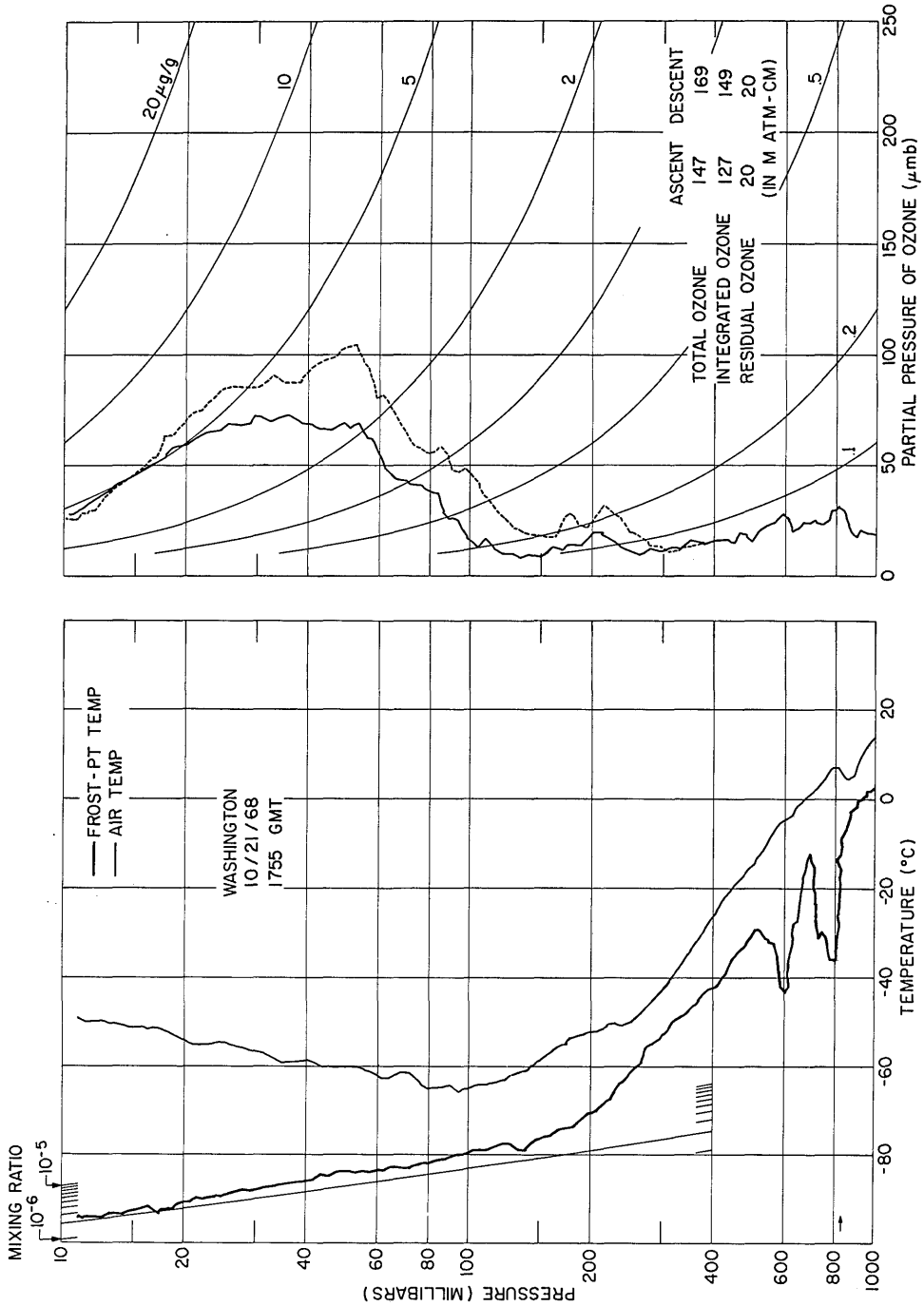
WASHINGTON,D.C. 1/17/68 1620Z OZONE DATA ASCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
96.00	46.14	.04468	-60.4	415.7	.79641
93.60	59.81	.04588	-59.7	420.0	1.05879
88.90	70.27	.04873	-60.8	423.9	1.30975
86.50	74.91	.05035	-62.1	424.8	1.43506
84.40	83.96	.05198	-62.6	426.8	1.64838
80.40	71.00	.05470	-63.1	431.7	1.46319
78.60	73.49	.05602	-62.3	436.1	1.54932
76.50	95.64	.05806	-61.1	442.0	2.07159
74.70	108.23	.06009	-61.3	444.5	2.40086
71.30	141.54	.06530	-61.1	451.0	3.28943
68.50	145.37	.06990	-60.1	458.2	3.51649
66.80	135.57	.07259	-59.7	462.5	3.36297
65.20	133.95	.07515	-59.0	467.2	3.40420
62.20	144.76	.08054	-59.4	472.6	3.85643
58.80	154.68	.08740	-59.4	480.2	4.35902
57.40	158.36	.09042	-59.7	483.0	4.57145
54.60	161.41	.09679	-60.1	488.9	4.89847
53.30	165.27	.09993	-59.9	492.8	5.13805
52.10	165.97	.10292	-59.7	496.6	5.27851
48.20	165.88	.11311	-58.3	510.9	5.70265
46.90	164.59	.11666	-58.8	513.9	5.81490
45.80	170.59	.11986	-58.3	518.5	6.17163
43.50	175.23	.12699	-57.9	527.2	6.67472
41.60	176.95	.13323	-57.9	534.0	7.04835
39.70	178.96	.13983	-58.3	540.1	7.46964
38.80	175.00	.14300	-60.4	538.4	7.47358
36.20	177.00	.15269	-56.6	559.0	8.10190
35.40	175.58	.15579	-56.4	563.1	8.21863
34.60	171.11	.15888	-56.6	566.2	8.19464
33.80	168.91	.16200	-57.2	568.3	8.28040
33.10	168.52	.16478	-57.2	571.7	8.43635
31.60	181.38	.17142	-57.2	579.4	9.51091
30.10	167.91	.17787	-56.2	590.3	9.24342
28.90	158.35	.18296	-55.4	599.5	9.07896
27.60	152.51	.18850	-54.5	609.7	9.15623
26.30	152.41	.19431	-54.8	617.6	9.60217
25.20	149.01	.19933	-54.5	625.8	9.79811
24.50	143.72	.20253	-54.4	631.4	9.72034
24.00	146.75	.20492	-54.4	635.1	10.13159
23.40	146.00	.20784	-54.5	639.2	10.33827
22.80	138.80	.21068	-54.8	643.3	10.08769
21.80	136.11	.21550	-54.4	652.8	10.34556
20.90	127.05	.21973	-53.8	662.5	10.07288
19.95	133.43	.22463	-52.2	676.1	11.08203
19.10	127.35	.22901	-50.7	689.1	11.04791
18.70	127.35	.23114	-50.2	695.0	11.28422
17.90	113.88	.23507	-51.5	699.7	10.54211
17.15	107.57	.23871	-51.9	707.1	10.39286
16.35	97.46	.24238	-51.9	716.8	9.87723
15.60	95.68	.24593	-52.0	725.9	10.16248
15.00	90.13	.24872	-51.9	734.7	9.95581
14.30	83.85	.25188	-51.5	746.0	9.71577
14.00	80.70	.25323	-51.7	750.0	9.55086
13.70	80.49	.25461	-51.9	754.0	9.73497
13.15	75.52	.25705	-50.9	766.0	9.51603


20μg/g
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ASCENT DESCENT
147 169
127 149
20 20
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MIXING RATIO
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PRESSURE (MILLIBARS)
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TEMPERATURE (°C)
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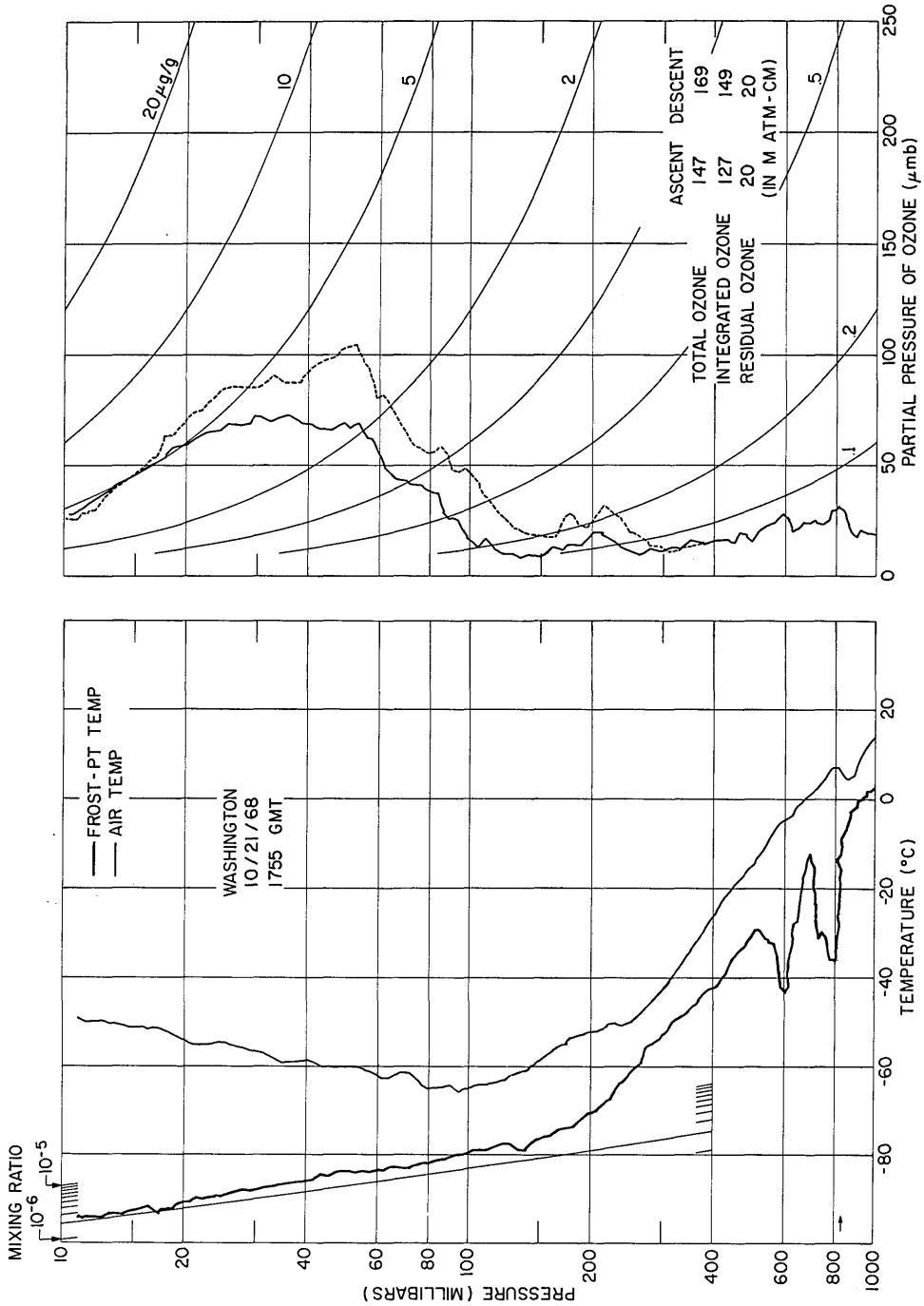
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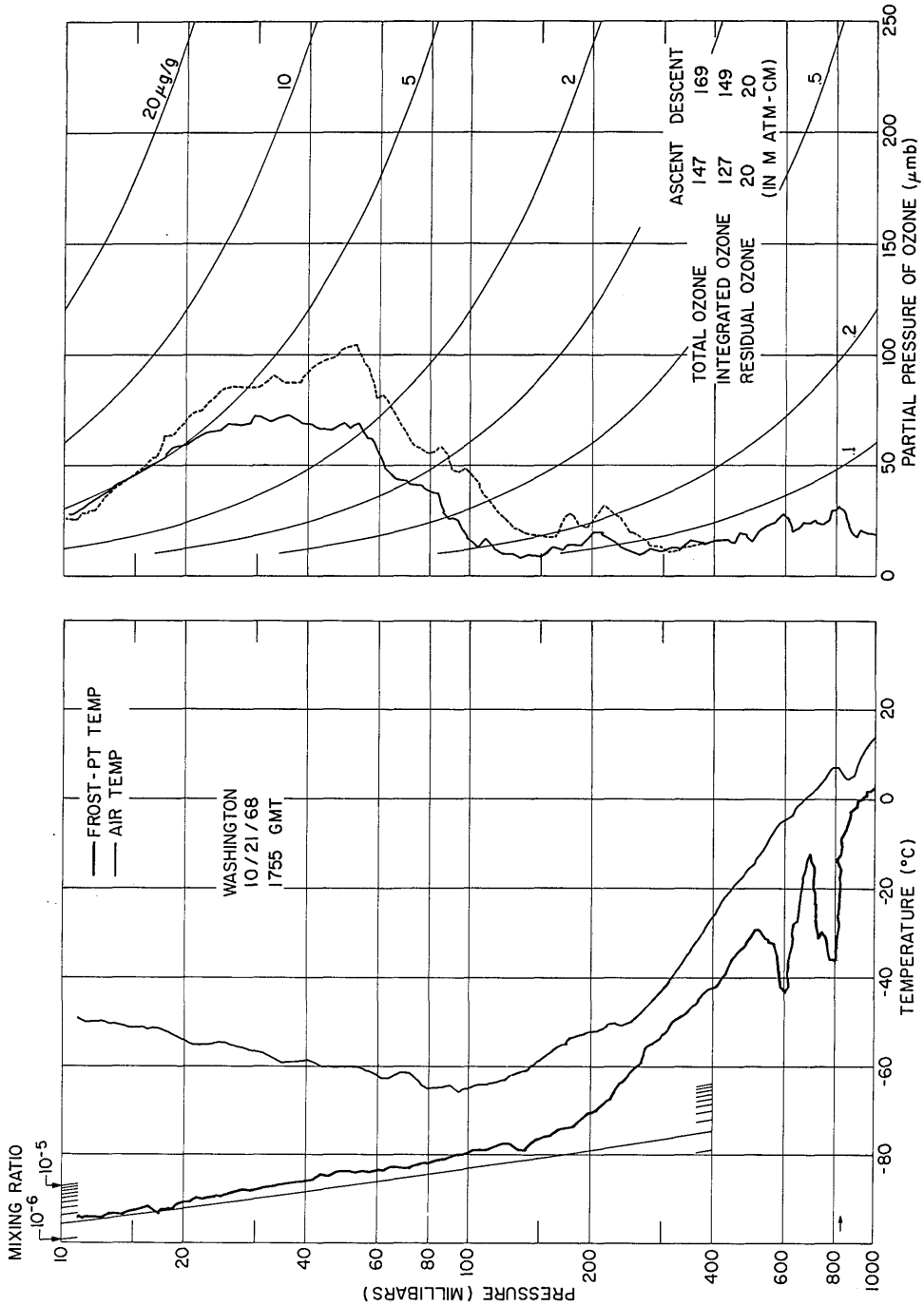
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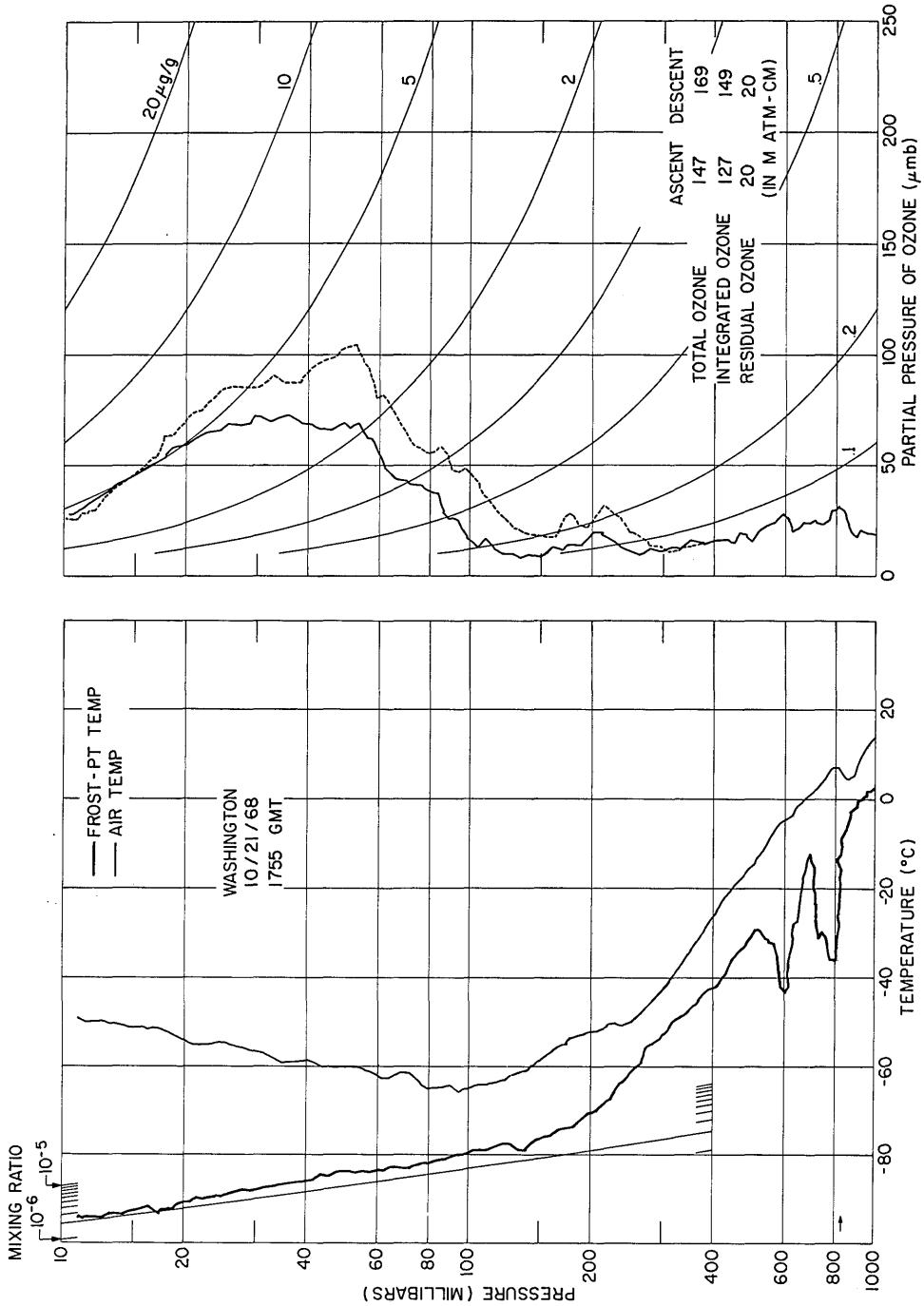
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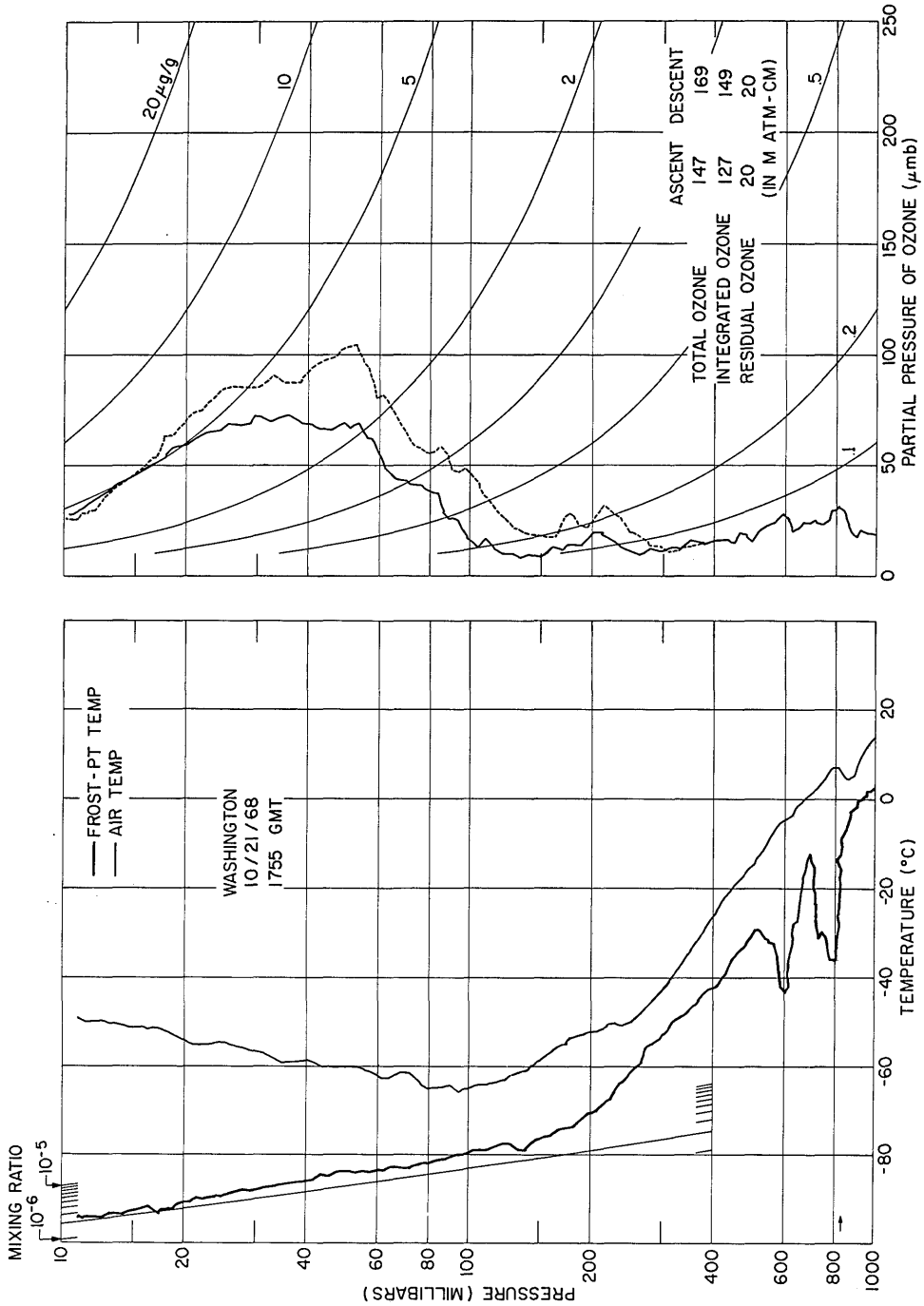
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TEMPERATURE (°C)
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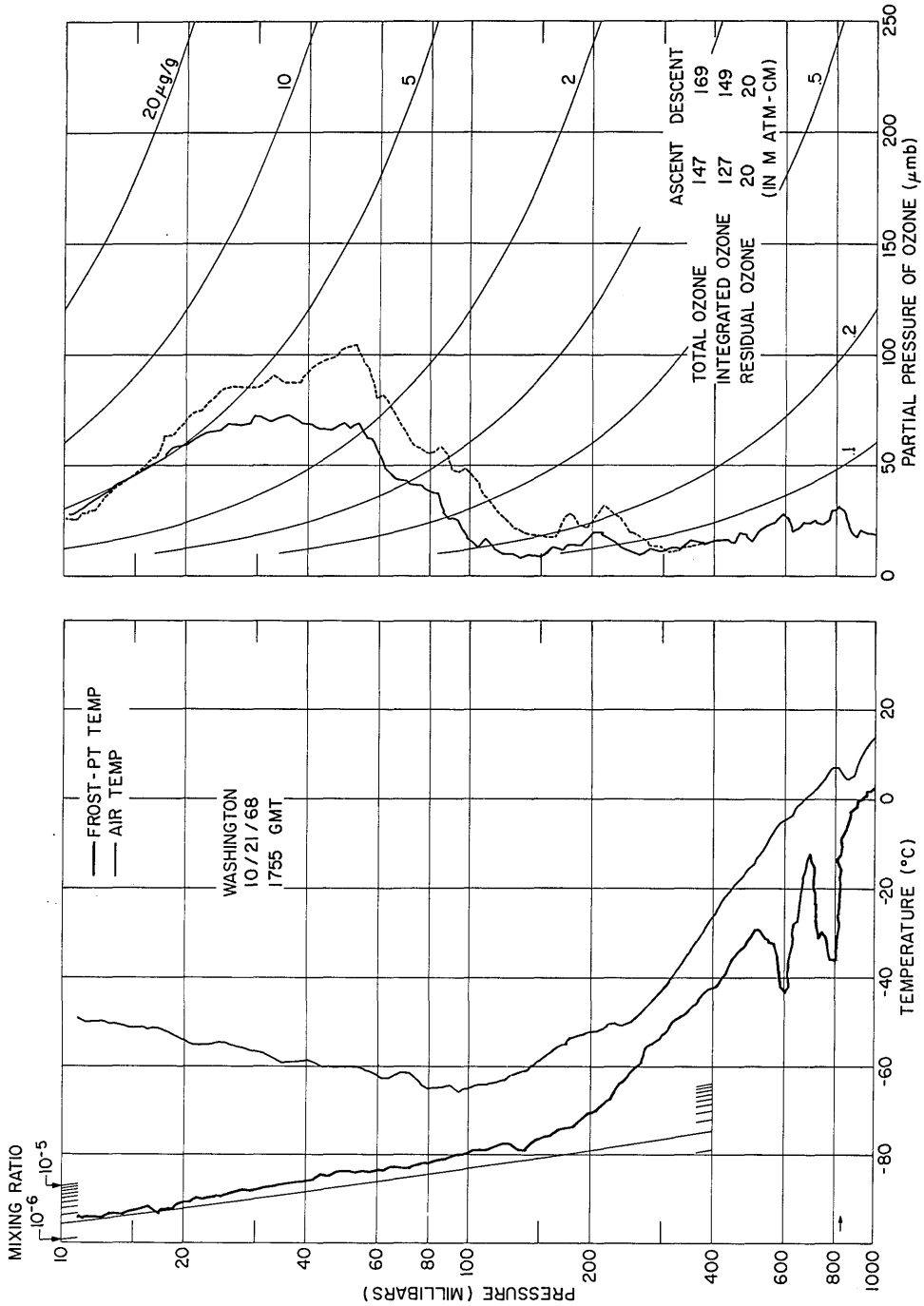
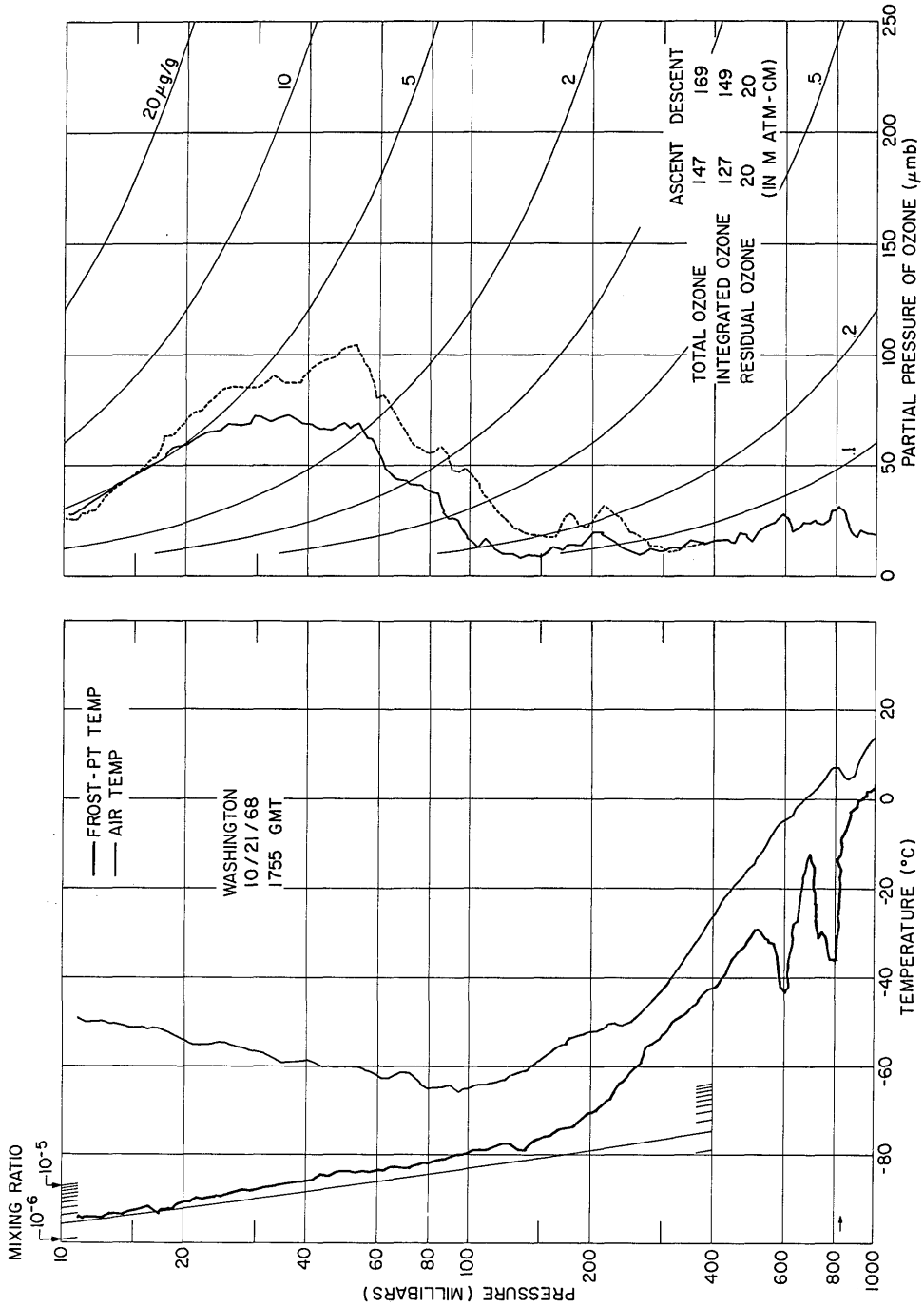
WASHINGTON,D.C. 2/26/68 1630Z WATER VAPOR DATA

P (mb)	T (°C)	F (°C)	w (g/kg)	θ (°K)	M (cm)	ΣM (cm)
80.90	-57.8	-83.7	.00226	441.7	.00000522	.32975015
78.30	-58.0	-83.7	.00233	445.4	.00000608	.32975623
76.20	-57.6	-83.8	.00236	449.8	.00000502	.32976125
74.00	-57.2	-83.8	.00243	454.5	.00000536	.32976662
71.90	-56.5	-83.7	.00254	459.6	.00000532	.32977194
69.80	-56.1	-83.7	.00262	464.4	.00000551	.32977745
67.60	-55.5	-83.4	.00283	470.0	.00000611	.32978356
65.20	-55.1	-83.7	.00280	475.8	.00000688	.32979044
63.20	-55.5	-83.9	.00280	479.1	.00000571	.32979615
61.00	-56.1	-84.0	.00286	482.6	.00000633	.32980248
59.00	-56.1	-84.3	.00281	487.3	.00000578	.32980826
57.10	-55.9	-84.6	.00277	492.3	.00000539	.32981366
55.10	-55.7	-84.8	.00277	497.8	.00000565	.32981931
53.30	-55.5	-85.0	.00273	503.0	.00000504	.32982434
51.60	-55.9	-85.2	.00272	506.8	.00000472	.32982907
50.00	-56.3	-85.5	.00267	510.4	.00000440	.32983346
48.40	-56.5	-85.7	.00266	514.6	.00000435	.32983781
46.90	-57.4	-85.9	.00265	517.2	.00000407	.32984188
45.40	-57.6	-86.1	.00264	521.6	.00000405	.32984594
44.00	-57.4	-86.1	.00273	526.8	.00000383	.32984976
42.40	-57.4	-86.1	.00283	532.4	.00000453	.32985429
40.80	-57.2	-86.2	.00289	538.8	.00000466	.32985896
39.40	-56.9	-86.3	.00294	544.7	.00000416	.32986312
37.60	-57.4	-86.8	.00286	551.0	.00000532	.32986844
36.10	-57.6	-87.1	.00282	556.9	.00000434	.32987277
34.50	-57.4	-87.2	.00290	564.7	.00000466	.32987744
33.00	-56.9	-87.8	.00270	573.0	.00000428	.32988171
31.50	-56.1	-88.2	.00266	583.0	.00000410	.32988581
30.20	-55.5	-88.0	.00284	591.7	.00000364	.32988945
28.75	-55.3	-88.3	.00286	600.6	.00000420	.32989365
27.50	-55.3	-90.5	.00199	608.3	.00000308	.32989673
26.10	-54.7	-90.4	.00215	619.2	.00000295	.32989968
24.80	-54.3	-88.5	.00319	629.4	.00000353	.32990322
23.50	-54.1	-91.4	.00198	639.8	.00000341	.32990663
22.40	-54.1	-90.9	.00228	648.6	.00000238	.32990901
21.20	-53.5	-89.5	.00309	660.6	.00000328	.32991229
20.30	-52.1	-90.4	.00276	673.0	.00000268	.32991497
19.40	-51.4	-91.5	.00234	684.0	.00000234	.32991731
18.45	-50.5	-91.8	.00234	696.8	.00000226	.32991958
17.70	-50.5	-91.7	.00250	705.1	.00000185	.32992142
17.00	-51.4	-91.9	.00248	710.3	.00000177	.32992320


20μg/g
10
5
2
1
.2
.5
ASCENT DESCENT
147 169
127 149
20 20
(IN M ATM-CM)
TOTAL OZONE
INTEGRATED OZONE
RESIDUAL OZONE
PARTIAL PRESSURE OF OZONE (μmb)
0
50
100
150
200
250
FROST-PT TEMP
AIR TEMP
WASHINGTON
10/21/68
1755 GMT
MIXING RATIO
10
10⁻⁶
10⁻⁵
PRESSURE (MILLIBARS)
20
40
60
80
100
200
400
600
800
1000
TEMPERATURE (°C)
-80
-60
-40
-20
0
20

WASHINGTON,D.C. 2/26/68 1630Z OZONE DATA ASCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
127.00	111.62	.08124	-52.1	398.5	1.45630
121.50	78.66	.08399	-53.1	401.9	1.07281
119.00	78.15	.08527	-53.3	403.9	1.08822
116.00	68.16	.08665	-53.5	406.5	.97363
110.00	60.62	.08919	-53.7	412.4	.91311
107.50	53.93	.09017	-53.9	414.7	.83121
105.00	52.46	.09114	-54.1	417.1	.82782
103.00	71.39	.09222	-54.3	419.0	1.14842
100.50	80.74	.09379	-54.7	421.2	1.33118
98.50	101.25	.09540	-54.9	423.3	1.70333
96.20	129.16	.09781	-55.1	425.7	2.22466
94.00	153.12	.10060	-54.9	429.0	2.69917
91.80	146.90	.10335	-54.7	432.3	2.65160
89.80	155.10	.10604	-54.3	435.8	2.86188
88.10	138.99	.10814	-53.9	439.0	2.61411
86.40	133.64	.11020	-54.5	440.2	2.56292
82.40	163.43	.11631	-55.7	443.7	3.28636
80.40	162.07	.11946	-56.1	446.0	3.34026
78.20	146.47	.12267	-56.3	449.1	3.10356
75.30	183.25	.12813	-57.4	451.8	4.03239
71.60	187.43	.13559	-58.0	457.0	4.33758
70.40	190.58	.13813	-57.2	461.0	4.48571
69.00	188.21	.14112	-57.2	463.7	4.51979
67.40	167.65	.14423	-57.4	466.3	4.12166
65.80	169.68	.14744	-56.9	470.5	4.27293
62.60	165.95	.15398	-57.6	475.8	4.39262
61.00	193.26	.15793	-57.8	478.9	5.24975
58.40	225.79	.16569	-57.8	484.9	6.40649
57.00	126.65	.16812	-57.8	488.2	3.68169
55.80	187.79	.17127	-58.0	490.7	5.57634
54.40	194.24	.17517	-58.0	494.3	5.91641
53.20	191.10	.17854	-57.8	497.9	5.95217
52.10	221.59	.18219	-57.6	501.4	7.04737
50.80	222.67	.18663	-57.4	505.6	7.26313
49.80	215.13	.19001	-57.4	508.4	7.15800
43.80	211.30	.21143	-56.7	529.0	7.99358
40.10	194.01	.22495	-56.5	543.1	8.01673
35.20	184.42	.24393	-56.1	564.7	8.68145
34.40	181.95	.24723	-56.3	567.9	8.76405
33.50	174.01	.25087	-56.5	571.7	8.60689
32.10	169.50	.25659	-58.2	574.1	8.74938
31.40	171.47	.25957	-58.0	578.3	9.04873
29.90	167.12	.26603	-57.2	588.8	9.26152
28.50	157.03	.27198	-55.9	600.4	9.12985
27.10	156.51	.27820	-53.3	616.4	9.56974
26.50	160.81	.28104	-51.6	625.2	10.05533
25.20	154.82	.28719	-50.7	636.9	10.18030
24.00	143.96	.29274	-50.5	646.3	9.93957
22.80	135.76	.29824	-52.3	650.4	9.86654
21.80	124.54	.30265	-53.5	655.4	9.46611
20.70	117.67	.30746	-53.7	664.6	9.41912
19.70	113.47	.31189	-52.9	676.4	9.54437
18.70	107.31	.31633	-52.1	688.9	9.55288
18.25	105.10	.31835	-51.8	694.9	9.54264
17.30	103.67	.32272	-50.5	709.7	9.92973


20μg/g
10
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ASCENT DESCENT
147 169
127 149
20 20
(IN M ATM-CM)
TOTAL OZONE
INTEGRATED OZONE
RESIDUAL OZONE
PARTIAL PRESSURE OF OZONE (μmb)
0
50
100
150
200
250
FROST-PT TEMP
AIR TEMP
WASHINGTON
10/21/68
1755 GMT
MIXING RATIO
10
10⁻⁶
10⁻⁵
PRESSURE (MILLIBARS)
20
40
60
80
100
200
400
600
800
1000
TEMPERATURE (°C)
-80
-60
-40
-20
0
20

WASHINGTON,D.C. 2/26/68 1630Z OZONE DATA DESCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
31.50					
30.30	171.34	.00525	-55.5	591.1	9.37018
27.50	153.32	.01699	-55.3	608.3	9.23824
25.80	148.38	.02447	-54.5	621.8	9.52960
23.40	132.36	.03467	-54.1	640.5	9.37235
21.80	117.23	.04123	-54.1	653.6	8.91029
20.00	109.96	.04871	-52.1	675.8	9.11026
18.10	103.84	.05690	-50.1	701.7	9.50622
16.45	94.41	.06402	-52.0	715.2	9.50949
14.70	90.14	.07203	-51.8	739.2	10.16075
13.80	80.95	.07606	-51.0	755.2	9.71977
13.40	77.57	.07787	-50.3	764.1	9.59160
12.60	78.18	.08167	-48.5	783.8	10.28125
12.30	78.59	.08316	-48.5	789.2	10.58779
11.70	73.40	.08606	-48.2	801.8	10.39497
11.20	69.41	.08845	-47.0	816.1	10.26898
10.95	68.82	.08968	-46.7	822.6	10.41477
10.80	69.96	.09044	-46.5	826.5	10.73382
10.65	68.45	.09120	-46.5	829.8	10.64919

WASHINGTON,D.C. 3/5/68 1642Z WATER VAPOR DATA

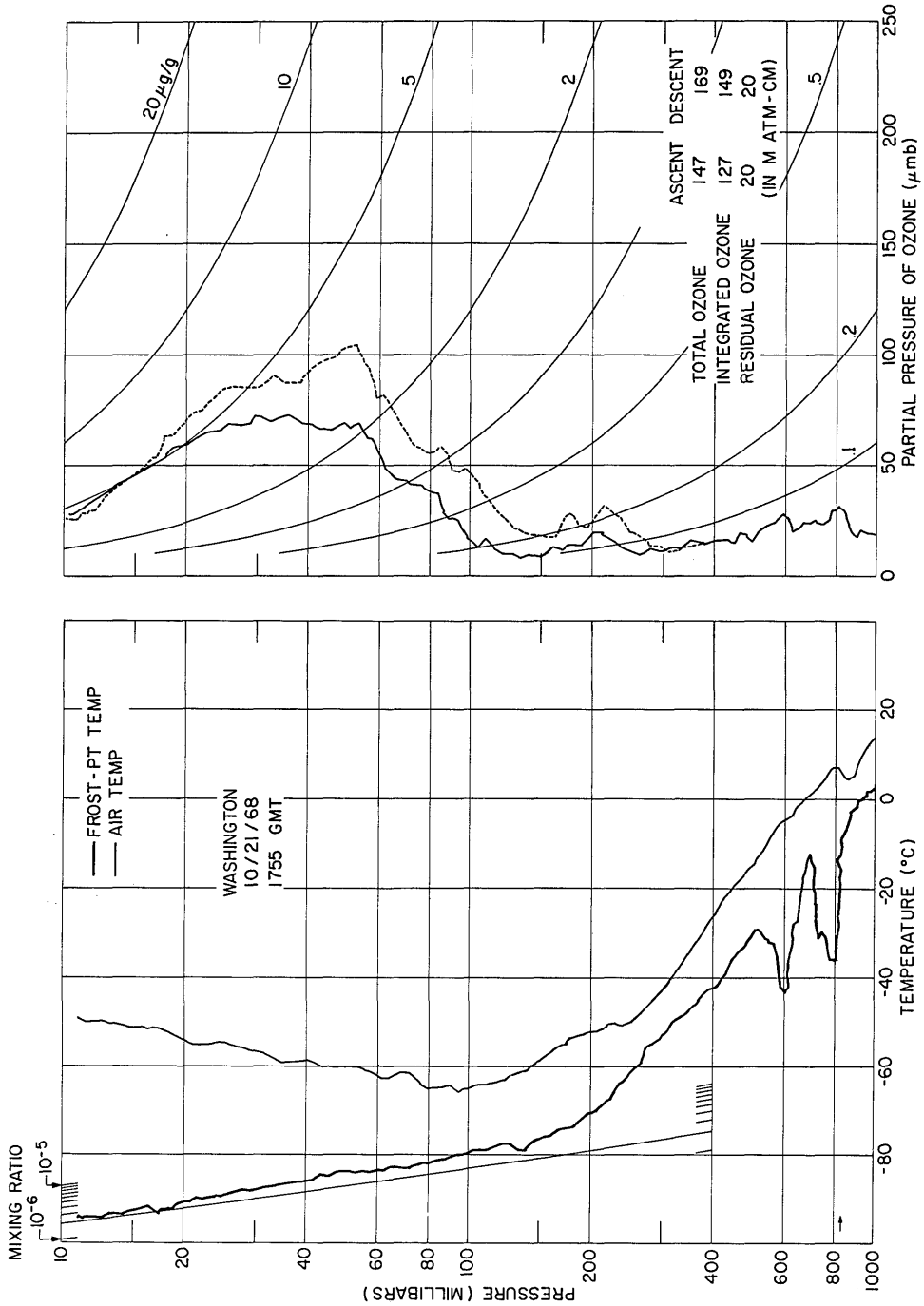
P (mb)	T (°C)	F (°C)	w (g/kg)	θ (°K)	M (cm)	ΣM (cm)
1009.00	10.1	-11.0	1.46538	282.6		
994.00	8.8	-11.4	1.43390	282.4	.02218828	.02218828
978.00	7.3	-12.6	1.31076	282.2	.02240528	.04459356
962.00	5.8	-12.2	1.38068	282.1	.02197084	.06656440
947.00	4.4	-12.6	1.35376	281.9	.02092676	.08749115
932.00	3.4	-13.0	1.33045	282.1	.02054237	.10803352
916.00	2.2	-13.3	1.30807	282.4	.02153887	.12957239
900.00	1.1	-13.3	1.33138	282.7	.02154641	.15111880
882.00	.0	-13.3	1.35861	283.2	.02470380	.17582260
868.00	-.9	-13.0	1.42877	283.5	.01990977	.19573237
853.00	-1.9	-11.4	1.67155	283.9	.02372691	.21945928
838.00	-2.4	-11.0	1.76526	284.8	.02630201	.24576129
822.00	-2.9	-11.0	1.79972	285.8	.02910168	.27486297
808.00	-3.6	-11.4	1.76491	286.5	.02546152	.30032450
796.00	-4.4	-14.4	1.36406	286.9	.01915692	.31948142
782.00	-4.9	-18.9	.91692	287.8	.01629268	.33577409
768.00	-5.7	-18.6	.96021	288.4	.01340805	.34918214
754.00	-6.2	-19.4	.90112	289.4	.01329520	.36247735
739.00	-6.8	-25.9	.48425	290.4	.01060225	.37307960
724.50	-7.1	-29.3	.35152	291.7	.00618291	.37926251
710.00	-7.4	-30.5	.31524	293.1	.00493261	.38419512
697.50	-7.9	-32.5	.26020	294.1	.00366989	.38786501
683.00	-8.6	-35.9	.18394	295.0	.00328569	.39115070
670.00	-9.1	-27.6	.45299	296.0	.00422446	.39537516
658.00	-9.6	-21.6	.84010	297.0	.00791684	.40329200
644.50	-10.1	-26.8	.51058	298.2	.00930311	.41259511
631.00	-10.8	-32.0	.30277	299.3	.00560211	.41819721
619.00	-11.4	-32.7	.28823	300.2	.00361834	.42181556
607.00	-12.4	-33.0	.28430	300.7	.00350527	.42532083
592.00	-13.4	-33.1	.28680	301.7	.00437064	.42969148
580.00	-14.4	-34.1	.26537	302.3	.00338058	.43307206
566.00	-15.4	-35.6	.22880	303.3	.00352976	.43660182
553.00	-16.5	-37.7	.18756	304.0	.00276156	.43936338
542.00	-17.4	-40.8	.13409	304.7	.00180517	.44116855
529.00	-18.9	-40.4	.14480	305.0	.00184977	.44301832
517.00	-20.0	-33.1	.32843	305.7	.00289726	.44591558
505.00	-21.8	-31.2	.41280	305.5	.00453810	.45045368
492.50	-23.6	-30.9	.43854	305.5	.00542945	.45588313
481.00	-25.3	-30.9	.44903	305.4	.00520766	.46109079
470.00	-27.1	-30.5	.47634	305.3	.00519337	.46628416
458.00	-28.7	-29.8	.52622	305.6	.00613806	.47242221
444.50	-30.2	-30.3	.51304	306.3	.00715810	.47958031
432.00	-31.8	-31.9	.44986	306.8	.00614093	.48572125
423.00	-33.5	-33.6	.38209	306.4	.00382017	.48954141
413.00	-35.3	-34.6	.34980	306.3	.00373408	.49327549
404.00	-36.8	-35.4	.33075	306.2	.00312497	.49640046
392.00	-38.3	-35.8	.32554	306.8	.00401810	.50041856
382.00	-39.9	-37.0	.29196	307.0	.00315052	.50356908
371.00	-41.6	-41.3	.18594	307.5	.00268209	.50625117
362.70	-42.5	-41.8	.17838	308.2	.00154278	.50779395
356.00	-42.8	-50.2	.06717	309.5	.00083938	.50863333
350.00	-43.5	-48.9	.08010	309.9	.00045083	.50908417
343.00	-44.2	-49.3	.07748	310.9	.00056279	.50964695
337.00	-44.6	-50.7	.06667	311.8	.00044127	.51008822
331.00	-45.3	-52.1	.05700	312.6	.00037859	.51046681
325.00	-45.7	-53.4	.04945	313.5	.00032589	.51079270

WASHINGTON,D.C. 3/5/68 1642Z WATER VAPOR DATA

P (mb)	T (°C)	F (°C)	w (g/kg)	θ (°K)	M (cm)	ΣM (cm)
319.50	-46.1	-54.7	.04255	314.6	.00025818	.51105088
314.00	-46.2	-55.8	.03743	316.0	.00022443	.51127531
308.50	-47.0	-56.3	.03561	316.4	.00020495	.51148026
303.00	-47.7	-57.2	.03203	317.1	.00018978	.51167004
297.50	-48.6	-60.4	.02135	317.6	.00014977	.51181981
292.00	-49.4	-63.1	.01501	318.1	.00010203	.51192184
286.50	-50.3	-61.1	.02019	318.5	.00009878	.51202062
280.00	-51.2	-60.2	.02332	319.3	.00014430	.51216492
275.00	-51.9	-60.6	.02246	319.9	.00011678	.51228170
270.00	-52.3	-62.0	.01900	321.1	.00010575	.51238745
265.00	-52.5	-63.2	.01638	322.5	.00009026	.51247771
260.00	-52.5	-65.1	.01275	324.3	.00007430	.51255201
255.00	-52.3	-65.9	.01161	326.4	.00006211	.51261412
250.00	-52.1	-67.9	.00881	328.5	.00005208	.51266620
245.00	-51.9	-68.8	.00792	330.7	.00004268	.51270887
240.00	-51.9	-69.1	.00770	332.6	.00003986	.51274873
235.00	-51.9	-70.5	.00638	334.6	.00003593	.51278466
230.00	-51.7	-71.1	.00602	337.0	.00003164	.51281630
226.00	-51.4	-71.8	.00547	339.2	.00002344	.51283973
221.00	-50.8	-72.7	.00488	342.2	.00002640	.51286614
216.50	-50.3	-73.6	.00434	345.1	.00002117	.51288731
212.00	-50.6	-74.0	.00420	346.6	.00001960	.51290691
207.50	-51.4	-74.1	.00420	347.6	.00001928	.51292619
203.00	-51.4	-74.9	.00380	349.8	.00001836	.51294455
198.00	-50.6	-76.0	.00325	353.4	.00001799	.51296254
194.00	-50.1	-77.2	.00278	356.3	.00001231	.51297484
190.00	-49.4	-78.0	.00249	359.6	.00001074	.51298559
186.00	-49.1	-78.2	.00245	362.4	.00001006	.51299565
182.00	-48.9	-78.2	.00250	364.9	.00001009	.51300573
178.00	-48.7	-78.4	.00246	367.5	.00001012	.51301585
174.00	-49.1	-79.0	.00231	369.3	.00000973	.51302558
170.00	-49.6	-79.2	.00227	370.9	.00000934	.51303492
166.00	-49.6	-79.6	.00218	373.5	.00000907	.51304400
162.00	-49.6	-79.9	.00212	376.1	.00000876	.51305276
158.50	-50.1	-80.4	.00203	377.5	.00000739	.51306015
155.00	-50.6	-80.6	.00199	379.0	.00000717	.51306732
151.50	-51.2	-80.7	.00201	380.6	.00000714	.51307446
148.00	-52.1	-80.8	.00200	381.6	.00000715	.51308161
144.50	-52.7	-81.1	.00197	383.2	.00000708	.51308869
141.00	-52.8	-81.3	.00193	385.6	.00000694	.51309563
137.50	-53.0	-81.4	.00195	388.0	.00000693	.51310256
134.00	-53.8	-81.7	.00192	389.5	.00000691	.51310948
130.50	-54.6	-81.4	.00206	391.1	.00000709	.51311657
127.00	-55.2	-81.2	.00220	393.1	.00000760	.51312417
124.00	-56.0	-81.7	.00208	394.3	.00000654	.51313071
121.00	-56.8	-82.3	.00192	395.6	.00000611	.51313682
117.70	-57.6	-82.8	.00181	397.2	.00000627	.51314309
114.50	-58.3	-82.9	.00183	399.1	.00000593	.51314902
111.30	-59.2	-82.8	.00191	400.7	.00000611	.51315513
108.00	-59.8	-82.4	.00212	402.9	.00000678	.51316191
105.30	-60.5	-82.3	.00221	404.5	.00000596	.51316787
102.50	-61.0	-82.5	.00220	406.8	.00000630	.51317418
100.00	-60.3	-82.6	.00219	411.0	.00000560	.51317978
97.00	-59.6	-82.8	.00219	415.9	.00000671	.51318648
94.50	-58.9	-82.9	.00222	420.3	.00000562	.51319210

WASHINGTON,D.C. 3/5/68 1642Z WATER VAPOR DATA

P (mb)	T (°C)	F (°C)	w (g/kg)	θ (°K)	M (cm)	ΣM (cm)
91.80	-58.3	-82.8	.00232	425.1	.00000624	.51319835
89.20	-57.6	-82.5	.00250	429.9	.00000638	.51320472
86.50	-57.0	-82.5	.00261	435.0	.00000703	.51321176
84.10	-56.6	-82.5	.00269	439.3	.00000648	.51321824
81.80	-56.2	-82.5	.00272	443.7	.00000633	.51322457
79.10	-55.6	-82.5	.00281	449.2	.00000761	.51323219
77.00	-55.8	-82.5	.00293	452.3	.00000615	.51323834
74.80	-56.0	-82.5	.00298	455.6	.00000663	.51324497
72.60	-56.4	-82.8	.00293	458.6	.00000663	.51325160
70.30	-56.8	-83.0	.00294	462.0	.00000688	.51325849
68.10	-56.4	-83.2	.00294	467.1	.00000660	.51326509
66.00	-55.6	-83.3	.00294	473.1	.00000630	.51327139
64.00	-54.8	-83.5	.00294	479.0	.00000601	.51327740
62.00	-55.6	-83.4	.00309	481.6	.00000615	.51328355
60.00	-56.0	-84.1	.00286	485.2	.00000606	.51328962
58.00	-56.6	-84.4	.00282	488.5	.00000578	.51329540
56.00	-57.2	-84.7	.00273	492.0	.00000566	.51330106
54.20	-57.9	-84.8	.00278	495.2	.00000505	.51330611
52.20	-58.1	-85.2	.00270	500.0	.00000559	.51331170
50.60	-57.9	-85.5	.00265	505.0	.00000437	.51331607
48.80	-57.6	-85.4	.00279	510.8	.00000499	.51332106
47.30	-56.8	-85.7	.00274	517.4	.00000422	.51332527
45.70	-56.0	-85.8	.00279	524.5	.00000450	.51332977
44.00	-55.2	-86.0	.00279	532.1	.00000483	.51333460
42.50	-54.8	-86.2	.00279	538.4	.00000426	.51333886
41.00	-54.6	-86.5	.00274	544.5	.00000423	.51334310
39.50	-54.6	-86.9	.00265	550.3	.00000411	.51334721
38.10	-54.4	-87.1	.00265	556.5	.00000377	.51335098
36.70	-54.4	-87.8	.00245	562.5	.00000364	.51335461
35.25	-54.6	-88.0	.00245	568.5	.00000362	.51335824
33.80	-55.0	-88.5	.00232	574.3	.00000352	.51336175
32.40	-55.2	-88.9	.00228	580.8	.00000328	.51336503
31.10	-55.4	-89.3	.00218	587.1	.00000295	.51336798
29.70	-54.8	-89.8	.00210	596.5	.00000305	.51337104
28.40	-55.4	-89.9	.00215	602.5	.00000280	.51337384
27.10	-55.4	-90.7	.00197	610.6	.00000273	.51337656
25.90	-55.2	-91.4	.00179	619.1	.00000229	.51337886
24.70	-55.0	-91.9	.00170	628.2	.00000213	.51338099
23.50	-54.0	-91.7	.00188	640.0	.00000219	.51338318
22.40	-52.8	-92.2	.00179	652.2	.00000206	.51338524
21.40	-52.5	-93.3	.00152	661.9	.00000168	.51338692
20.50	-52.3	-94.8	.00119	670.7	.00000124	.51338816
19.60	-52.1	-94.8	.00125	679.9	.00000112	.51338927
18.80	-52.1	-94.0	.00150	688.0	.00000112	.51339039
18.10	-52.3	-94.6	.00139	694.9	.00000103	.51339142
17.40	-52.7	-94.8	.00141	701.6	.00000100	.51339242
16.70	-53.0	-95.6	.00126	708.7	.00000094	.51339336
16.10	-53.8	-96.1	.00119	713.7	.00000075	.51339410
15.40	-53.8	-96.8	.00108	722.8	.00000080	.51339491
14.90	-54.0	-97.7	.00094	729.0	.00000051	.51339541


20μg/g
10
5
2
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ASCENT DESCENT
147 169
127 149
20 20
(IN M ATM-CM)
TOTAL OZONE
INTEGRATED OZONE
RESIDUAL OZONE
PARTIAL PRESSURE OF OZONE (μmb)
0
50
100
150
200
250
FROST-PT TEMP
AIR TEMP
WASHINGTON
10/21/68
1755 GMT
MIXING RATIO
10
10⁻⁶
10⁻⁵
PRESSURE (MILLIBARS)
20
40
60
80
100
200
400
600
800
1000
TEMPERATURE (°C)
-80
-60
-40
-20
0
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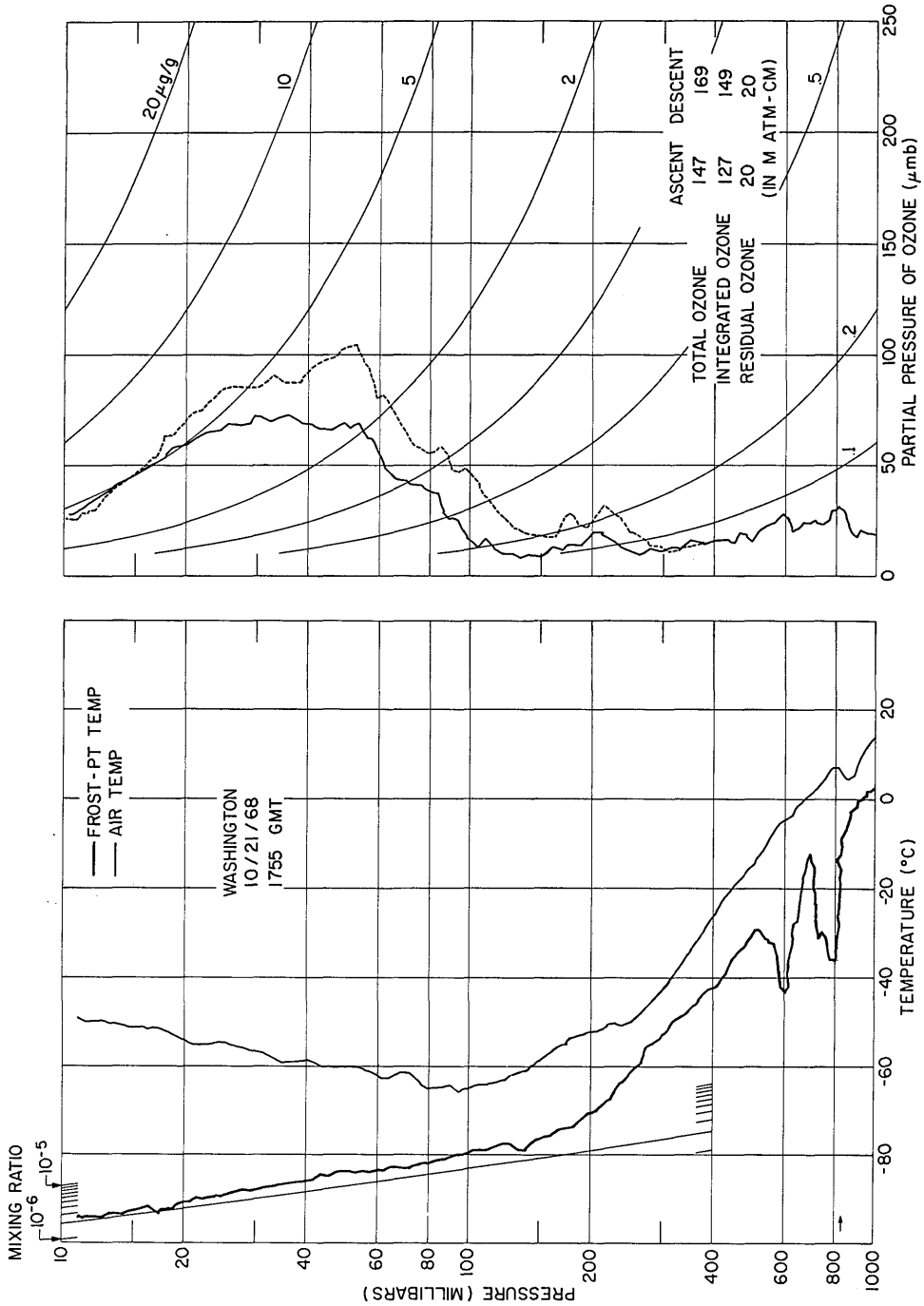
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1755 GMT
MIXING RATIO
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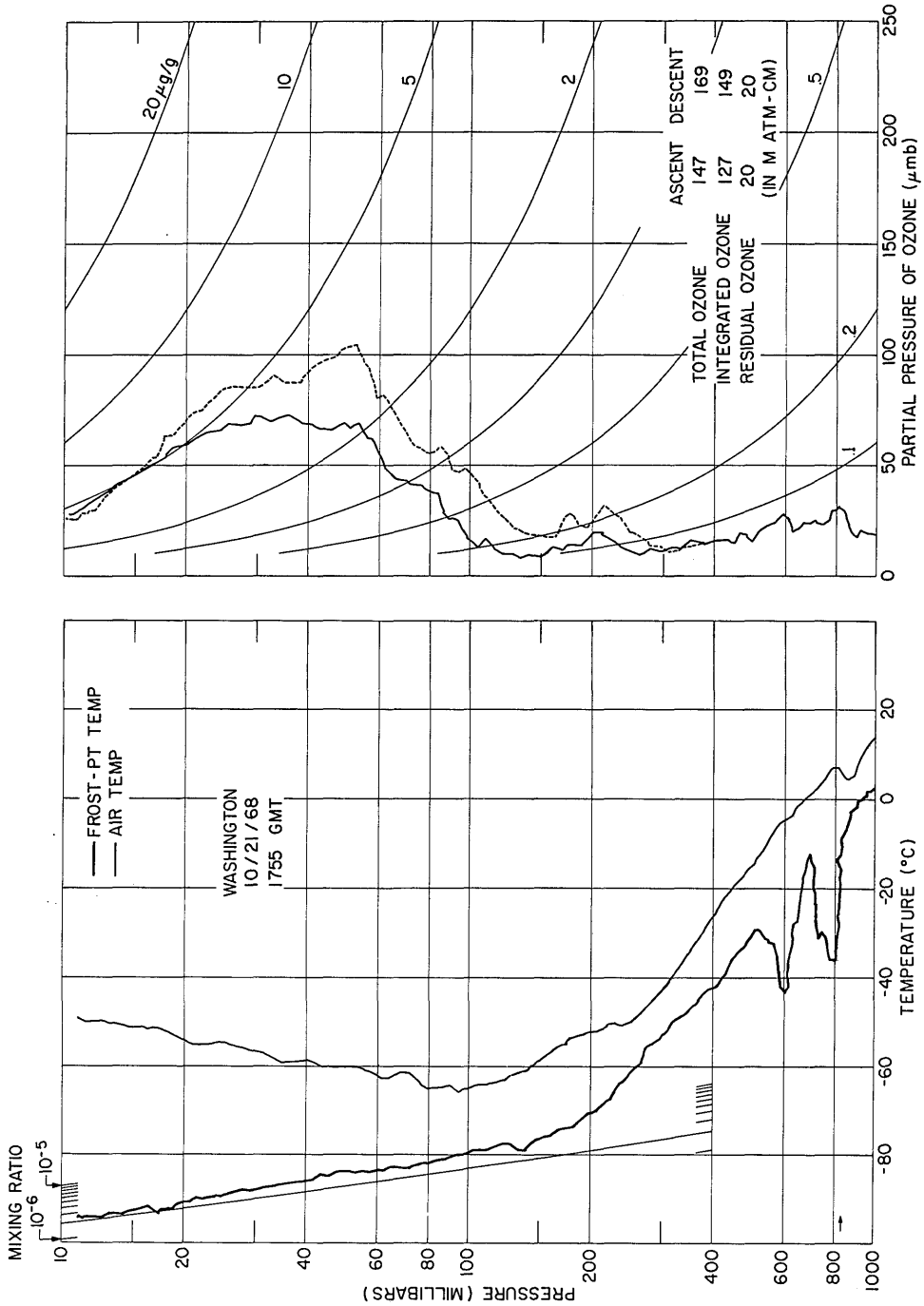
10⁻⁶
10⁻⁵
PRESSURE (MILLIBARS)
20
40
60
80
100
200
400
600
800
1000
TEMPERATURE (°C)
-80
-60
-40
-20
0
20

WASHINGTON,D.C. 3/5/68 1642Z OZONE DATA ASCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
10.65	64.61	.30942	-48.6	822.3	10.05297


20μg/g
10
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2
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ASCENT DESCENT
147 169
127 149
20 20
(IN M ATM-CM)
TOTAL OZONE
INTEGRATED OZONE
RESIDUAL OZONE
PARTIAL PRESSURE OF OZONE (μmb)
0
50
100
150
200
250
FROST-PT TEMP
AIR TEMP
WASHINGTON
10/21/68
1755 GMT
MIXING RATIO
10
10⁻⁶
10⁻⁵
PRESSURE (MILLIBARS)
20
40
60
80
100
200
400
600
800
1000
TEMPERATURE (°C)
-80
-60
-40
-20
0
20

WASHINGTON,D.C. 3/5/68 1642Z OZONE DATA DESCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
26.30	143.65	.23669	-55.4	615.9	9.05040
23.80	131.77	.24708	-54.2	637.1	9.17404
21.60	121.91	.25642	-52.5	660.2	9.35209
20.60	124.75	.26109	-52.3	669.7	10.03450
18.80	120.16	.26976	-52.1	688.0	10.59071
18.00	111.26	.27358	-52.3	696.0	10.24190
17.40	109.61	.27652	-52.7	701.6	10.43771
16.05	96.72	.28268	-53.8	714.3	9.98523
14.75	89.47	.28865	-54.0	731.1	10.05126
14.20	87.43	.29127	-54.2	738.4	10.20172
13.70	88.36	.29377	-54.4	745.4	10.68649
13.25	86.89	.29606	-54.0	753.9	10.86576
12.30	79.61	.30074	-52.7	774.7	10.72514
11.50	74.03	.30467	-52.3	791.1	10.66637
10.90	68.13	.30755	-50.8	808.6	10.35625
10.65	64.61	.30874	-48.6	822.3	10.05297

WASHINGTON, D.C. 4/25/68 1630Z WATER VAPOR DATA

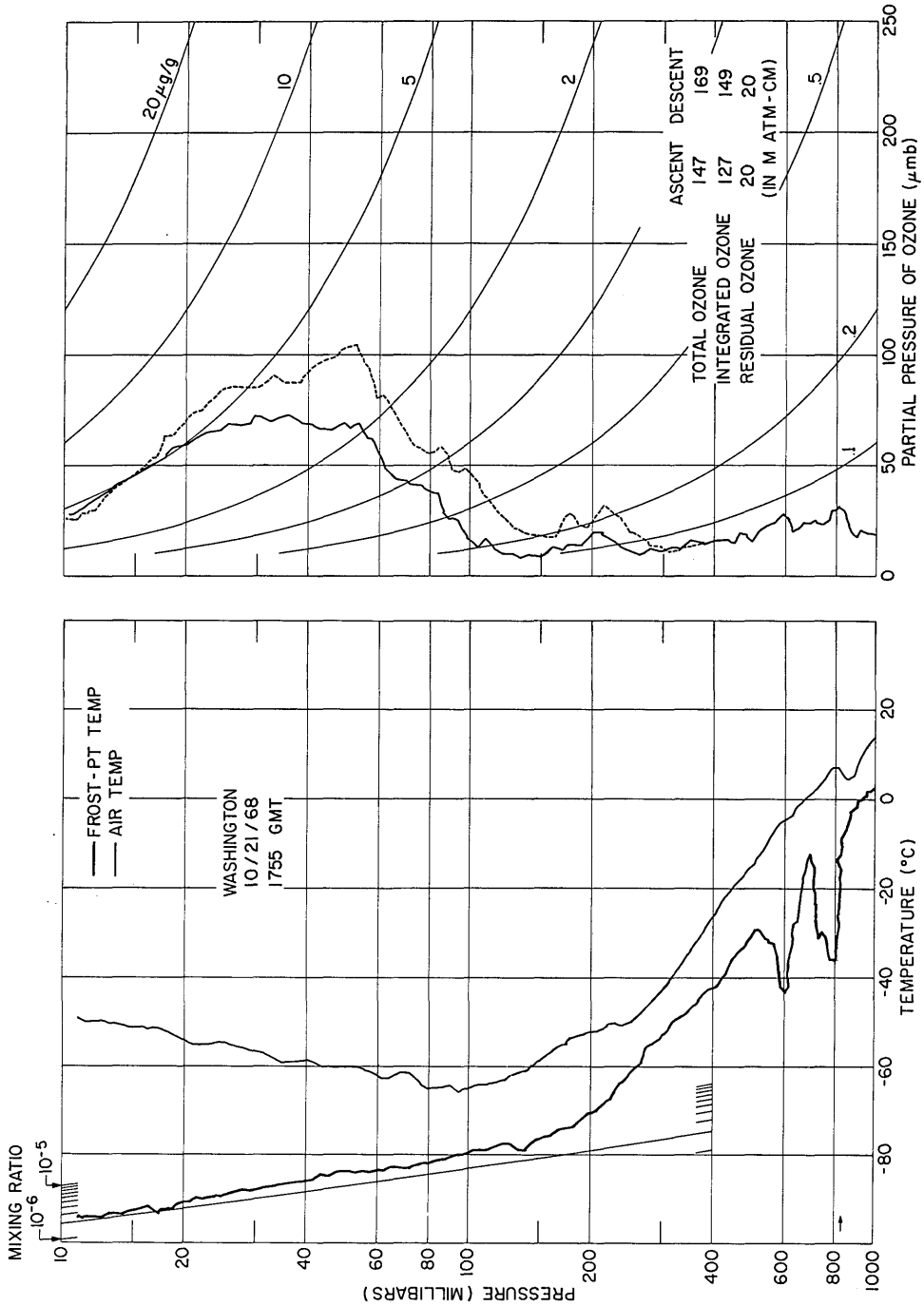
P (mb)	T (°C)	F (°C)	w (g/kg)	θ (°K)	M (cm)	ΣM (cm)
1006.50	11.4	-3.2	2.89621	284.1		
999.00	10.1	-3.2	2.91805	283.3	.02224836	.02224836
975.00	8.7	-3.9	2.82279	283.9	.07029571	.09254406
961.00	7.4	-3.9	2.86410	283.7	.04062043	.13316450
946.00	6.6	-2.5	3.27972	284.3	.04701884	.18018334
929.00	5.3	-5.3	2.63790	284.4	.05132608	.23150942
914.00	3.9	-5.3	2.68137	284.3	.04070854	.27221796
900.00	2.5	-5.9	2.58119	284.1	.03758959	.30980755
884.00	1.1	-5.9	2.62811	284.1	.04252470	.35233225
871.00	.2	-6.5	2.52557	284.3	.03418240	.38651465
856.00	-.9	-7.1	2.44132	284.6	.03801174	.42452639
842.00	-2.0	-7.1	2.48207	284.8	.03516695	.45969334
828.00	-3.2	-7.1	2.52421	284.9	.03575902	.49545236
814.00	-4.2	-7.1	2.56780	285.2	.03637138	.53182374
800.00	-5.4	-7.1	2.61293	285.4	.03700508	.56882882
784.00	-6.1	-7.1	2.66648	286.3	.04309706	.61192589
771.00	-5.9	-8.3	2.44550	287.9	.03390585	.64583173
758.50	-4.2	-7.1	2.75653	291.0	.03317602	.67900775
746.00	-2.8	-8.3	2.52778	294.0	.03370081	.71270856
733.00	-2.3	-8.8	2.45171	296.0	.03302711	.74573568
731.00	-2.3	-9.9	2.23483	296.3	.00478216	.75051783
723.50	-2.4	-11.4	1.96928	297.0	.01608710	.76660493
716.00	-2.5	-12.4	1.82464	297.7	.01451750	.78112243
708.50	-3.1	-12.9	1.76613	298.1	.01374014	.79486257
700.00	-3.7	-13.8	1.64683	298.4	.01480104	.80966361
693.30	-4.1	-15.1	1.47596	298.7	.01067479	.82033840
686.00	-4.6	-16.7	1.28479	299.1	.01028234	.83062074
678.00	-5.3	-17.1	1.25299	299.3	.01035823	.84097897
670.00	-6.1	-19.3	1.03067	299.5	.00932100	.85029997
662.00	-6.7	-21.5	.83603	299.8	.00761913	.85791910
654.00	-7.0	-23.1	.73018	300.5	.00639266	.86431175
646.00	-7.2	-24.7	.62603	301.3	.00553554	.86984730
639.00	-7.8	-27.0	.50123	301.5	.00402589	.87387319
631.00	-8.6	-28.9	.41904	301.7	.00375615	.87762934
623.00	-9.1	-28.9	.42442	302.3	.00344266	.88107200
615.50	-9.8	-30.9	.35139	302.6	.00296864	.88404064
608.00	-10.4	-32.1	.31328	302.9	.00254335	.88658398
600.00	-11.2	-31.7	.33118	303.2	.00263041	.88921440
592.00	-11.7	-29.1	.43671	303.8	.00313422	.89234862
585.00	-12.4	-26.3	.59047	303.9	.00366850	.89601712
578.00	-12.8	-24.2	.73879	304.5	.00474735	.90076447
569.50	-13.7	-25.3	.67262	304.8	.00612088	.90688534
561.00	-14.5	-26.3	.61576	305.1	.00558731	.91247265
554.00	-15.1	-27.0	.57820	305.5	.00426412	.91673677
547.00	-15.7	-27.8	.54403	305.9	.00400794	.92074470
539.00	-16.4	-29.4	.46863	306.3	.00413327	.92487797
531.00	-17.2	-30.6	.41642	306.7	.00361243	.92849040
524.30	-18.2	-32.2	.35605	306.6	.00264055	.93113095
517.00	-19.1	-33.9	.30158	306.8	.00244929	.93358023
509.50	-19.9	-35.8	.24910	307.0	.00210716	.93568739
502.00	-21.1	-36.6	.23116	307.0	.00183773	.93752512
495.00	-21.6	-37.3	.21851	307.6	.00160599	.93913111
488.00	-22.1	-38.5	.19364	308.2	.00147197	.94060308
481.00	-22.8	-39.2	.18099	308.5	.00133795	.94194102
474.00	-23.5	-39.5	.17774	309.1	.00128114	.94322217
467.00	-24.2	-39.8	.17475	309.4	.00125885	.94448102

WASHINGTON,D.C. 4/25/68 1630Z WATER VAPOR DATA

P (mb)	T (°C)	F (°C)	w (g/kg)	θ (°K)	M (cm)	ΣM (cm)
460.00	-25.0	-39.4	.18616	309.8	.00128895	.94576997
454.00	-25.8			310.0	.00000000	.94576997
447.00	-26.8			310.1	.00000000	.94576997
440.00	-27.6			310.5	.00000000	.94576997
433.00	-28.5			310.8	.00000000	.94576997
426.70	-29.4			310.9	.00000000	.94576997
420.00	-30.2			311.3	.00000000	.94576997
413.00	-31.1			311.6	.00000000	.94576997
406.00	-31.7	-45.6	.10302	312.4	.00036791	.94613788
400.00	-32.4	-51.4	.05164	312.9	.00047342	.94661130
393.00	-33.0	-51.2	.05381	313.6	.00037658	.94698788
386.50	-34.3	-49.9	.06372	313.4	.00038975	.94737764
380.00	-35.2	-48.4	.07875	313.7	.00047246	.94785009
373.50	-35.9	-49.3	.07176	314.3	.00049911	.94834921
367.00	-37.1	-50.2	.06478	314.4	.00045279	.94880199
361.00	-38.2	-50.3	.06507	314.3	.00039749	.94919948
354.00	-39.4	-50.7	.06332	314.5	.00045852	.94965801
348.00	-40.2	-51.5	.05801	315.0	.00037140	.95002940
342.00	-41.1	-51.8	.05702	315.4	.00035213	.95038153
336.00	-42.0	-53.0	.05014	315.7	.00032805	.95070958
330.00	-42.9	-53.7	.04673	316.0	.00029652	.95100610
324.00	-44.0	-54.4	.04313	316.2	.00027506	.95128116
318.00	-45.0	-55.1	.04033	316.5	.00025550	.95153666
313.00	-45.7	-55.7	.03802	317.0	.00019988	.95173654
307.00	-46.2	-56.1	.03677	318.1	.00022897	.95196551
302.00	-46.8	-56.6	.03511	318.6	.00018339	.95214890
297.00	-47.5	-57.2	.03286	319.2	.00017339	.95232229
290.00	-48.0	-57.6	.03196	320.6	.00023149	.95255378
284.50	-48.2	-58.9	.02740	322.1	.00016658	.95272036
279.30	-48.2	-59.7	.02499	323.8	.00013900	.95285936
274.00	-48.2	-60.2	.02376	325.6	.00013182	.95299117
269.00	-48.2	-61.2	.02128	327.3	.00011489	.95310606
264.00	-48.0	-63.6	.01556	329.4	.00009397	.95320003
259.50	-47.4	-63.2	.01661	332.0	.00007385	.95327388
255.00	-46.7	-66.9	.01005	334.7	.00006121	.95333509
250.50	-46.5	-68.7	.00782	336.6	.00004101	.95337610
246.00	-46.3	-68.5	.00819	338.6	.00003675	.95341285
241.50	-46.2	-69.0	.00780	340.7	.00003670	.95344955
237.00	-46.0	-71.4	.00559	342.7	.00003073	.95348027
232.50	-45.5	-73.4	.00418	345.4	.00002241	.95350268
228.00	-44.5	-74.7	.00350	348.8	.00001763	.95352031
223.70	-44.8	-74.5	.00365	350.2	.00001568	.95353599
219.00	-45.0	-74.1	.00400	352.1	.00001833	.95355432
215.00	-45.7	-74.0	.00412	352.9	.00001657	.95357089
211.00	-46.3	-74.5	.00390	353.8	.00001638	.95358726
206.50	-46.7	-74.8	.00379	355.5	.00001766	.95360492
202.00	-47.5	-73.5	.00471	356.4	.00001951	.95362443
198.50	-47.5	-71.6	.00648	358.1	.00001997	.95364439
194.00	-47.7	-72.9	.00543	360.2	.00002733	.95367172
190.50	-47.5	-73.7	.00484	362.4	.00001834	.95369007
187.00	-47.4	-74.1	.00469	364.6	.00001702	.95370708
183.20	-47.5	-74.4	.00454	366.4	.00001790	.95372498
179.00	-48.0	-74.5	.00460	368.0	.00001960	.95374458
175.70	-48.4	-74.1	.00499	369.4	.00001614	.95376071
172.00	-49.1	-74.0	.00515	370.5	.00001913	.95377985

WASHINGTON,D.C. 4/25/68 1630Z WATER VAPOR DATA

P (mb)	T (°C)	F (°C)	w (g/kg)	θ (°K)	M (cm)	ΣM (cm)
168.70	-49.1	-75.3	.00431	372.6	.00001591	.95379576
165.00	-49.1	-76.0	.00392	374.9	.00001553	.95381129
161.70	-49.1	-75.9	.00404	377.1	.00001341	.95382470
157.50	-49.6	-76.1	.00406	379.0	.00001737	.95384207
155.00	-50.0	-76.1	.00409	380.2	.00001039	.95385246
152.00	-50.9	-76.2	.00412	380.7	.00001256	.95386502
148.40	-51.1	-76.2	.00422	383.0	.00001532	.95388034
145.00	-51.5	-76.5	.00414	384.9	.00001450	.95389484
142.00	-51.8	-75.9	.00461	386.5	.00001338	.95390822
139.00	-52.8	-76.4	.00436	387.2	.00001372	.95392194
136.00	-53.2	-77.4	.00383	389.0	.00001253	.95393448
133.00	-53.4	-77.7	.00371	391.1	.00001153	.95394601
130.30	-53.8	-77.2	.00409	392.7	.00001073	.95395674
128.00	-54.0	-77.8	.00381	394.3	.00000925	.95396599
125.00	-54.6	-78.3	.00356	395.9	.00001128	.95397727
122.00	-55.2	-78.6	.00349	397.6	.00001079	.95398806
119.50	-55.2	-78.8	.00348	399.9	.00000888	.95399694
117.00	-54.6	-77.8	.00416	403.5	.00000975	.95400669
114.50	-54.0	-77.5	.00445	407.1	.00001098	.95401767
112.00	-54.0	-76.7	.00519	409.7	.00001228	.95402995
109.50	-54.0	-78.5	.00398	412.3	.00001168	.95404163
107.50	-54.8	-78.7	.00391	413.0	.00000805	.95404968
105.00	-55.8	-78.8	.00392	413.8	.00000998	.95405966
102.50	-56.9	-78.2	.00444	414.6	.00001065	.95407031
100.00	-57.5	-78.1	.00466	416.3	.00001161	.95408192
98.30	-58.0	-79.1	.00404	417.5	.00000754	.95408946
96.10	-58.2	-78.8	.00433	419.7	.00000939	.95409885
94.00	-58.0	-79.3	.00408	422.8	.00000900	.95410785
92.00	-57.8	-80.2	.00358	425.9	.00000781	.95411566
90.00	-58.2	-80.3	.00362	427.7	.00000733	.95412299
88.00	-58.9	-80.4	.00361	429.1	.00000736	.95413035
85.90	-59.4	-80.8	.00348	431.1	.00000758	.95413794
83.90	-59.8	-80.9	.00352	433.1	.00000714	.95414507
81.90	-59.6	-80.9	.00356	436.5	.00000723	.95415230
80.00	-59.1	-81.0	.00360	440.4	.00000694	.95415924
78.00	-58.4	-80.9	.00379	445.1	.00000754	.95416678
76.00	-57.8	-80.7	.00398	449.8	.00000793	.95417471
74.00	-57.1	-81.4	.00362	454.6	.00000775	.95418246
72.00	-56.9	-81.5	.00367	458.6	.00000744	.95418990
70.00	-57.1	-81.7	.00364	461.9	.00000745	.95419735
68.10	-57.5	-82.3	.00342	464.6	.00000684	.95420419
66.20	-57.5	-82.0	.00370	468.4	.00000690	.95421109
64.40	-57.5	-81.9	.00386	472.1	.00000693	.95421802
62.40	-57.5	-82.1	.00383	476.3	.00000784	.95422585
60.60	-57.5	-82.3	.00385	480.3	.00000705	.95423290
59.10	-57.3	-82.5	.00379	484.3	.00000584	.95423874
57.40	-57.1	-83.0	.00357	488.8	.00000638	.95424512
55.70	-56.9	-83.4	.00344	493.5	.00000606	.95425119
54.10	-56.3	-83.5	.00349	499.1	.00000565	.95425683
52.50	-56.0	-83.6	.00355	503.9	.00000574	.95426257
51.00	-56.0	-84.0	.00342	508.1	.00000532	.95426789
49.40	-56.0	-84.6	.00320	512.8	.00000539	.95427328
47.80	-56.3	-85.0	.00308	517.1	.00000513	.95427841
46.30	-56.7	-85.5	.00292	520.8	.00000459	.95428300
44.70	-56.7	-85.5	.00298	526.1	.00000481	.95428781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1755 GMT
MIXING RATIO
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10⁻⁶
10⁻⁵
PRESSURE (MILLIBARS)
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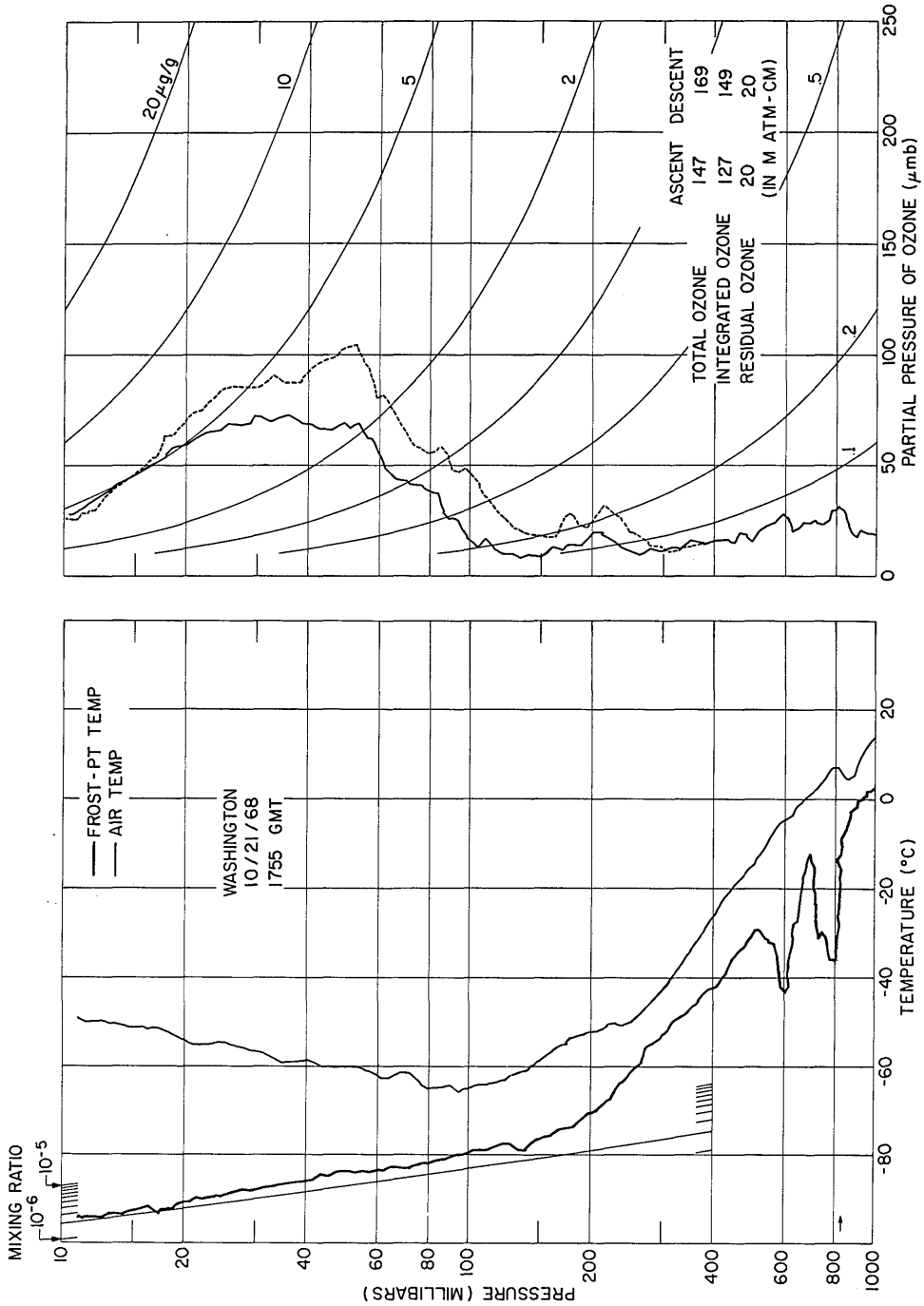
100
200
400
600
800
1000
TEMPERATURE (°C)
-80
-60
-40
-20
0
20


20μg/g
10
5
2
1
.2
.5
ASCENT DESCENT
147 169
127 149
20 20
(IN M ATM-CM)
TOTAL OZONE
INTEGRATED OZONE
RESIDUAL OZONE
PARTIAL PRESSURE OF OZONE (μmb)
0
50
100
150
200
250
FROST-PT TEMP
AIR TEMP
WASHINGTON
10/21/68
1755 GMT
MIXING RATIO
10
10⁻⁶
10⁻⁵
PRESSURE (MILLIBARS)
20
40
60
80
100
200
400
600
800
1000
TEMPERATURE (°C)
-80
-60
-40
-20
0
20

WASHINGTON,D.C. 4/25/68 1630Z OZONE DATA ASCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
109.00	51.55	.12308	-52.6	415.5	.78372
103.50	58.09	.12546	-54.6	417.9	.93000
101.00	59.88	.12661	-56.0	418.0	.98237
98.00	59.39	.12803	-57.8	418.3	1.00412
95.60	63.62	.12927	-58.2	420.4	1.10272
91.00	77.46	.13229	-58.9	425.0	1.41047
87.00	82.30	.13521	-58.9	430.5	1.56757
84.60	78.63	.13694	-58.9	433.9	1.54012
81.00	66.64	.13923	-59.1	438.9	1.36317
78.80	71.24	.14078	-59.4	441.9	1.49799
77.00	81.21	.14226	-59.6	444.3	1.74762
75.20	86.38	.14388	-59.1	448.3	1.90332
72.20	84.46	.14659	-58.0	455.9	1.93848
68.40	99.49	.15084	-57.3	464.5	2.41021
65.60	112.07	.15454	-57.3	470.0	2.83090
62.60	119.38	.15895	-57.5	475.9	3.16002
58.40	130.73	.16612	-57.8	484.9	3.70925
55.80	144.42	.17131	-56.9	493.3	4.28866
53.40	153.21	.17663	-55.2	503.4	4.75413
51.00	158.89	.18240	-55.4	509.6	5.16226
48.80	165.79	.18817	-55.4	516.1	5.62922
47.80	166.48	.19089	-55.6	518.6	5.77122
44.70	160.64	.19940	-56.0	527.6	5.95499
42.80	162.16	.20496	-55.2	536.3	6.27817
41.00	172.19	.21080	-54.8	543.9	6.95905
40.00	177.06	.21425	-54.4	548.8	7.33465
38.20	178.80	.22075	-54.2	556.6	7.75583
36.60	174.66	.22665	-54.0	563.9	7.90743
35.10	171.24	.23231	-53.0	573.3	8.08399
33.60	169.54	.23816	-52.8	581.0	8.36090
32.20	166.98	.24377	-52.0	590.2	8.59295
30.90	166.86	.24920	-52.0	597.1	8.94755
29.50	159.25	.25503	-52.8	603.0	8.94499
28.20	155.63	.26056	-52.0	612.9	9.14435
27.10	150.33	.26529	-51.1	622.6	9.19189
26.00	148.34	.27014	-50.7	631.1	9.45406
24.90	147.87	.27519	-50.9	638.4	9.84025
23.70	142.13	.28073	-50.9	647.4	9.93703
22.80	137.27	.28493	-50.7	655.2	9.97640
21.90	133.95	.28918	-50.2	664.4	10.13488
21.00	130.76	.29352	-48.2	678.3	10.31741
20.20	126.79	.29741	-47.4	688.5	10.40079
19.30	120.22	.30173	-47.7	696.5	10.32137
18.60	118.38	.30518	-46.8	706.6	10.54556
18.15	119.63	.30750	-46.2	713.6	10.92113
17.80	118.02	.30931	-46.3	717.1	10.98606
17.05	113.27	.31316	-47.0	723.8	11.00769
16.40	106.12	.31642	-47.4	730.8	10.72171
15.80	100.11	.31936	-45.5	744.7	10.49922
15.20	98.17	.32236	-44.0	757.8	10.70202
14.65	97.39	.32520	-43.1	769.0	11.01588
14.00	95.53	.32862	-41.8	783.2	11.30634
13.50	94.63	.33134	-41.1	794.1	11.61530
13.00	91.78	.33407	-40.8	803.7	11.69808
12.50	90.16	.33686	-40.9	812.2	11.95214

WASHINGTON,D.C. 4/25/68 1630Z OZONE DATA ASCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
12.30	86.39	.33796	-40.9	816.0	11.63815
11.90	85.79	.34020	-39.9	827.5	11.94613
11.50	84.69	.34249	-38.7	839.8	12.20236
11.20	81.87	.34420	-38.0	848.8	12.11195
10.90	81.07	.34593	-38.0	855.4	12.32417
10.80	79.43	.34651	-37.8	858.2	12.18717

WASHINGTON,D.C. 4/25/68 1630Z OZONE DATA DESCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
780.00					
768.00	49.63	.00061	-.4	294.1	.10709
750.00	49.50	.00153	-.2	296.3	.10936
736.00	49.11	.00226	-.5	297.6	.11056
703.00	48.36	.00402	-1.9	300.0	.11398
672.00	50.63	.00582	-3.6	302.0	.12484
649.00	46.74	.00710	-5.3	303.1	.11934
624.00	45.61	.00852	-7.6	303.9	.12110
602.00	42.39	.00972	-9.6	304.6	.11669
594.00	41.23	.01015	-10.4	304.9	.11500
571.00	41.03	.01143	-12.3	306.2	.11906
554.00	44.79	.01250	-13.8	307.0	.13396
531.00	48.48	.01412	-16.3	307.8	.15127
509.50	51.84	.01581	-18.8	308.4	.16861
495.00	53.79	.01704	-20.6	308.8	.18007
398.00	27.36	.02175	-32.5	313.1	.11389
378.00	23.05	.02269	-35.5	313.8	.10104
364.00	24.73	.02342	-37.8	314.1	.11258
352.00	25.47	.02410	-39.6	314.8	.11991
340.00	25.54	.02480	-41.4	315.5	.12448
327.00	26.37	.02561	-43.4	316.2	.13363
315.00	40.29	.02680	-45.5	316.7	.21191
304.00	50.50	.02822	-46.5	318.5	.27526
287.00	72.69	.03152	-48.2	321.3	.41966
276.00	87.38	.03421	-48.2	324.9	.52457
266.00	98.94	.03710	-48.2	328.4	.61634
260.50	105.57	.03884	-47.7	331.1	.67152
252.00	120.65	.04200	-46.7	335.8	.79331
243.00	136.91	.04593	-46.2	340.1	.93358
238.00	154.89	.04847	-46.2	342.1	1.07838
233.00	167.04	.05127	-45.7	344.9	1.18794
224.00	157.20	.05616	-44.7	350.3	1.16282
215.00	162.08	.06141	-45.7	352.9	1.24913
207.00	163.34	.06630	-46.7	355.2	1.30751
199.00	154.38	.07110	-47.5	357.9	1.28549
194.50	144.89	.07372	-47.7	360.0	1.23436
187.00	111.37	.07718	-47.4	364.6	.98682
173.00	84.80	.08239	-49.1	369.9	.81219
169.00	77.43	.08382	-49.1	372.4	.75914
161.50	61.19	.08601	-49.3	376.9	.62783
155.00	55.60	.08781	-50.0	380.2	.59440
147.00	45.23	.08970	-51.3	383.7	.50984
144.00	45.25	.09044	-51.5	385.7	.52073
140.50	42.83	.09127	-52.0	387.4	.50510
132.00	52.43	.09386	-53.4	392.0	.65815
127.00	50.48	.09540	-54.0	395.2	.65868
121.00	50.12	.09731	-55.4	398.1	.68637
119.00	54.52	.09803	-55.0	400.8	.75910
113.50	58.82	.10022	-54.0	408.1	.85872
111.00	66.30	.10139	-54.0	410.7	.98967
108.50	63.78	.10254	-54.6	412.3	.97400
104.00	77.83	.10514	-56.0	414.5	1.24007
101.50	76.57	.10661	-57.1	415.4	1.25002
99.20	86.18	.10817	-57.8	416.8	1.43951
97.40	89.84	.10947	-58.2	418.1	1.52838
95.00	77.28	.11099	-58.2	421.1	1.34795

WASHINGTON,D.C. 4/25/68 1630Z OZONE DATA DESCENT

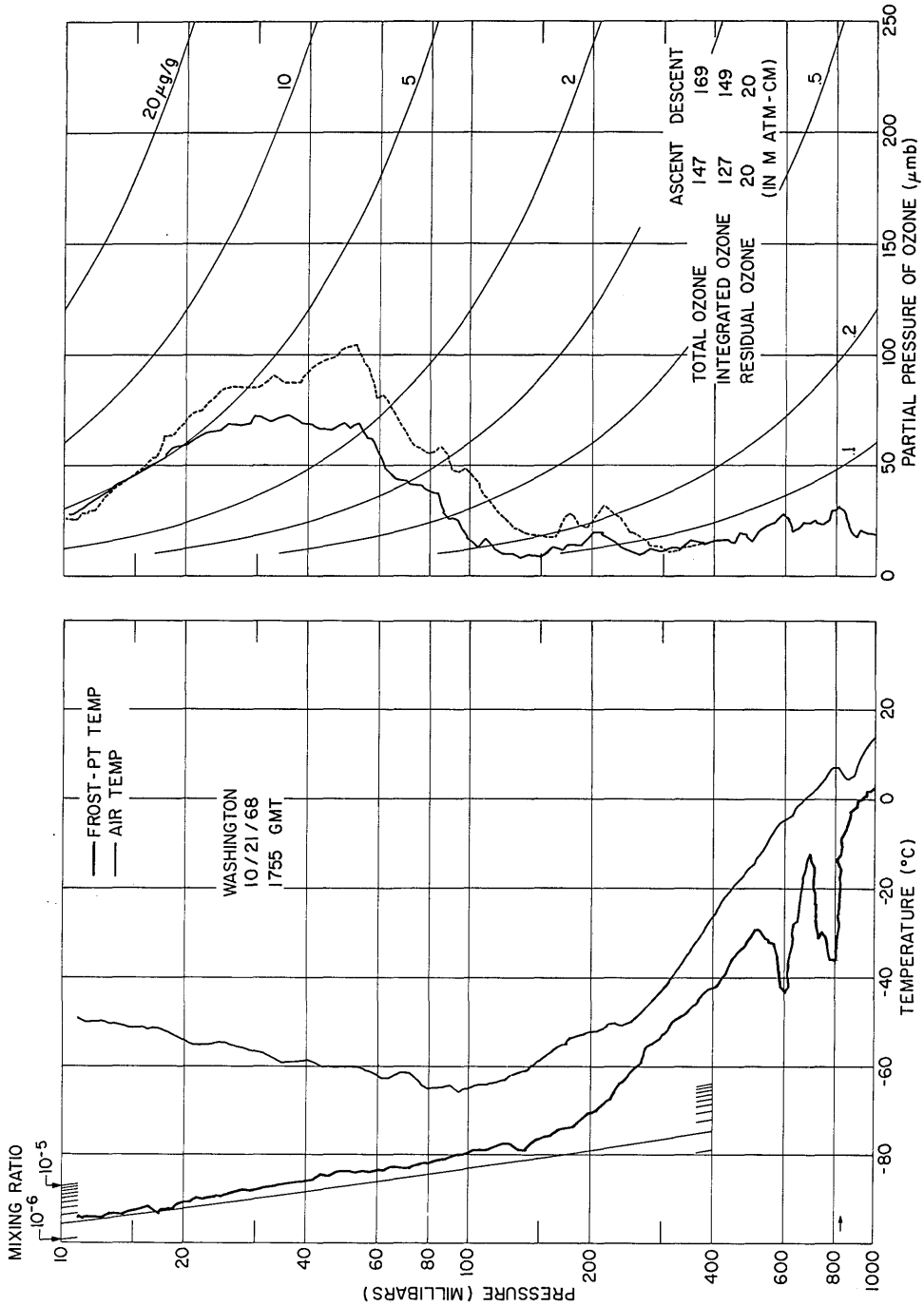
PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
91.20	109.07	.11450	-58.2	426.1	1.98175
86.80	124.14	.11935	-59.1	430.3	2.36983
84.70	125.57	.12178	-59.6	432.4	2.45663
82.60	118.19	.12412	-59.6	435.5	2.37090
78.80	119.19	.12855	-58.9	442.8	2.50635
74.90	132.27	.13385	-57.5	452.1	2.92609
73.00	144.75	.13679	-56.9	456.8	3.28563
70.90	132.05	.13983	-57.1	460.2	3.08606
67.00	118.38	.14512	-57.5	466.8	2.92757
65.00	120.73	.14801	-57.5	470.8	3.07780
61.10	135.82	.15465	-57.5	479.2	3.68327
58.00	155.34	.16103	-57.1	487.4	4.43790
54.60	167.42	.16902	-56.7	496.8	5.08080
52.80	178.05	.17373	-56.0	503.1	5.58757
49.80	177.26	.18192	-56.0	511.6	5.89804
48.10	175.03	.18672	-56.3	516.2	6.02966
45.20	192.38	.19616	-56.7	524.4	7.05247
42.80	205.14	.20500	-55.8	534.7	7.94186
40.40	198.81	.21406	-55.4	544.7	8.15426
37.60	187.25	.22468	-54.8	557.5	8.25195
34.80	177.37	.23552	-53.8	572.6	8.44551
32.20	169.38	.24590	-54.0	584.9	8.71617
29.50	159.88	.25696	-53.2	601.9	8.98031
28.40	159.88	.26175	-51.5	613.3	9.32814
26.40	155.07	.27070	-51.3	626.7	9.73325
24.50	146.04	.27931	-51.1	640.8	9.87701
23.00	138.19	.28620	-50.9	653.0	9.95551
21.70	130.06	.29218	-48.0	672.5	9.93120
20.50	124.84	.29778	-48.7	681.4	10.09071
19.90	120.59	.30061	-48.4	688.3	10.04140
18.70	115.81	.30630	-47.9	702.3	10.26175
17.70	105.05	.31086	-47.9	713.4	9.83405
16.85	101.44	.31480	-46.8	726.8	9.97557
16.10	98.61	.31834	-45.0	742.3	10.14920
15.30	97.16	.32225	-44.0	756.3	10.52251
14.70	95.46	.32527	-41.5	773.4	10.76046
14.15	92.25	.32805	-41.4	782.4	10.80270
13.60	90.29	.33087	-41.5	790.8	11.00018
13.10	88.75	.33350	-41.4	799.9	11.22586
12.70	86.27	.33561	-39.6	813.3	11.25630
12.20	84.10	.33827	-38.2	827.3	11.42211
11.80	80.94	.34041	-38.2	835.2	11.36554
11.50	78.84	.34201	-38.4	840.9	11.36035
11.20	78.39	.34364	-36.9	852.5	11.59703
10.90	78.39	.34532	-36.9	859.1	11.91622
10.80	78.39	.34589	-37.4	859.8	12.02655

WASHINGTON,D.C. 5/29/68 1600Z WATER VAPOR DATA

P (mb)	T (°C)	F (°C)	w (g/kg)	θ (°K)	M (cm)	ΣM (cm)
1007.40	5.7	7.3	6.35966	278.3		
1001.00	6.7	8.2	6.83175	279.8	.04307380	.04307380
990.00	7.6	8.2	6.90850	281.6	.07711332	.12018712
975.00	8.5	9.2	7.51040	283.7	.11034822	.23053534
955.00	9.4	9.2	7.66962	286.3	.15489750	.38543284
940.00	10.3	9.2	7.79354	288.5	.11834005	.50377288
926.00	11.1	3.9	5.45594	290.5	.09463878	.59841166
910.00	12.0	-2.4	3.45000	293.0	.07270123	.67111290
896.00	12.0	-3.0	3.32846	294.3	.04841733	.71953022
883.00	11.1	-3.6	3.21230	294.5	.04338238	.76291260
870.00	10.2	-3.0	3.42848	294.8	.04404578	.80695838
855.11	9.1	-3.0	3.48851	295.2	.05254774	.85950612
842.00	8.3	-3.6	3.36956	295.7	.04587193	.90537804
827.00	7.4	-4.1	3.27253	296.3	.05083215	.95621020
813.00	6.7	-3.6	3.49043	296.9	.04830667	1.00451687
800.00	5.8	-3.6	3.54747	297.4	.04667978	1.05119665
786.00	4.8	-5.7	2.99359	297.8	.04672171	1.09791836
772.00	4.4	-6.3	2.91219	298.9	.04218400	1.14010236
758.00	3.8	-7.3	2.71956	299.8	.04022659	1.18032895
743.50	2.8	-8.2	2.55014	300.4	.03898481	1.21931376
730.00	2.0	-8.2	2.59749	301.1	.03545545	1.25476921
718.00	1.3	-9.1	2.43597	301.7	.03081699	1.28558619
706.00	.5	-12.1	1.90170	302.3	.02655707	1.31214327
691.00	.1	-13.6	1.68864	303.7	.02747703	1.33962029
677.00	-.5	-18.9	1.05498	304.8	.01959725	1.35921754
663.50	-1.1	-23.2	.71132	305.8	.01216580	1.37138334
650.00	-1.7	-25.0	.60293	307.0	.00905220	1.38043554
638.50	-2.6	-25.7	.57419	307.5	.00690658	1.38734213
626.00	-3.8	-30.1	.37468	307.9	.00605148	1.39339361
613.50	-5.0	-31.0	.34838	308.4	.00461134	1.39800495
600.00	-6.3	-31.6	.33141	308.8	.00468221	1.40268716
586.00	-7.5	-32.0	.32754	309.4	.00470679	1.40739395
574.00	-8.7	-33.0	.30112	309.9	.00384893	1.41124287
562.00	-10.2	-33.9	.27786	310.0	.00354478	1.41478765
550.00	-11.6	-35.4	.24141	310.3	.00317921	1.41796686
538.00	-13.0	-36.0	.23182	310.6	.00289729	1.42086415
527.00	-14.3	-34.7	.27297	310.8	.00283299	1.42369714
515.50	-15.7	-37.5	.20464	311.1	.00280231	1.42649946
505.00	-17.2	-38.7	.18324	311.1	.00207791	1.42857736
492.50	-18.7	-39.4	.17254	311.5	.00226897	1.43084633
482.00	-20.1	-39.6	.17390	311.8	.00185588	1.43270221
470.00	-21.6	-39.6	.17834	312.2	.00215656	1.43485877
460.00	-23.1	-41.7	.14276	312.2	.00163826	1.43649703
449.00	-24.3	-44.5	.10522	312.8	.00139174	1.43788877
439.00	-25.7	-45.1	.10129	313.0	.00105360	1.43894237
429.00	-27.2	-46.8	.08385	313.3	.00094455	1.43988693
420.00	-29.2	-46.5	.08970	312.5	.00079687	1.44068380
414.00	-29.9	-45.8	.09879	313.0	.00057700	1.44126080
408.00	-30.5	-46.2	.09564	313.4	.00059520	1.44185600
402.00	-31.2	-46.9	.08843	313.9	.00056349	1.44241948
396.00	-31.9	-46.6	.09295	314.4	.00055525	1.44297473
389.50	-32.7	-46.4	.09787	314.8	.00063282	1.44360755
383.00	-33.4	-46.4	.09953	315.5	.00065465	1.44426221
376.00	-34.0	-46.1	.10498	316.2	.00073041	1.44499262
369.00	-34.9	-44.9	.12350	316.8	.00081600	1.44580862
362.00	-35.6	-45.0	.12435	317.6	.00088517	1.44669379

WASHINGTON,D.C. 5/29/68 1600Z WATER VAPOR DATA

P (mb)	T (°C)	F (°C)	w (g/kg)	θ (°K)	M (cm)	ΣM (cm)
355.00	-36.3	-46.6	.10369	318.5	.00081441	1.44750820
347.50	-37.0	-50.7	.06427	319.5	.00064270	1.44815090
340.00	-37.7	-52.9	.05003	320.5	.00043738	1.44858828
334.50	-38.5	-54.5	.04150	320.8	.00025685	1.44884513
328.00	-39.1	-56.3	.03335	321.8	.00024824	1.44909337
323.00	-39.9	-58.2	.02654	322.2	.00015278	1.44924615
317.50	-40.4	-58.4	.02623	323.0	.00014807	1.44939423
312.00	-41.2	-58.4	.02669	323.6	.00014850	1.44954273
307.00	-41.8	-58.8	.02560	324.2	.00013338	1.44967611
301.50	-42.1	-59.6	.02346	325.4	.00013764	1.44981375
297.00	-42.7	-60.5	.02103	326.0	.00010212	1.44991587
291.00	-42.9	-61.5	.01878	327.7	.00012185	1.45003772
286.00	-43.3	-62.1	.01755	328.6	.00009267	1.45013039
281.00	-44.3	-62.5	.01704	328.9	.00008821	1.45021860
276.00	-45.1	-62.7	.01671	329.5	.00008607	1.45030467
271.00	-46.1	-63.4	.01548	329.8	.00008211	1.45038678
266.00	-46.7	-63.7	.01518	330.5	.00007822	1.45046499
261.30	-47.6	-63.9	.01503	331.0	.00007245	1.45053744
256.00	-48.3	-64.0	.01505	331.9	.00008133	1.45061877
251.00	-48.8	-65.0	.01331	333.0	.00007235	1.45069112
246.00	-49.5	-65.6	.01247	333.9	.00006576	1.45075688
241.80	-50.0	-65.9	.01221	334.8	.00005288	1.45080976
237.00	-50.6	-66.2	.01188	335.9	.00005899	1.45086876
233.00	-51.5	-66.4	.01185	336.1	.00004841	1.45091717
228.00	-51.7	-67.0	.01100	337.9	.00005826	1.45097543
224.00	-51.9	-68.2	.00940	339.3	.00004162	1.45101705
219.50	-51.9	-69.4	.00811	341.3	.00004019	1.45105724
215.00	-51.9	-71.1	.00644	343.3	.00003339	1.45109063
211.00	-52.0	-71.8	.00586	344.9	.00002509	1.45111573
207.00	-52.2	-73.5	.00464	346.5	.00002141	1.45113714
203.00	-52.4	-74.4	.00411	348.1	.00001784	1.45115498
198.00	-52.6	-73.9	.00455	350.3	.00002207	1.45117705
194.00	-53.4	-75.0	.00389	351.1	.00001721	1.45119426
190.00	-54.2	-76.2	.00331	352.0	.00001469	1.45120895
186.00	-54.8	-77.8	.00261	353.1	.00001208	1.45122103
182.50	-55.2	-78.3	.00247	354.4	.00000907	1.45123011
179.00	-55.2	-78.3	.00252	356.4	.00000891	1.45123902
175.00	-54.4	-79.2	.00222	360.0	.00000967	1.45124869
171.00	-54.2	-80.5	.00182	362.7	.00000824	1.45125693
167.00	-54.0	-81.4	.00161	365.5	.00000699	1.45126392
163.00	-53.6	-81.9	.00153	368.7	.00000639	1.45127031
160.00	-53.2	-81.9	.00156	371.3	.00000474	1.45127505
157.00	-53.6	-82.9	.00134	372.7	.00000444	1.45127949
153.00	-54.4	-83.4	.00126	374.1	.00000529	1.45128478
149.50	-55.2	-84.1	.00114	375.2	.00000428	1.45128906
146.00	-55.6	-84.8	.00104	377.0	.00000389	1.45129295
142.50	-55.4	-85.0	.00102	380.0	.00000368	1.45129663
139.00	-55.2	-85.0	.00105	383.1	.00000368	1.45130031
136.00	-55.2	-84.9	.00110	385.5	.00000328	1.45130359
132.70	-55.4	-84.5	.00121	387.8	.00000387	1.45130746
129.50	-55.8	-84.1	.00131	389.8	.00000411	1.45131157
126.50	-56.4	-84.4	.00128	391.3	.00000396	1.45131554
123.00	-56.4	-84.9	.00122	394.4	.00000447	1.45132001
120.30	-56.4	-85.1	.00119	396.9	.00000331	1.45132332
117.50	-56.2	-85.1	.00122	400.0	.00000343	1.45132674


20μg/g
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ASCENT DESCENT
147 169
127 149
20 20
(IN M ATM-CM)
TOTAL OZONE
INTEGRATED OZONE
RESIDUAL OZONE
PARTIAL PRESSURE OF OZONE (μmb)
0
50
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FROST-PT TEMP
AIR TEMP
WASHINGTON
10/21/68
1755 GMT
MIXING RATIO
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10⁻⁶
10⁻⁵
PRESSURE (MILLIBARS)
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TEMPERATURE (°C)
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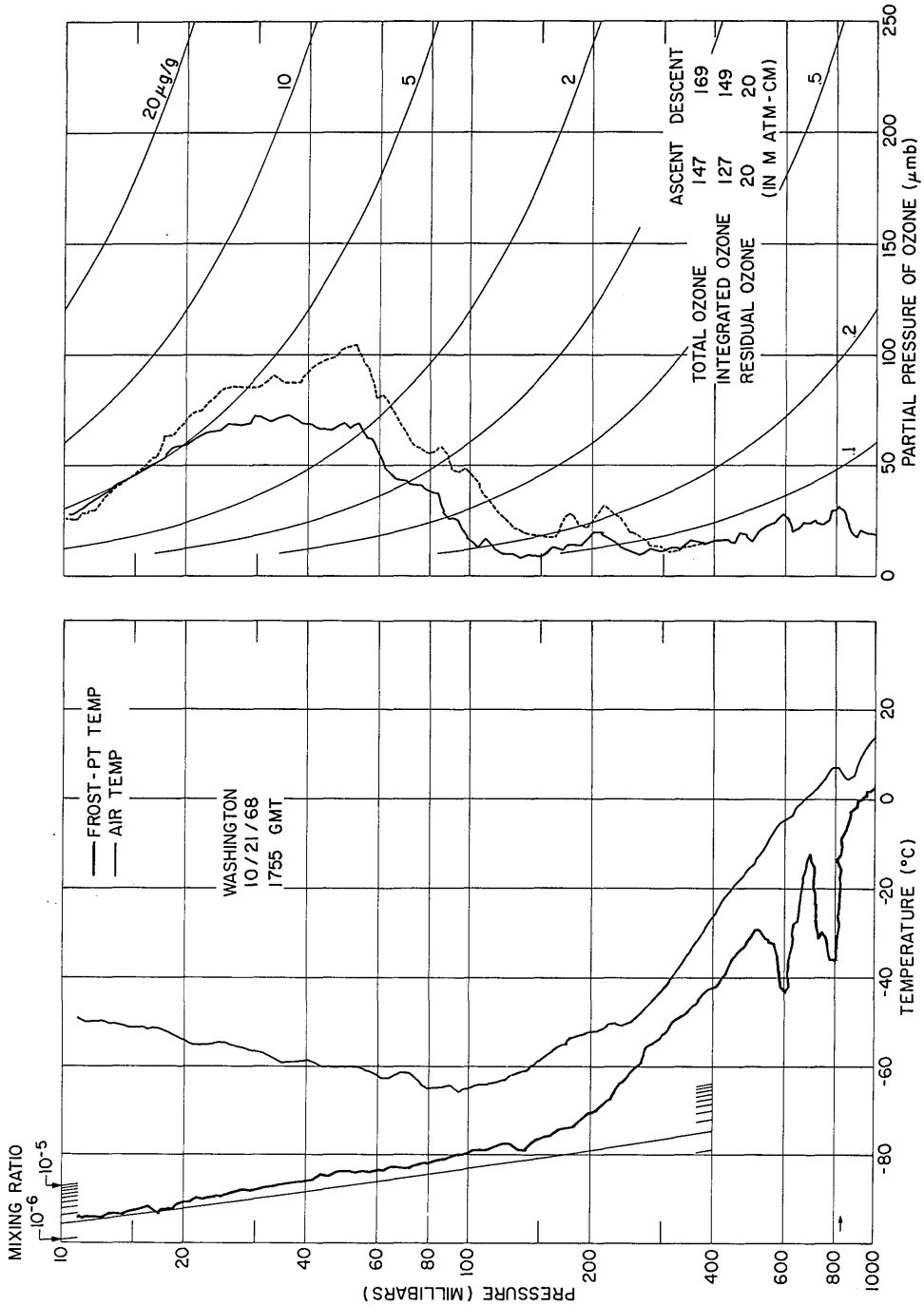
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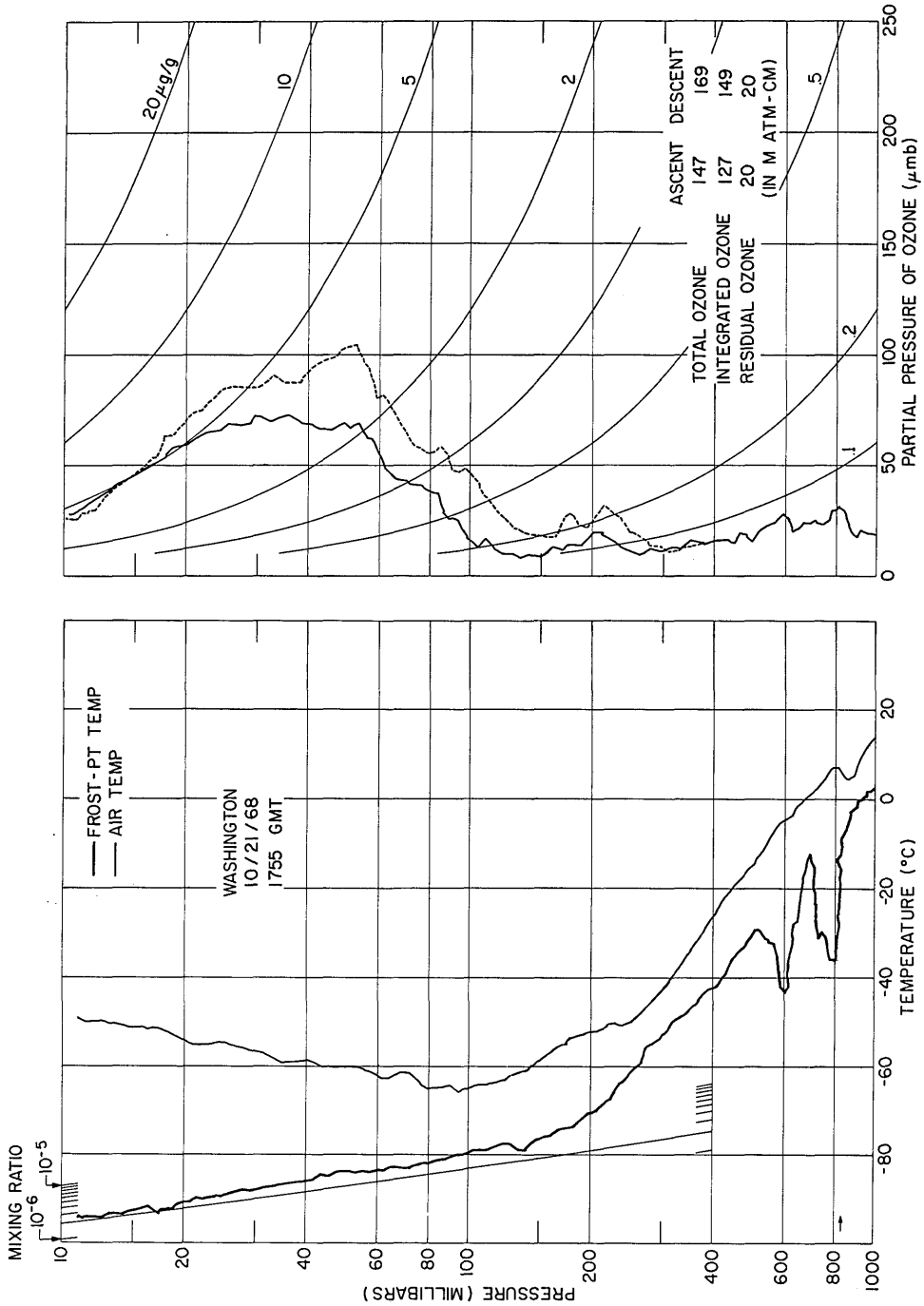
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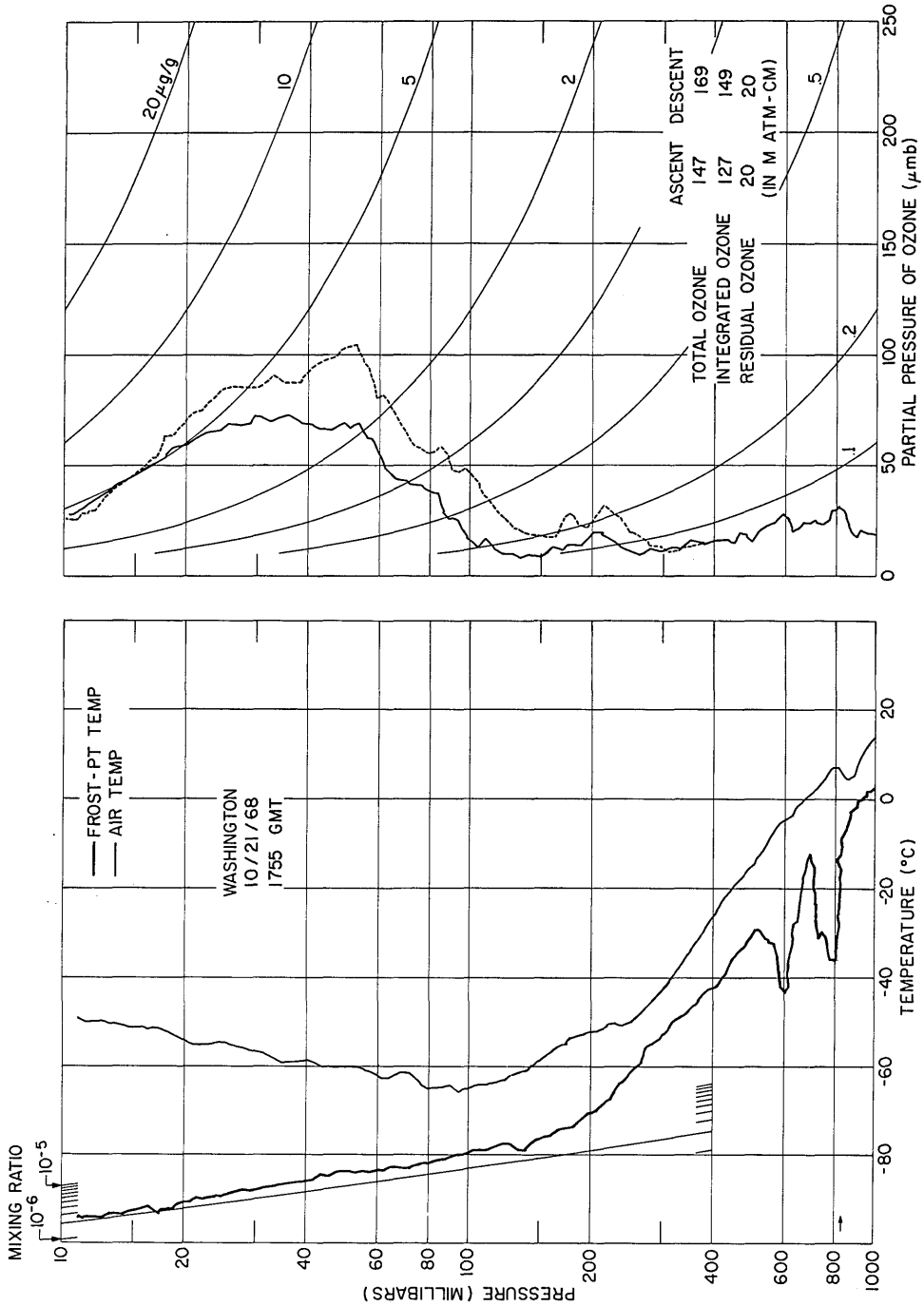
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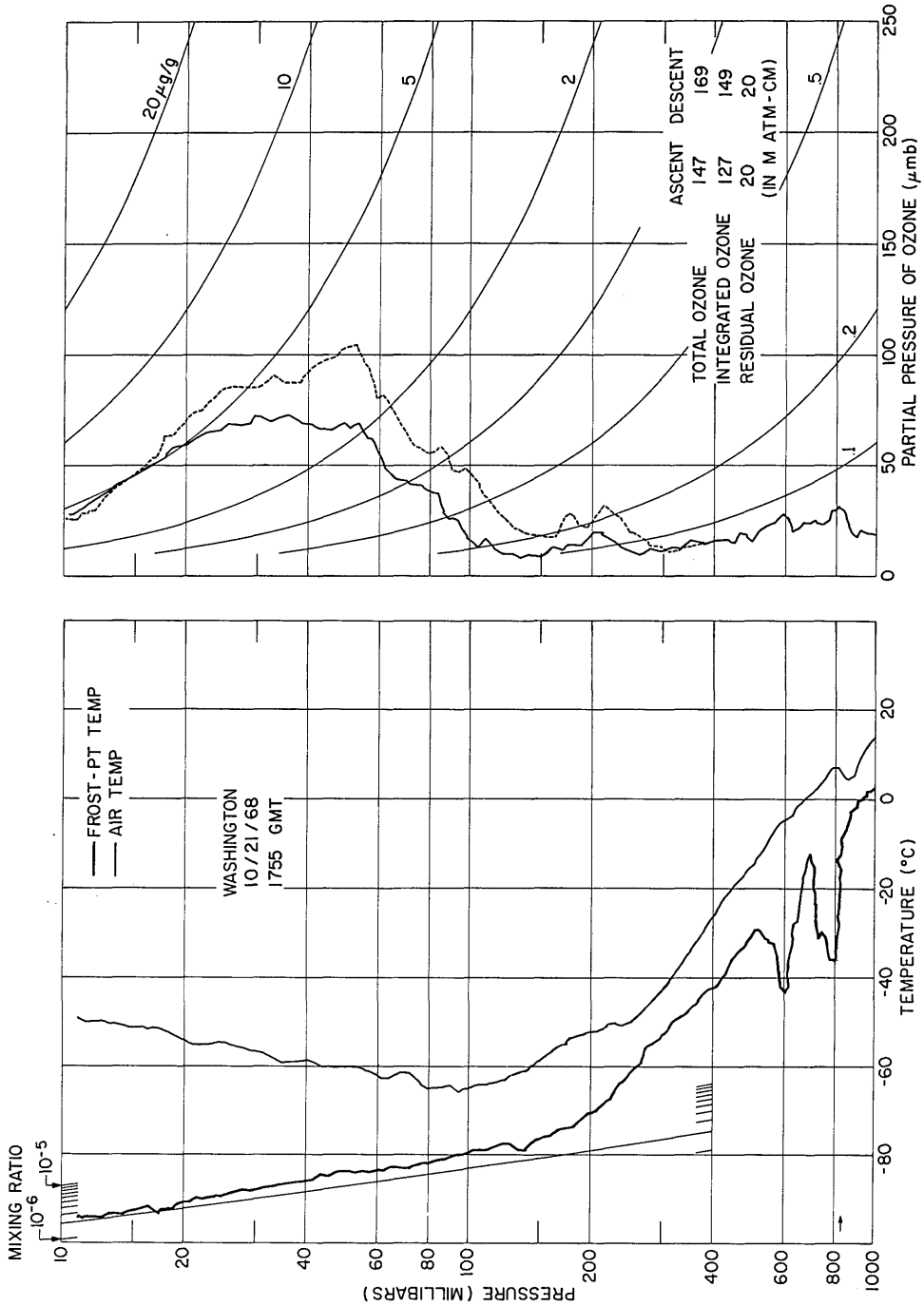
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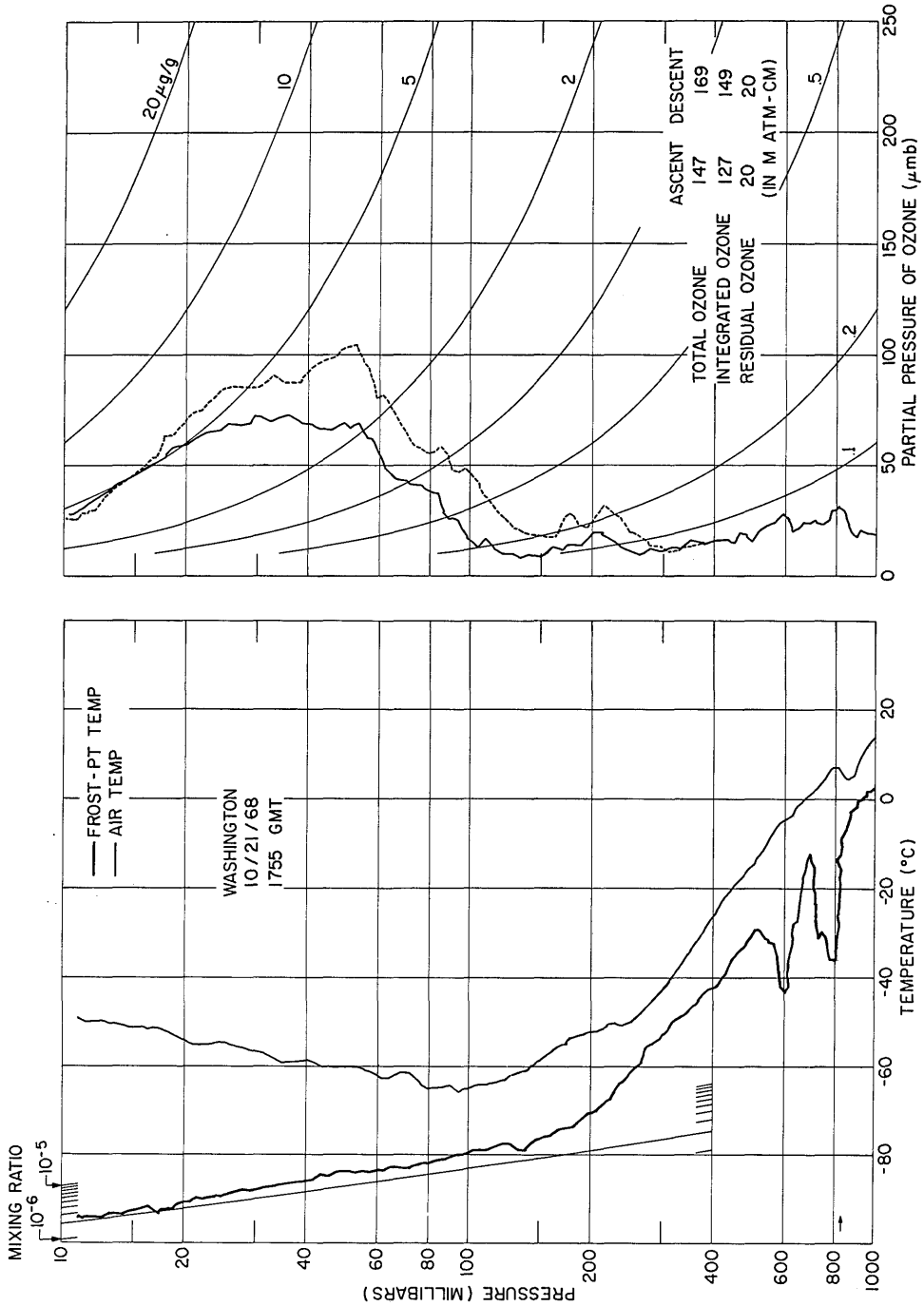
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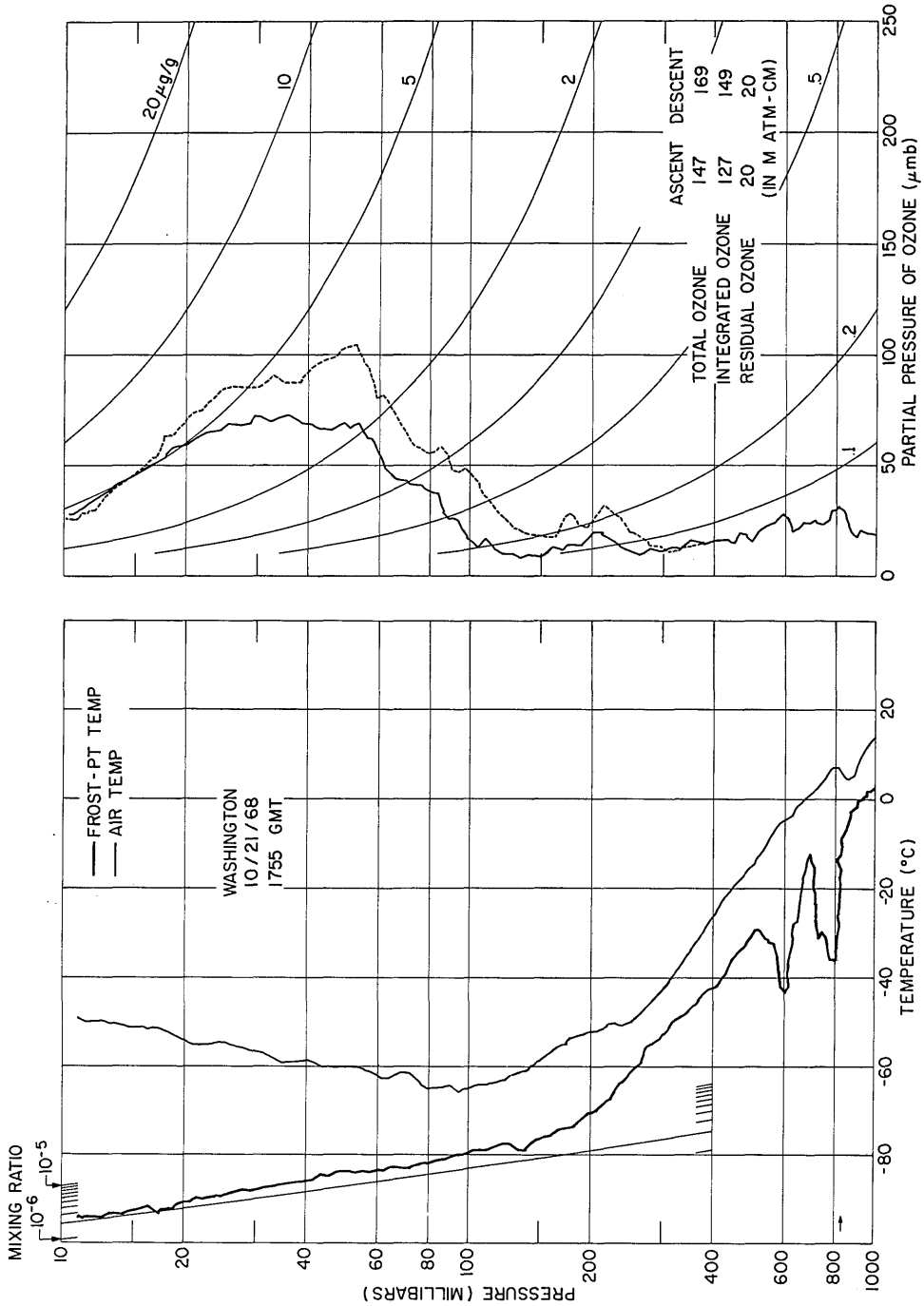
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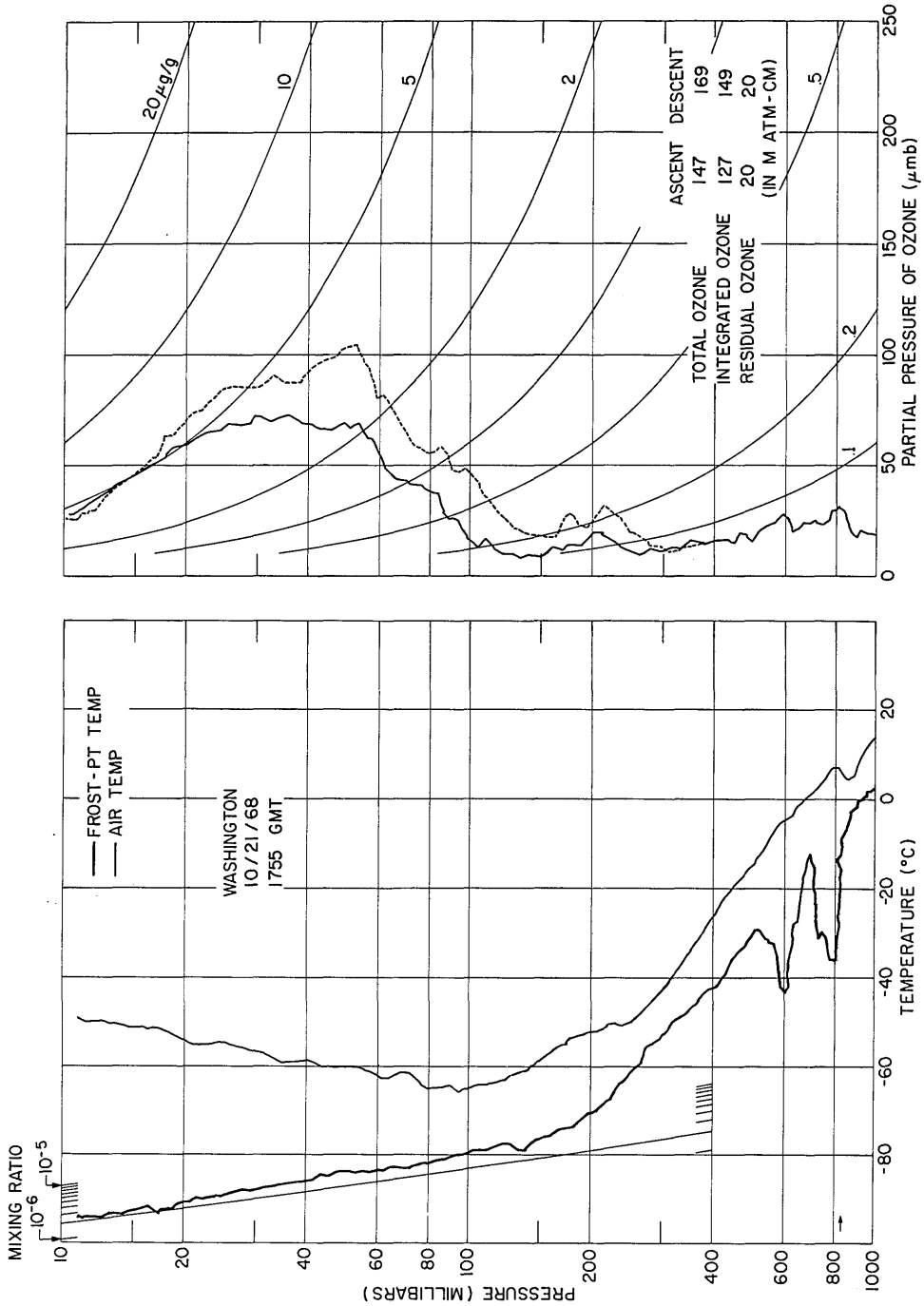
WASHINGTON,D.C. 6/14/68 1520Z OZONE DATA ASCENT

PRESS MBAR	OZONE MICME	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
92.80	49.38	.07645	-61.2	418.1	.88169
90.20	56.22	.07771	-61.7	420.5	1.03275
87.60	52.75	.07893	-61.4	424.5	.99772
85.00	56.01	.08026	-61.7	427.7	1.09182
80.50	48.40	.08234	-62.6	432.4	.99623
76.60	45.84	.08413	-63.6	436.6	.99152
74.70	46.54	.08506	-63.4	440.2	1.03233
70.50	60.14	.08780	-62.4	449.7	1.41361
68.70	66.66	.08916	-61.4	455.1	1.60780
67.40	92.81	.09056	-60.3	460.1	2.28166
64.20	102.59	.09450	-58.3	470.9	2.64774
62.80	121.36	.09662	-58.1	474.3	3.20201
60.00	138.97	.10162	-56.6	483.8	3.83785
57.20	134.49	.10670	-56.6	490.5	3.89593
56.00	126.53	.10881	-56.2	494.4	3.74397
54.80	130.23	.11104	-55.8	498.4	3.93793
53.50	147.72	.11384	-55.0	503.7	4.57526
52.40	145.12	.11622	-54.6	507.6	4.58891
50.00	151.81	.12184	-54.0	515.8	5.03106
48.80	152.16	.12476	-53.2	521.2	5.16672
46.60	146.90	.13011	-52.5	529.9	5.22340
43.60	150.49	.13802	-51.0	543.6	5.71924
41.60	151.63	.14364	-50.2	553.2	6.03980
39.60	154.18	.14964	-49.6	562.3	6.45124
38.00	155.29	.15469	-49.8	568.6	6.77142
36.40	156.16	.16000	-50.2	574.7	7.10890
34.90	159.46	.16529	-49.5	583.4	7.57097
33.90	161.64	.16900	-49.1	589.2	7.90065
31.80	157.58	.17696	-48.6	601.5	8.21091
30.30	153.52	.18282	-50.2	605.6	8.39544
29.00	156.19	.18823	-47.9	619.4	8.92423
27.80	154.37	.19338	-47.4	628.3	9.20095
26.50	156.57	.19930	-47.4	636.9	9.78983
25.40	155.43	.20450	-45.3	650.7	10.13939
24.80	158.08	.20748	-45.2	655.6	10.56191
23.60	150.89	.21339	-45.2	665.0	10.59431
22.60	146.36	.21840	-45.3	672.8	10.73057
21.50	142.60	.22401	-46.0	680.6	10.98997
20.60	137.11	.22864	-46.0	688.9	11.02896
19.15	133.15	.23632	-43.6	710.7	11.52133
18.75	130.18	.23849	-42.4	718.8	11.50476
18.00	126.86	.24257	-42.2	727.7	11.67775
17.15	120.69	.24718	-41.3	740.7	11.66097
16.40	113.28	.25118	-41.0	751.2	11.44515
15.70	111.40	.25502	-40.3	763.1	11.75714
14.90	107.64	.25947	-39.9	776.0	11.97094
14.30	105.77	.26290	-39.7	785.7	12.25640
13.60	100.58	.26688	-39.7	797.0	12.25426
13.00	96.51	.27032	-38.7	810.8	12.30153
12.50	94.74	.27325	-37.7	823.4	12.55902
11.90	88.86	.27671	-35.9	841.5	12.37365
11.40	83.66	.27954	-35.1	854.8	12.15951
10.90	79.28	.28235	-35.4	864.9	12.05161
10.80	78.37	.28292	-35.5	866.7	12.02415
10.65	77.23	.28377	-34.5	873.6	12.01604


20μg/g
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ASCENT DESCENT
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127 149
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(IN M ATM-CM)
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0
50
100
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FROST-PT TEMP
AIR TEMP
WASHINGTON
10/21/68
1755 GMT
MIXING RATIO
10
10⁻⁶
10⁻⁵
PRESSURE (MILLIBARS)
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40
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100
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1000
TEMPERATURE (°C)
-80
-60
-40
-20
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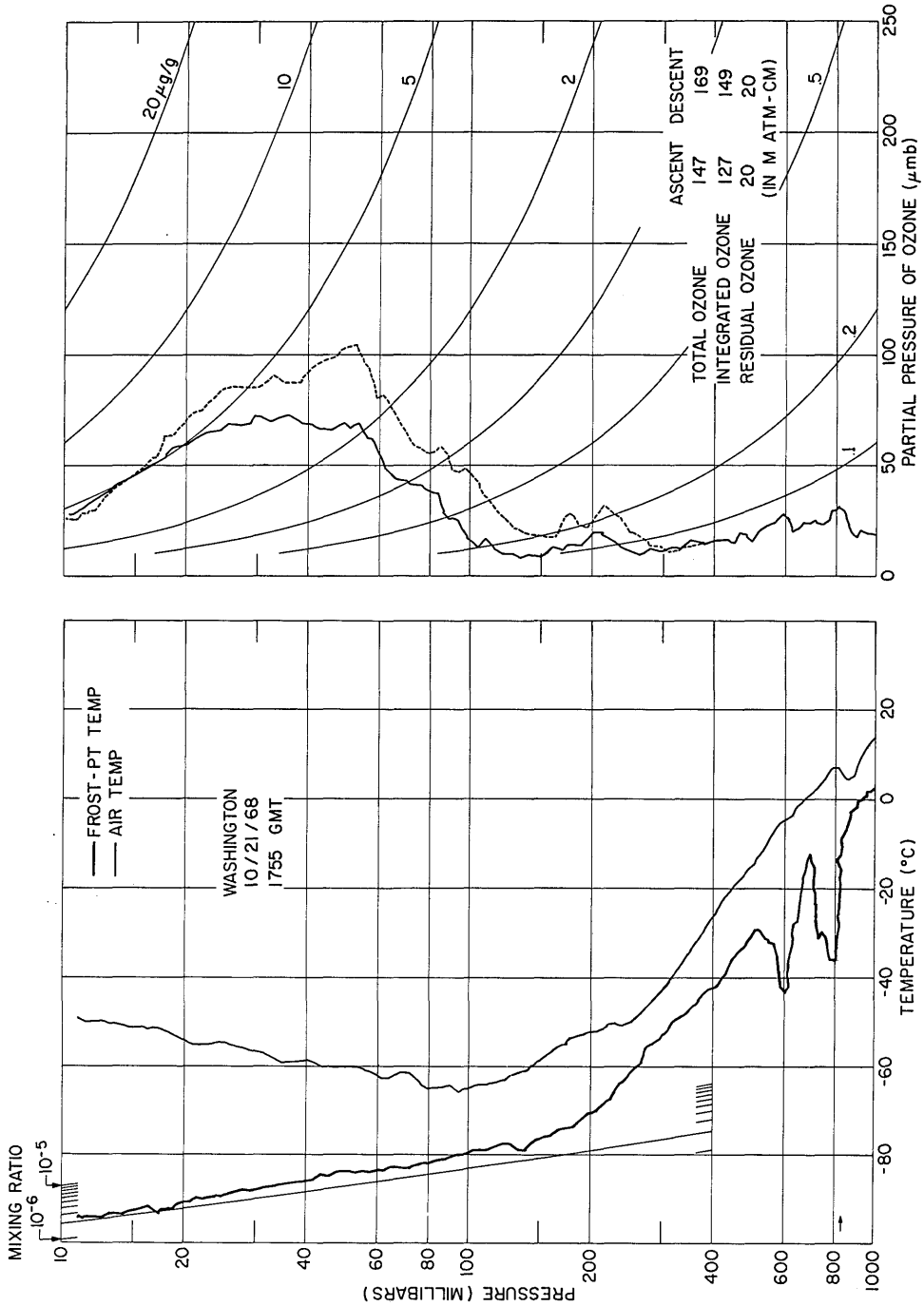
WASHINGTON,D.C. 7/1/68 1533Z WATER VAPOR DATA

P (mb)	T (°C)	F (°C)	w (g/kg)	θ (°K)	M (cm)	ΣM (cm)
443.00	-15.6	-35.9	.28393	325.0	.00204080	2.57247646
436.00	-16.4	-35.9	.28849	325.5	.00204434	2.57452080
430.00	-17.2	-28.3	.65464	325.7	.00288710	2.57740790
423.00	-18.0	-22.4	1.20072	326.3	.00662622	2.58403412
416.00	-18.6	-23.1	1.14439	327.1	.00837533	2.59240945
409.00	-19.6	-24.1	1.04842	327.4	.00783142	2.60024087
402.00	-20.7	-25.0	.98397	327.5	.00725852	2.60749939
387.50	-21.9	-26.1	.90728	329.4	.01399131	2.62149070
376.00	-23.2	-26.3	.91702	330.6	.01070373	2.63219443
370.00	-24.2	-26.5	.91484	330.7	.00560769	2.63780212
364.00	-25.2	-28.0	.80172	330.9	.00525472	2.64305684
359.00	-26.3	-28.8	.74360	330.7	.00394212	2.64699896
354.00	-27.4	-30.6	.62487	330.7	.00349098	2.65048994
348.50	-28.5	-33.3	.47708	330.6	.00309221	2.65358216
343.00	-28.9	-38.5	.27565	331.6	.00211227	2.65569443
338.00	-29.4	-46.0	.11712	332.3	.00100197	2.65669639
333.00	-29.8	-49.7	.07618	333.2	.00049311	2.65718950
328.00	-30.7	-51.1	.06505	333.4	.00036028	2.65754978
323.00	-31.5	-50.9	.06742	333.7	.00033793	2.65788771
318.00	-32.6	-50.2	.07501	333.7	.00036335	2.65825106
313.00	-33.5	-52.0	.06108	334.0	.00034717	2.65859823
308.50	-34.6	-53.2	.05344	333.8	.00026292	2.65886115
304.00	-35.4	-53.5	.05214	334.1	.00024238	2.65910353
298.00	-36.4	-54.8	.04467	334.6	.00029634	2.65939987
294.00	-37.2	-55.6	.04112	334.7	.00017507	2.65957494
290.00	-38.1	-54.3	.04911	334.8	.00018415	2.65975909
286.00	-39.1	-49.9	.08687	334.7	.00027752	2.66003661
281.00	-39.7	-49.7	.09028	335.6	.00045192	2.66048853
276.00	-40.5	-50.8	.08051	336.0	.00043568	2.66092421
271.00	-41.4	-52.3	.06779	336.5	.00037830	2.66130251
266.00	-42.3	-53.7	.05788	337.0	.00032057	2.66162308
261.00	-43.4	-54.9	.05051	337.2	.00027649	2.66189957
256.00	-44.2	-56.0	.04458	337.9	.00024256	2.66214213
251.00	-45.1	-56.3	.04377	338.5	.00022538	2.66236751
246.00	-46.3	-56.7	.04258	338.7	.00022028	2.66258779
241.50	-47.3	-56.8	.04254	339.0	.00019543	2.66278322
237.00	-48.4	-57.0	.04254	339.1	.00019532	2.66297854
233.00	-49.8	-57.5	.04048	338.6	.00016943	2.66314797
228.00	-50.7	-57.5	.04137	339.4	.00020881	2.66335678
223.00	-51.8	-57.5	.04230	339.9	.00021344	2.66357023
218.00	-52.5	-57.5	.04327	340.9	.00021829	2.66378851
213.00	-53.7	-58.7	.03734	341.4	.00020562	2.66399413
208.00	-54.7	-60.4	.03055	342.2	.00017317	2.66416730
203.00	-55.9	-60.8	.02987	342.7	.00015411	2.66432141
198.00	-57.3	-61.1	.02922	342.8	.00015073	2.66447213
193.50	-58.6	-61.4	.02879	343.0	.00013317	2.66460530
189.00	-60.0	-61.4	.02921	343.2	.00013316	2.66473846
185.00	-61.1	-61.8	.02847	343.4	.00011770	2.66485617
181.00	-62.3	-62.1	.02776	343.6	.00011475	2.66497092
177.00	-62.8	-63.3	.02418	345.0	.00010599	2.66507691
173.00	-63.3	-65.8	.01734	346.4	.00008473	2.66516164
169.00	-64.6	-67.6	.01375	346.6	.00006345	2.66522509
165.00	-65.7	-67.8	.01367	347.2	.00005594	2.66528103
161.00	-66.5	-67.8	.01401	348.2	.00005646	2.66533749
157.00	-68.0	-67.8	.01422	348.3	.00005759	2.66539508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WASHINGTON,D.C. 7/1/68 1533Z WATER VAPOR DATA

P (mb)	T (°C)	F (°C)	w (g/kg)	θ (°K)	M (cm)	ΣM (cm)
23.10	-45.9	-84.8	.00655	666.8	.00000615	2.66598429
22.10	-45.0	-84.6	.00709	678.1	.00000696	2.66599125
21.20	-44.3	-83.0	.00969	688.1	.00000770	2.66599895
20.40	-43.4	-82.5	.01092	698.6	.00000840	2.66600735
19.80	-42.6	-82.3	.01180	706.9	.00000694	2.66601430
19.20	-42.0	-82.9	.01088	715.0	.00000693	2.66602123
18.60	-41.7	-83.2	.01069	722.5	.00000660	2.66602783
18.00	-41.3	-84.7	.00855	730.7	.00000589	2.66603372
17.40	-41.1	-85.8	.00737	738.3	.00000487	2.66603859
16.95	-41.0	-85.8	.00757	744.3	.00000343	2.66604201
16.05	-40.8	-80.7	.01884	756.5	.00001211	2.66605413
15.60	-40.7	-80.4	.02026	763.2	.00000897	2.66606310
15.20	-40.5	-80.2	.02171	769.3	.00000855	2.66607165
14.80	-40.4	-79.9	.02328	775.7	.00000918	2.66608083
14.40	-40.1	-79.7	.02496	782.8	.00000983	2.66609067
14.05	-40.0	-79.5	.02631	788.8	.00000915	2.66609982
13.70	-39.8	-80.7	.02208	795.0	.00000863	2.66610844
13.40	-39.7	-81.5	.01973	800.6	.00000639	2.66611484
13.15	-39.5	-81.9	.01891	805.4	.00000492	2.66611975
12.85	-39.5	-82.0	.01905	810.7	.00000581	2.66612557
12.60	-39.7	-82.0	.01943	814.8	.00000490	2.66613047
12.30	-39.7	-82.3	.01899	820.4	.00000587	2.66613634
11.97	-39.5	-85.0	.01219	827.3	.00000525	2.66614158
11.75	-39.5	-83.5	.01610	831.7	.00000317	2.66614476
11.60	-39.5	-83.1	.01743	834.8	.00000256	2.66614732
11.55	-39.4	-83.7	.01584	836.3	.00000083	2.66614816

WASHINGTON,D.C. 7/1/68 1533Z OZONE DATA ASCENT

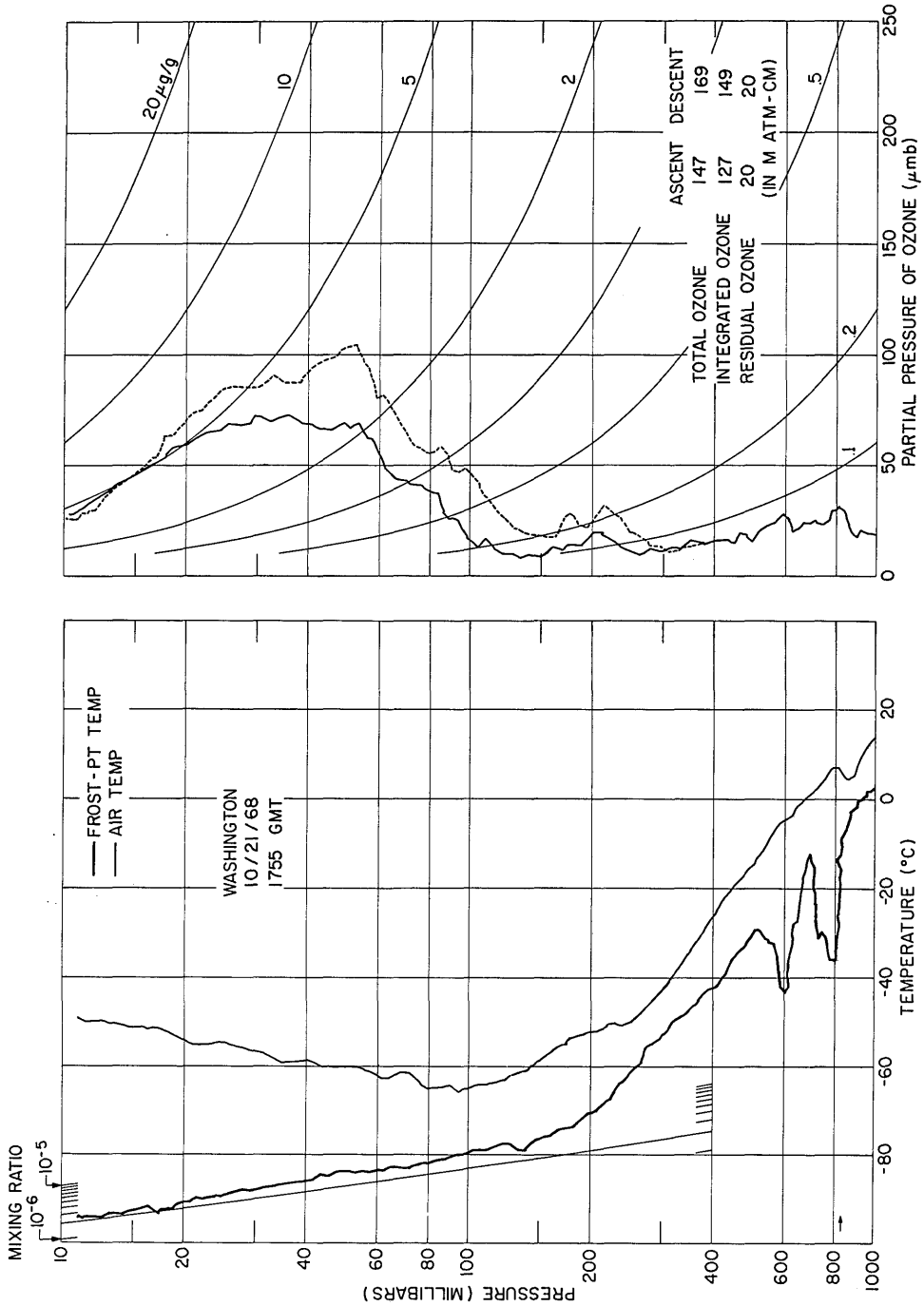
PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
1003.00					
992.00	84.13	.00073	26.9	300.7	.14052
944.00	90.29	.00427	24.7	302.8	.15849
918.00	73.21	.00588	22.8	303.3	.13215
902.00	58.51	.00669	22.6	304.7	.10748
875.00	38.16	.00761	22.5	307.1	.07227
852.00	35.32	.00835	21.4	308.3	.06869
825.00	31.29	.00915	19.7	309.4	.06284
797.00	30.75	.00998	17.1	309.7	.06394
780.00	33.71	.01056	15.9	310.4	.07162
766.00	31.92	.01101	14.5	310.4	.06905
739.00	28.13	.01181	12.0	310.9	.06307
710.00	25.90	.01263	9.4	311.6	.06044
684.00	25.31	.01337	6.4	311.6	.06131
656.00	21.61	.01409	4.1	312.8	.05459
624.00	25.04	.01507	1.6	314.4	.06650
595.00	24.78	.01600	-1.2	315.5	.06900
568.00	26.23	.01697	-4.4	316.0	.07651
543.00	22.24	.01776	-6.3	317.7	.06786
518.00	20.23	.01851	-7.2	321.0	.06473
494.00	18.13	.01919	-8.9	323.3	.06080
469.00	18.52	.01995	-11.5	324.9	.06543
446.00	17.72	.02065	-14.4	325.9	.06583
423.00	19.08	.02145	-17.6	326.8	.07473
402.00	18.28	.02218	-20.8	327.4	.07535
381.00	19.11	.02299	-23.7	328.7	.08313
361.00	20.74	.02387	-26.2	330.4	.09521
340.00	17.12	.02468	-29.3	331.9	.08342
320.00	17.86	.02554	-32.7	333.0	.09248
300.00	15.05	.02630	-36.1	334.4	.08311
283.00	11.45	.02683	-38.9	335.9	.06704
266.00	16.19	.02762	-41.6	338.1	.10086
248.00	19.88	.02872	-44.8	340.1	.13282
231.00	19.19	.02980	-48.6	341.3	.13766
216.00	18.36	.03077	-52.4	342.1	.14081
200.00	17.62	.03184	-55.7	344.5	.14596
186.00	15.69	.03274	-59.3	345.8	.13975
172.00	17.01	.03379	-62.3	348.6	.16389
157.00	18.47	.03512	-66.0	351.7	.19496
140.00	19.37	.03687	-71.1	354.4	.22927
131.00	20.13	.03793	-72.8	358.1	.25456
122.00	17.99	.03894	-70.8	369.2	.24432
108.00	41.22	.04291	-67.7	388.1	.63246
97.50	39.38	.04609	-64.9	405.0	.66924
85.00	47.38	.05122	-62.3	426.4	.92369
75.50	73.63	.05811	-61.4	443.1	1.61585
71.50	80.80	.06158	-61.4	450.1	1.87254
68.00	83.62	.06489	-61.4	456.6	2.03765
65.50	97.45	.06777	-60.9	462.5	2.46524
60.50	106.29	.07444	-58.4	478.7	2.91120
56.50	117.68	.08079	-56.3	492.9	3.45124
53.50	125.90	.08622	-55.9	501.6	3.89944
51.00	118.33	.09069	-55.7	509.0	3.84450
49.30	117.17	.09383	-55.1	515.4	3.93808
46.90	122.02	.09863	-54.5	524.2	4.31101
45.60	126.03	.10143	-54.3	528.9	4.57969

WASHINGTON,D.C, 7/1/68 1533Z OZONE DATA ASCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
43.30	126.81	.10661	-53.1	539.6	4.85285
41.30	136.62	.11171	-52.0	549.8	5.43138
39.40	144.61	.11709	-50.5	560.9	6.08183
37.50	142.55	.12265	-52.0	565.1	6.29884
35.70	139.21	.12806	-51.1	575.5	6.46141
34.00	138.84	.13341	-50.2	585.9	6.76659
33.30	139.54	.13570	-50.2	589.4	6.94343
31.60	137.36	.14141	-50.2	598.3	7.22909
30.20	136.67	.14630	-50.4	605.6	7.49863
28.80	135.98	.15139	-50.0	614.9	7.82382
27.40	135.46	.15672	-49.1	626.1	8.19192
26.10	137.70	.16201	-49.1	634.9	8.74230
25.00	139.33	.16674	-48.4	644.7	9.23492
23.80	136.75	.17205	-47.3	657.3	9.52106
22.80	136.00	.17666	-46.1	668.8	9.88357
21.80	135.45	.18146	-45.1	680.3	10.29568
20.30	130.95	.18883	-44.5	696.2	10.68881
19.50	128.10	.19290	-43.9	706.2	10.88534
18.65	121.21	.19716	-43.4	716.7	10.76890
17.70	115.76	.20194	-42.0	731.9	10.83712
17.10	112.94	.20502	-41.1	742.0	10.94371
16.30	106.80	.20906	-40.7	753.6	10.85738
15.60	100.12	.21253	-40.4	764.1	10.63465
15.10	94.25	.21495	-40.0	772.7	10.34296
14.50	88.78	.21779	-39.8	782.2	10.14555
13.80	87.67	.22122	-39.7	793.9	10.52698
13.10	81.44	.22456	-39.4	806.8	10.30091
12.50	76.63	.22740	-39.2	818.1	10.15844
12.10	72.80	.22927	-39.1	826.3	9.97003
11.75	68.75	.23086	-39.2	832.7	9.69466
11.65	68.03	.23132	-39.4	834.3	9.67620

WASHINGTON,D..C. 7/1/68 1533Z OZONE DATA DESCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
1004.00					
965.00	74.50	.00233	26.5	302.7	.12793
947.00	71.47	.00339	25.1	303.0	.12506
919.00	63.09	.00489	23.4	303.8	.11375
887.00	40.45	.00602	23.0	306.5	.07555
858.00	33.61	.00690	22.8	309.2	.06491
845.00	32.31	.00729	22.1	309.8	.06336
819.00	31.84	.00807	19.2	309.5	.06441
794.00	29.31	.00879	17.3	310.2	.06116
767.00	26.64	.00952	14.8	310.6	.05755
742.00	25.04	.01017	12.0	310.6	.05591
730.00	23.57	.01048	11.3	311.2	.05349
706.00	24.51	.01112	9.0	311.6	.05752
683.00	28.69	.01187	7.5	312.9	.06960
660.00	26.55	.01259	5.3	313.5	.06665
640.00	26.45	.01323	3.1	313.8	.06847
620.00	22.98	.01381	.6	313.8	.06141
601.00	22.93	.01437	-1.8	313.8	.06321
579.00	22.66	.01503	-4.1	314.5	.06484
560.00	21.48	.01560	-6.2	315.1	.06356
543.00	20.63	.01610	-6.9	317.0	.06294
527.00	17.31	.01651	-6.4	320.3	.05443
513.00	16.71	.01686	-7.1	322.0	.05396
498.00	16.04	.01724	-8.7	322.7	.05337
484.00	13.97	.01755	-10.6	323.0	.04784
472.00	15.75	.01787	-12.1	323.5	.05531
459.00	16.66	.01823	-13.9	323.9	.06013
445.00	17.76	.01867	-15.4	324.9	.06612
432.00	14.91	.01902	-17.0	325.6	.05720
423.00	19.04	.01933	-18.0	326.3	.07458
410.00	19.75	.01982	-19.3	327.5	.07983
384.00	22.04	.02096	-21.9	330.2	.09512
370.00	20.40	.02156	-24.2	330.7	.09135
359.00	21.24	.02206	-26.3	330.7	.09805
348.00	17.16	.02248	-28.7	330.6	.08171
337.00	17.09	.02292	-29.4	332.6	.08405
327.00	16.00	.02330	-30.9	333.5	.08108
316.00	15.99	.02373	-32.8	334.0	.08386
306.00	13.59	.02407	-35.0	334.0	.07357
296.00	10.09	.02434	-36.8	334.7	.05650
288.00	13.11	.02462	-38.8	334.5	.07542
227.50	15.87	.02757	-40.4	355.3	.11560
267.50	20.68	.02493	-42.2	336.7	.12810
252.00	22.63	.02600	-45.0	338.3	.14882
242.00	22.57	.02672	-47.3	338.8	.15454
233.00	23.11	.02741	-49.8	338.6	.16434
218.00	20.60	.02849	-52.5	340.9	.15656
207.00	21.88	.02938	-54.5	343.0	.17514
198.00	18.95	.03005	-57.5	342.5	.15858
188.00	21.13	.03091	-60.4	343.0	.18619
180.00	24.30	.03175	-62.3	344.1	.22367
172.00	25.24	.03265	-63.6	346.5	.24318
163.50	26.09	.03370	-66.2	347.1	.26445
156.00	25.66	.03465	-68.3	348.4	.27256
148.00	27.08	.03577	-70.8	349.3	.30321
140.00	29.68	.03707	-71.4	353.8	.35128


20μg/g
10
5
2
1
.2
.5
ASCENT DESCENT
147 169
127 149
20 20
(IN M ATM-CM)
TOTAL OZONE
INTEGRATED OZONE
RESIDUAL OZONE
PARTIAL PRESSURE OF OZONE (μmb)
0
50
100
150
200
250
FROST-PT TEMP
AIR TEMP
WASHINGTON
10/21/68
1755 GMT
MIXING RATIO
10
10⁻⁶
10⁻⁵
PRESSURE (MILLIBARS)
20
40
60
80
100
200
400
600
800
1000
TEMPERATURE (°C)
-80
-60
-40
-20
0
20

WASHINGTON,D.C. 8/12/68 1600Z WATER VAPOR DATA

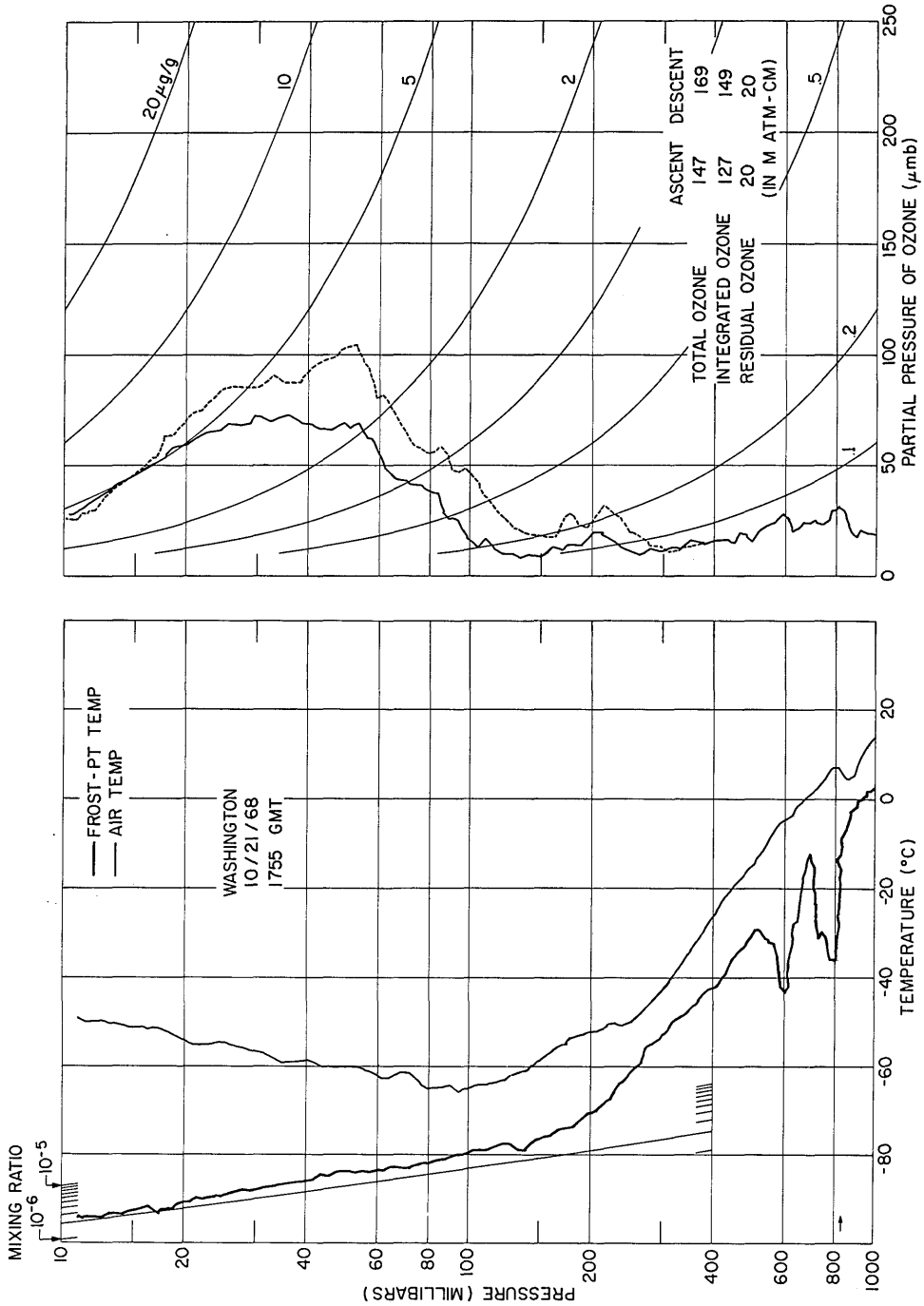
P (mb)	T (°C)	F (°C)	w (g/kg)	θ (°K)	M (cm)	ΣM (cm)
1001.00	21.9	4.0	5.10658	295.0		
993.00	20.1	4.0	5.14806	293.9	.04185553	.04185553
981.00	19.1	4.9	5.53643	293.8	.06541499	.10727052
968.00	18.0	4.9	5.61145	293.9	.07393973	.18121025
954.00	17.3	4.9	5.69456	294.4	.08075687	.26196712
942.00	16.3	4.9	5.76777	294.5	.07017721	.33214433
929.00	15.7	3.2	5.18058	295.0	.07261631	.40476064
916.00	14.2	2.4	4.95161	294.7	.06720303	.47196367
902.00	12.9	.8	4.49746	294.7	.06749308	.53945675
890.00	11.5	-.6	4.07835	294.3	.05250472	.59196147
878.00	10.8	.8	4.62131	294.7	.05326299	.64522447
865.00	9.5	.1	4.45257	294.7	.06018367	.70540814
857.00	10.3	.1	4.49444	296.2	.03651826	.74192640
847.00	9.4	-.6	4.28682	296.3	.04480216	.78672856
835.00	8.3	-.6	4.34886	296.4	.05287130	.83959986
824.00	7.5	-2.0	3.93307	296.6	.04648004	.88607991
814.00	9.1	-4.5	3.21580	299.3	.03647369	.92255360
804.00	10.5	-11.1	1.82595	301.9	.02572311	.94827671
793.00	10.6	-11.5	1.77899	303.2	.02023174	.96850845
782.00	11.1	-12.0	1.73483	304.9	.01972035	.98822880
771.00	10.2	-12.8	1.63237	305.2	.01889746	1.00712626
761.00	9.4	-14.0	1.48324	305.5	.01589589	1.02302215
750.00	8.8	-14.4	1.45401	306.1	.01648453	1.03950667
740.00	8.5	-16.9	1.16731	307.0	.01337405	1.05288072
729.00	8.2	-20.3	.85313	307.9	.01133917	1.06421989
719.00	7.9	-19.8	.91521	308.8	.00902210	1.07324199
709.00	7.5	-21.5	.78653	309.6	.00868233	1.08192432
700.00	7.2	-28.5	.39382	310.4	.00541997	1.08734429
690.00	6.9	-34.7	.20853	311.4	.00307319	1.09041747
680.00	6.4	-33.9	.23033	312.2	.00223905	1.09265652
671.00	6.1	-30.6	.32969	313.0	.00257149	1.09522802
662.00	5.9	-29.5	.37607	313.9	.00324072	1.09846874
653.00	5.6	-30.3	.35210	314.8	.00334366	1.10181239
644.00	4.7	-28.7	.41920	315.1	.00354166	1.10535406
636.00	4.0	-29.7	.38360	315.4	.00327669	1.10863075
628.00	3.7	-29.9	.38075	316.2	.00311977	1.11175051
619.00	3.3	-30.3	.37145	317.1	.00345397	1.11520448
610.00	2.7	-30.8	.35569	317.7	.00333890	1.11854339
602.00	1.9	-31.0	.35374	318.0	.00289562	1.12143901
594.00	1.5	-30.8	.36528	318.7	.00293475	1.12437376
586.00	1.1	-32.2	.31907	319.5	.00279321	1.12716697
578.00	.4	-36.5	.20467	319.9	.00213768	1.12930465
569.00	-.6	-34.4	.26151	320.3	.00214063	1.13144527
561.00	-.6	-24.1	.77001	321.6	.00421029	1.13565557
552.50	-1.5	-21.5	1.00969	321.8	.00771806	1.14337362
544.00	-2.4	-20.0	1.17702	322.2	.00948314	1.15285677
536.00	-3.6	-18.2	1.42306	322.1	.01061252	1.16346928
528.00	-4.7	-16.9	1.63724	322.2	.01249094	1.17596023
520.00	-5.6	-17.9	1.51329	322.5	.01285924	1.18881947
512.00	-6.5	-15.9	1.85912	322.9	.01376486	1.20258433
504.50	-7.7	-14.8	2.08913	322.8	.01510802	1.21769235
496.00	-8.5	-14.8	2.12505	323.3	.01827568	1.23596802
488.50	-9.2	-15.9	1.94884	323.9	.01558878	1.25155680
480.00	-10.3	-16.6	1.85842	324.2	.01651099	1.26806779
472.50	-11.2	-17.9	1.66582	324.5	.01348557	1.28155336
464.00	-12.1	-19.4	1.46143	325.1	.01356201	1.29511537

WASHINGTON,D.C. 8/12/68 1600Z WATER VAPOR DATA

P (mb)	T (°C)	F (°C)	w (g/kg)	θ (°K)	M (cm)	ΣM (cm)
457.50	-12.5	-21.2	1.25245	325.9	.00900006	1.30411543
450.00	-13.1	-22.6	1.11556	326.7	.00906120	1.31317663
442.00	-14.1	-24.3	.95397	327.1	.00844699	1.32162362
434.00	-15.0	-25.7	.84321	327.7	.00733539	1.32895902
427.00	-15.4	-28.5	.64587	328.8	.00531814	1.33427715
420.00	-15.7	-30.6	.52688	329.8	.00418837	1.33846553
412.50	-16.4	-31.9	.47022	330.7	.00381540	1.34228092
405.00	-16.7	-33.6	.40039	332.0	.00333139	1.34561232
397.00	-17.6	-27.7	.75560	332.7	.00471833	1.35033065
391.00	-18.5	-26.8	.83644	333.1	.00487357	1.35520422
385.00	-19.2	-26.8	.84949	333.5	.00516100	1.36036523
378.00	-20.2	-27.5	.81111	334.0	.00593071	1.36629593
371.50	-21.2	-29.3	.68372	334.3	.00495732	1.37125325
364.00	-22.0	-31.0	.58525	335.3	.00485572	1.37610897
358.50	-22.7	-31.4	.57230	335.7	.00324821	1.37935719
352.00	-23.7	-32.2	.53135	336.1	.00366004	1.38301723
346.00	-24.5	-33.4	.47682	336.7	.00308622	1.38610345
340.00	-25.8	-33.9	.46083	336.7	.00287034	1.38897379
334.50	-26.7	-35.9	.37721	337.0	.00235161	1.39132540
329.00	-28.0	-36.3	.36551	336.9	.00208412	1.39340952
323.00	-28.9	-36.5	.36635	337.4	.00224034	1.39564987
317.00	-30.0	-38.3	.30590	337.6	.00205788	1.39770775
311.00	-31.6	-40.6	.24061	337.2	.00167298	1.39938073
305.00	-32.4	-43.1	.18278	337.9	.00129609	1.40067682
299.00	-33.3	-45.1	.14868	338.7	.00101466	1.40169148
294.00	-34.2	-45.9	.13723	339.0	.00072935	1.40242083
288.50	-35.2	-45.9	.13984	339.5	.00077748	1.40319832
283.00	-36.6	-45.3	.15332	339.3	.00082265	1.40402097
278.00	-37.7	-46.1	.14171	339.4	.00075263	1.40477359
273.00	-38.6	-48.2	.11176	340.0	.00064661	1.40542020
268.00	-39.4	-50.3	.08825	340.5	.00051022	1.40593041
263.00	-40.5	-50.7	.08521	340.8	.00044248	1.40637289
258.00	-41.4	-50.5	.08972	341.4	.00044623	1.40681912
252.00	-42.3	-51.6	.07995	342.3	.00051938	1.40733850
247.00	-43.2	-52.7	.07046	342.9	.00038369	1.40772219
242.00	-44.6	-52.6	.07344	342.8	.00036709	1.40808928
237.00	-45.6	-53.8	.06430	343.4	.00035138	1.40844066
232.50	-46.7	-54.6	.05866	343.5	.00028230	1.40872297
228.00	-47.8	-55.0	.05690	343.9	.00026530	1.40898827
224.00	-48.8	-55.2	.05678	344.0	.00023200	1.40922026
219.00	-50.2	-55.5	.05581	344.1	.00028720	1.40950747
214.00	-51.5	-57.0	.04695	344.4	.00026211	1.40976958
210.00	-51.8	-58.5	.03909	345.7	.00017557	1.40994515
206.00	-52.8	-60.0	.03263	346.1	.00014634	1.41009149
202.00	-54.3	-60.3	.03204	345.6	.00013198	1.41022347
197.00	-55.8	-61.0	.02990	345.8	.00015801	1.41038148
192.50	-56.2	-62.5	.02466	347.5	.00012524	1.41050673
188.00	-56.8	-63.9	.02093	348.8	.00010465	1.41061138
184.00	-57.9	-64.2	.02060	349.2	.00008476	1.41069613
180.00	-59.0	-64.4	.02028	349.6	.00008342	1.41077955
175.70	-60.3	-65.3	.01839	349.8	.00008483	1.41086438
172.00	-61.3	-66.0	.01694	350.3	.00006668	1.41093107
167.50	-62.3	-66.7	.01583	351.4	.00007522	1.41100629
163.00	-63.0	-67.5	.01451	352.8	.00006965	1.41107593
159.00	-63.8	-68.3	.01314	354.0	.00005642	1.41113235

WASHINGTON,D.C. 8/12/68 1600Z WATER VAPOR DATA

P (mb)	T (°C)	F (°C)	w (g/kg)	θ (°K)	M (cm)	ΣM (cm)
155.70	-64.6	-68.8	.01254	354.8	.00004323	1.41117558
152.00	-64.9	-69.6	.01143	356.8	.00004524	1.41122082
148.50	-65.1	-70.1	.01082	358.7	.00003973	1.41126055
145.20	-65.4	-70.9	.00973	360.6	.00003460	1.41129515
142.00	-65.7	-73.3	.00698	362.4	.00002727	1.41132241
138.50	-66.0	-74.1	.00631	364.5	.00002371	1.41134612
135.00	-66.2	-74.3	.00627	366.7	.00002246	1.41136858
131.60	-66.5	-74.6	.00610	368.8	.00002144	1.41139002
128.00	-66.8	-74.6	.00633	371.3	.00002281	1.41141284
125.00	-67.4	-74.7	.00635	372.7	.00001940	1.41143224
122.00	-67.7	-75.1	.00616	374.8	.00001915	1.41145138
119.00	-67.4	-75.3	.00611	378.0	.00001879	1.41147017
116.00	-67.1	-75.5	.00601	381.3	.00001855	1.41148873
113.00	-66.2	-76.0	.00571	385.8	.00001793	1.41150665
110.00	-66.0	-77.7	.00451	389.3	.00001563	1.41152228
107.00	-65.7	-79.8	.00331	392.9	.00001197	1.41153425
104.00	-65.4	-80.4	.00308	396.6	.00000976	1.41154401
101.50	-65.1	-80.6	.00303	399.9	.00000778	1.41155179
99.00	-64.9	-81.4	.00273	403.3	.00000735	1.41155913
96.40	-64.6	-82.3	.00241	406.9	.00000681	1.41156594
93.70	-63.8	-82.9	.00225	411.8	.00000642	1.41157237
91.20	-63.5	-83.4	.00212	415.5	.00000557	1.41157794
88.50	-62.8	-83.9	.00200	420.6	.00000568	1.41158362
86.20	-62.5	-84.1	.00200	424.3	.00000469	1.41158831
84.00	-62.3	-84.1	.00202	427.9	.00000450	1.41159281
81.50	-61.5	-84.6	.00193	433.2	.00000504	1.41159785
79.00	-60.8	-84.7	.00196	438.5	.00000496	1.41160281
76.70	-60.1	-84.7	.00202	443.7	.00000466	1.41160747
74.50	-59.4	-84.2	.00224	448.9	.00000478	1.41161226
72.20	-58.5	-84.1	.00235	454.8	.00000538	1.41161764
70.00	-57.6	-84.1	.00242	460.7	.00000535	1.41162299
67.90	-56.8	-84.5	.00235	466.6	.00000511	1.41162810
65.90	-56.0	-84.1	.00261	472.4	.00000505	1.41163315
64.00	-55.3	-84.0	.00273	477.7	.00000517	1.41163832
62.00	-54.5	-83.9	.00286	483.9	.00000569	1.41164401
60.00	-54.1	-83.9	.00296	489.3	.00000593	1.41164994
58.10	-53.8	-84.2	.00288	494.7	.00000565	1.41165559
56.40	-53.6	-84.5	.00283	499.4	.00000495	1.41166054
54.40	-53.4	-85.0	.00268	505.0	.00000562	1.41166615
52.80	-53.2	-85.0	.00276	509.8	.00000443	1.41167058
51.00	-53.0	-85.4	.00268	515.3	.00000499	1.41167557
49.20	-52.6	-85.5	.00274	521.5	.00000496	1.41168053
47.50	-52.4	-85.3	.00292	527.2	.00000490	1.41168544
45.90	-52.0	-85.5	.00293	533.3	.00000477	1.41169021
44.30	-51.7	-85.6	.00299	539.7	.00000483	1.41169503
42.70	-51.1	-85.6	.00310	546.7	.00000496	1.41170000
41.30	-50.4	-85.9	.00301	553.8	.00000435	1.41170435
39.70	-50.2	-86.2	.00298	560.5	.00000487	1.41170922
38.30	-49.8	-86.3	.00303	567.2	.00000429	1.41171351
36.80	-49.7	-86.5	.00306	574.1	.00000465	1.41171816
35.40	-49.7	-86.3	.00328	580.5	.00000452	1.41172267
33.90	-49.5	-86.7	.00321	588.2	.00000496	1.41172764
32.40	-49.0	-87.2	.00308	597.3	.00000480	1.41173244
30.90	-48.4	-87.5	.00306	606.9	.00000469	1.41173713
29.40	-48.3	-88.2	.00284	616.0	.00000452	1.41174164


20μg/g
10
5
2
1
.2
.5
ASCENT DESCENT
147 169
127 149
20 20
(IN M ATM-CM)
TOTAL OZONE
INTEGRATED OZONE
RESIDUAL OZONE
PARTIAL PRESSURE OF OZONE (μmb)
0
50
100
150
200
250
FROST-PT TEMP
AIR TEMP
WASHINGTON
10/21/68
1755 GMT
MIXING RATIO
10
10⁻⁶
10⁻⁵
PRESSURE (MILLIBARS)
20
40
60
80
100
200
400
600
800
1000
TEMPERATURE (°C)
-80
-60
-40
-20
0
20

WASHINGTON,D.C. 8/12/68 1600Z OZONE DATA ASCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
1013.00					
993.00	36.58	.00058	20.1	293.9	.06104
966.00	41.36	.00148	18.0	294.1	.07095
940.00	42.32	.00239	16.3	294.7	.07459
910.00	40.84	.00343	13.7	294.7	.07436
874.00	39.72	.00470	10.5	294.7	.07530
844.00	41.89	.00585	8.1	295.2	.08223
817.00	41.71	.00692	10.2	300.2	.08459
802.00	31.21	.00738	9.7	301.3	.06449
779.00	25.11	.00795	9.2	303.3	.05342
725.00	24.64	.00935	7.8	307.9	.05632
712.00	25.30	.00971	7.5	309.2	.05888
700.00	23.25	.01003	6.7	309.9	.05504
685.00	27.02	.01049	6.0	311.0	.06536
658.00	37.16	.01167	5.7	314.3	.09359
623.00	24.82	.01274	3.4	316.6	.06600
609.00	25.46	.01319	2.9	318.1	.06926
597.50	20.23	.01350	2.0	318.8	.05610
575.00	20.41	.01412	.5	320.6	.05883
552.00	22.21	.01483	-1.4	322.1	.06666
530.00	22.14	.01554	-3.5	323.3	.06921
506.00	23.66	.01641	-6.4	324.1	.07747
485.00	25.82	.01727	-9.4	324.3	.08821
464.00	30.54	.01834	-12.1	325.1	.10906
431.00	31.87	.02019	-14.4	329.2	.12251
411.00	29.13	.02129	-16.7	330.6	.11745
403.00	27.42	.02171	-17.6	331.3	.11275
383.00	22.10	.02260	-20.0	333.1	.09562
363.00	23.83	.02361	-22.5	334.8	.10879
354.00	24.85	.02410	-23.9	335.4	.11631
336.00	26.92	.02521	-26.8	336.4	.13275
319.00	26.36	.02629	-29.8	337.3	.13690
302.00	25.36	.02739	-33.3	337.8	.13912
286.00	24.88	.02845	-36.0	339.1	.14416
271.00	25.03	.02952	-39.3	339.6	.15303
259.00	23.91	.03037	-41.1	341.4	.15299
243.00	22.87	.03152	-44.6	342.4	.15593
231.00	23.30	.03246	-47.4	343.1	.16717
216.00	20.95	.03357	-50.4	345.2	.16074
203.00	17.91	.03444	-53.4	346.6	.14619
191.00	19.17	.03537	-55.5	349.2	.16632
181.50	23.87	.03633	-58.1	350.2	.21789
170.00	20.96	.03741	-61.8	350.7	.20427
154.00	18.10	.03882	-64.3	356.4	.19473
140.00	19.77	.04031	-64.9	365.3	.23403
129.50	21.66	.04164	-65.4	372.6	.27715
121.50	23.98	.04285	-66.2	377.9	.32704
113.00	25.69	.04432	-67.7	383.1	.37667
104.00	30.78	.04634	-65.4	396.6	.49037
99.70	31.16	.04738	-66.2	399.8	.51781
94.20	36.17	.04900	-64.9	409.1	.63627
89.00	41.36	.05085	-62.5	420.4	.77010
84.00	68.10	.05396	-61.1	430.4	1.34338
78.60	75.56	.05792	-60.1	440.6	1.59296
77.60	74.82	.05868	-60.1	442.2	1.59764
73.70	74.20	.06170	-60.3	448.3	1.66814

WASHINGTON,D.C. 8/12/68 1600Z OZONE DATA ASCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
70.30	78.52	.06463	-59.4	456.4	1.85083
65.10	91.93	.07021	-57.9	469.9	2.34000
62.10	107.82	.07422	-56.0	480.5	2.87705
59.40	112.63	.07818	-55.3	488.0	3.14185
56.80	123.00	.08252	-54.7	495.7	3.58811
54.30	128.20	.08708	-54.1	503.5	3.91196
52.00	132.75	.09162	-52.0	514.6	4.23025
48.70	136.04	.09866	-51.7	525.3	4.62881
46.50	135.34	.10360	-52.0	531.3	4.82289
44.00	138.45	.10964	-51.8	540.2	5.21387
40.60	145.83	.11890	-50.7	555.6	5.95165
38.80	147.03	.12416	-50.7	562.8	6.27898
37.00	148.38	.12973	-50.6	571.0	6.64497
35.40	149.77	.13496	-49.0	582.4	7.01021
33.80	152.09	.14051	-48.4	591.5	7.45581
32.10	160.52	.14705	-48.3	600.7	8.28601
30.50	161.08	.15355	-47.8	611.0	8.75124
29.10	160.61	.15951	-46.7	622.0	9.14557
26.40	157.85	.17165	-47.9	636.2	9.90757
25.20	156.90	.17741	-47.2	646.7	10.31695
24.00	152.53	.18329	-46.4	658.2	10.53101
22.80	148.77	.18931	-45.6	670.3	10.81217
22.30	149.72	.19193	-46.1	673.1	11.12484
21.70	148.30	.19513	-46.3	677.9	11.32416
20.70	161.55	.20115	-46.6	686.1	12.93186
20.20	161.08	.20426	-46.6	690.9	13.21319
19.30	145.11	.20948	-46.4	700.5	12.45869
18.40	134.17	.21454	-46.3	710.6	12.08276
17.50	128.25	.21961	-46.1	721.4	12.14381
16.70	124.05	.22420	-44.1	737.3	12.30890
15.80	116.59	.22930	-42.4	754.7	12.22717
15.50	113.64	.23102	-41.5	761.8	12.14813
14.80	111.82	.23510	-40.5	775.5	12.51978
14.10	106.81	.23918	-40.5	786.3	12.55236
13.40	103.10	.24333	-40.5	797.8	12.74871
12.85	97.43	.24655	-40.5	807.4	12.56299
12.25	91.91	.25002	-40.6	818.0	12.43225
11.70	88.91	.25325	-40.9	827.7	12.59236
11.15	85.58	.25650	-40.6	840.3	12.71833
10.70	85.28	.25927	-40.0	852.4	13.20603
10.20	77.17	.26219	-38.7	869.0	12.53601
9.78	71.87	.26457	-37.4	884.4	12.17693
9.57	70.63	.26578	-37.1	890.9	12.22973
9.23	65.10	.26764	-35.7	905.6	11.68724
9.13	64.41	.26820	-35.0	911.0	11.68906
9.06	67.92	.26861	-34.8	914.1	12.42164

WASHINGTON,D..C. 8/12/68 1600Z OZONE DATA DESCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
870.00					
852.00	56.48	.00093	9.8	296.3	.10985
828.00	50.00	.00206	7.5	296.2	.10007
806.00	29.14	.00268	10.3	301.5	.05992
795.00	28.19	.00298	10.6	303.0	.05876
772.00	29.80	.00367	10.0	304.9	.06396
750.00	23.45	.00421	8.8	306.1	.05181
727.00	23.03	.00478	8.2	308.2	.05249
708.00	27.03	.00534	7.5	309.7	.06326
686.00	34.71	.00620	6.7	311.7	.08384
667.00	20.32	.00665	6.1	313.6	.05049
658.00	21.29	.00688	5.9	314.5	.05360
640.00	17.46	.00726	4.3	315.2	.04520
621.50	20.83	.00775	3.3	316.7	.05553
604.00	20.75	.00821	2.0	317.8	.05691
587.00	18.73	.00863	1.2	319.5	.05287
578.00	19.67	.00887	.4	319.9	.05639
562.00	19.52	.00931	-.6	321.4	.05754
544.00	21.35	.00985	-2.4	322.2	.06504
535.00	22.46	.01015	-3.6	322.3	.06955
518.00	21.83	.01071	-5.7	322.7	.06982
510.00	21.45	.01097	-6.8	322.9	.06970
494.00	25.93	.01162	-8.8	323.4	.08697
485.00	30.18	.01206	-9.7	324.0	.10312
477.00	27.28	.01242	-10.7	324.3	.09476
461.00	27.36	.01315	-12.3	325.4	.09835
452.50	28.52	.01357	-12.7	326.7	.10443
444.00	27.63	.01398	-14.0	326.8	.10311
437.00	28.96	.01435	-15.0	327.1	.10983
429.00	29.55	.01478	-15.4	328.3	.11414
414.00	26.88	.01553	-16.4	330.4	.10758
406.00	23.49	.01590	-16.6	331.9	.09586
397.00	23.17	.01631	-17.6	332.7	.09671
385.00	24.80	.01691	-19.2	333.5	.10674
370.00	26.98	.01775	-21.4	334.5	.12085
364.00	27.46	.01811	-22.0	335.3	.12499
350.00	26.98	.01894	-24.0	336.3	.12775
344.00	26.51	.01930	-25.1	336.4	.12768
333.00	27.92	.02002	-27.1	336.9	.13894
321.00	27.70	.02082	-29.3	337.4	.14298
308.00	33.80	.02192	-32.0	337.6	.18184
302.00	35.56	.02248	-33.0	338.1	.19510
296.00	33.43	.02301	-33.7	339.1	.18716
285.00	30.74	.02392	-36.1	339.3	.17874
274.00	26.90	.02476	-38.6	339.6	.16269
264.00	25.97	.02552	-40.3	340.7	.16299
253.00	25.49	.02638	-42.3	341.9	.16693
247.00	25.56	.02686	-43.4	342.7	.17146
237.00	21.70	.02757	-45.6	343.4	.15171
232.00	22.16	.02794	-46.7	343.7	.15830
228.00	23.40	.02826	-47.9	343.6	.17008
223.00	22.46	.02866	-49.1	343.9	.16692
213.00	23.58	.02951	-51.5	344.8	.18345
205.00	19.93	.03011	-53.4	345.7	.16109
195.00	17.82	.03081	-56.0	346.5	.15143
190.00	23.70	.03130	-56.4	348.4	.20668

WASHINGTON,D.C. 8/12/68 1600Z OZONE DATA DESCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
185.50	23.27	.03174	-57.6	348.7	.20789
177.00	24.27	.03264	-59.9	349.8	.22716
173.00	25.20	.03309	-61.1	350.1	.24132
168.00	22.94	.03362	-62.0	351.5	.22627
160.00	22.50	.03449	-63.5	353.9	.23302
156.00	23.94	.03497	-64.6	354.6	.25426
152.00	23.10	.03544	-64.9	356.8	.25184
145.50	24.89	.03630	-65.4	360.4	.28346
141.50	24.45	.03684	-65.7	362.7	.28626
134.50	28.17	.03796	-66.0	367.5	.34702
131.00	31.86	.03863	-66.2	369.8	.40294
124.00	30.90	.03997	-67.4	373.6	.41289
117.50	35.25	.04146	-67.4	379.4	.49704
108.50	39.99	.04398	-65.7	391.3	.61070
102.50	46.18	.04605	-65.4	398.3	.74647
97.40	50.66	.04809	-64.6	405.7	.86191
92.00	64.81	.05101	-63.8	413.9	1.16733
89.00	83.14	.05319	-63.0	419.4	1.54784
86.90	89.21	.05487	-62.8	422.8	1.70114
84.00	93.23	.05737	-62.3	427.9	1.83916
81.80	90.45	.05926	-61.8	432.2	1.83212
76.70	95.71	.06413	-60.1	443.7	2.06779
72.00	109.52	.06960	-58.3	455.6	2.52056
69.60	116.96	.07273	-57.6	461.5	2.78454
67.60	127.34	.07566	-56.6	467.6	3.12133
63.30	140.01	.08292	-54.9	480.1	3.66497
59.40	148.13	.09036	-54.1	490.7	4.13226
57.60	151.36	.09404	-53.8	495.9	4.35432
53.70	149.26	.10230	-53.4	506.9	4.60571
50.00	153.88	.11097	-52.6	519.1	5.09942
46.40	162.24	.12055	-52.2	531.2	5.79386
45.00	167.43	.12460	-51.8	536.8	6.16527
41.60	165.23	.13485	-50.4	552.6	6.58141
37.10	168.84	.15011	-49.8	572.4	7.54108
34.00	173.56	.16207	-49.5	587.7	8.45843
32.50	173.59	.16825	-48.8	597.2	8.85041
29.30	167.86	.18199	-48.1	617.1	9.49293
26.70	163.16	.19396	-47.9	634.2	10.12595
24.40	158.48	.20523	-47.8	651.2	10.76264
22.40	150.53	.21540	-47.9	666.8	11.13499
20.70	143.73	.22436	-47.2	684.1	11.50569
19.10	133.36	.23283	-44.6	708.1	11.56979
17.80	124.07	.23973	-43.4	726.5	11.55005
16.60	116.18	.24613	-43.1	742.1	11.59658
15.50	109.24	.25205	-42.1	759.8	11.67834
14.70	101.29	.25629	-41.5	773.5	11.41741
14.30	99.57	.25846	-41.4	780.1	11.53807
13.50	92.83	.26268	-40.8	795.1	11.39427
12.80	90.23	.26647	-40.2	809.3	11.68011
12.20	85.89	.26972	-39.4	823.1	11.66616
11.60	84.14	.27307	-39.0	836.6	12.01905
11.00	94.21	.27702	-38.6	851.0	14.19100
10.75	97.63	.27880	-37.6	860.3	15.04787
10.50	74.58	.28018	-36.7	869.2	11.76913
10.00	71.24	.28293	-36.3	883.0	11.80483

WASHINGTON,D.C. 8/12/68 1600Z OZONE DATA DESCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
9.60	71.03	.28521	-36.1	893.9	12.25961
9.24	62.72	.28711	-35.0	907.9	11.24729
9.09	64.22	.28794	-34.6	913.8	11.70632
9.03	66.22	.28828	-34.5	916.0	12.15110

WASHINGTON,D.C. 9/13/68 1530Z WATER VAPOR DATA

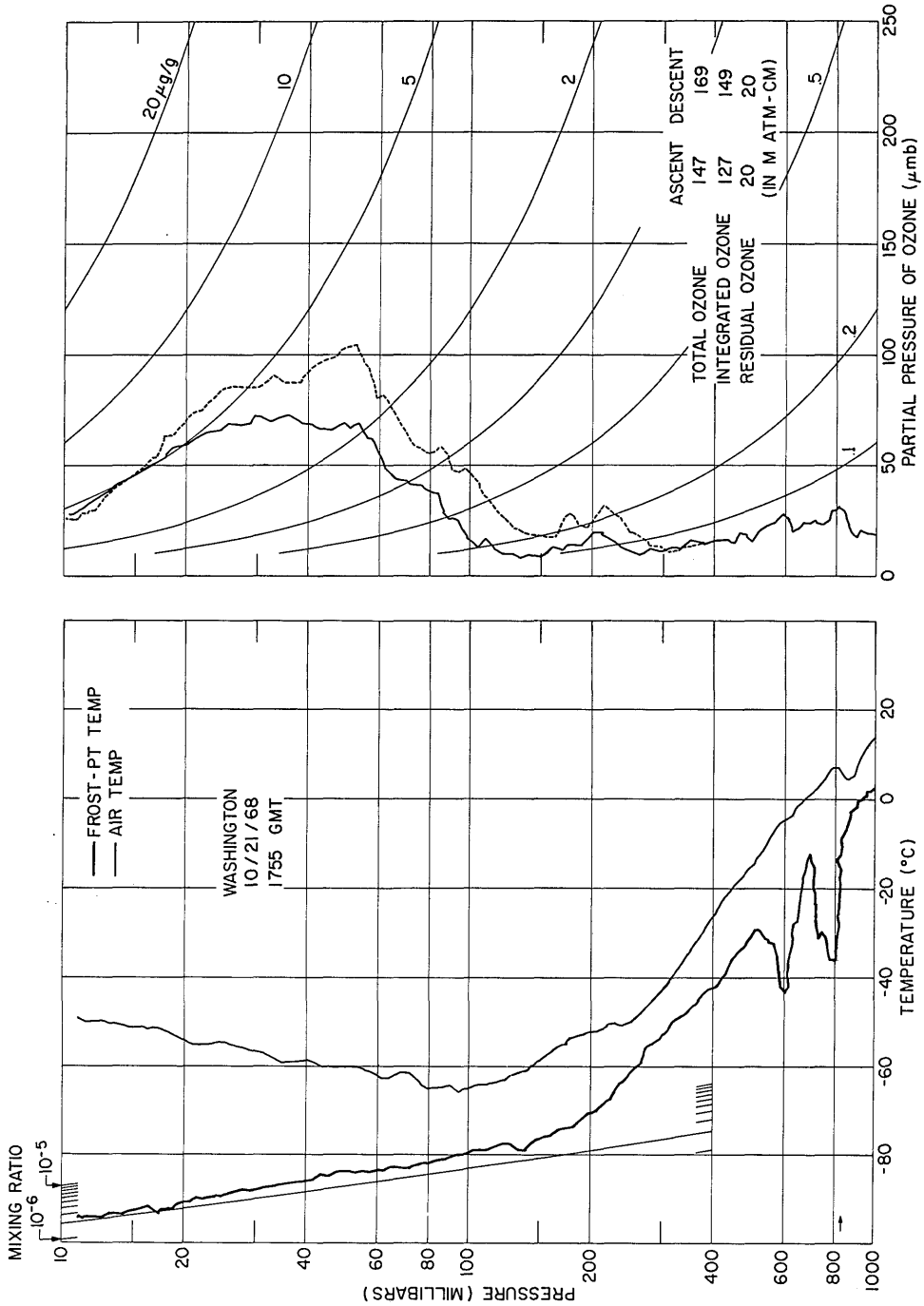
P (mb)	T (°C)	F (°C)	w (g/kg)	θ (°K)	M (cm)	ΣM (cm)
1013.80	17.9	7.7	6.42097	290.0		
1001.00	17.4	8.5	6.88100	290.5	0.08687000	0.08687000
978.00	16.4	9.3	7.46556	291.4	0.16835247	0.25522247
949.00	16.3	9.3	7.69652	293.8	0.22433690	0.47955937
938.00	15.8	8.5	7.34862	294.2	0.08443698	0.56399635
928.00	15.3	7.7	7.02133	294.6	0.07331607	0.63731242
917.00	14.8	9.3	7.96854	295.2	0.08412686	0.72143927
907.00	14.3	7.7	7.18578	295.6	0.07731796	0.79875724
898.00	13.3	7.7	7.25864	295.4	0.06632641	0.86508365
886.00	12.4	7.7	7.35811	295.6	0.08949031	0.95457395
875.00	11.4	4.6	6.03437	295.7	0.07516189	1.02973584
864.00	10.8	5.4	6.42980	296.1	0.06995196	1.09968780
854.00	9.6	5.4	6.50587	295.8	0.06599832	1.16568612
844.00	8.9	5.4	6.58377	296.0	0.06678392	1.23247005
833.00	8.1	3.9	6.03565	296.3	0.07082330	1.30329335
823.00	7.5	3.3	5.82168	296.7	0.06049659	1.36378993
813.00	7.1	2.0	5.36908	297.3	0.05709571	1.42088564
804.00	8.0	-8.1	2.37887	299.2	0.03557731	1.45646294
794.00	8.7	-22.5	0.63346	301.1	0.01536904	1.47183199
783.00	9.2	-33.1	0.21691	302.8	0.00477252	1.47660451
773.00	9.3	-36.6	0.15137	304.0	0.00187899	1.47848350
762.00	9.6	-32.0	0.25207	305.6	0.00226419	1.48074769
753.50	9.8	-32.7	0.23593	306.7	0.00211633	1.48286402
744.00	9.3	-32.8	0.23532	307.4	0.00228413	1.48514814
733.50	8.6	-29.5	0.33980	307.8	0.00308101	1.48822916
723.00	8.0	-29.0	0.36287	308.4	0.00376433	1.49199349
714.00	7.5	-26.0	0.49985	309.0	0.00396147	1.49595496
705.00	6.9	-25.2	0.54686	309.5	0.00480629	1.50076125
696.00	6.5	-23.2	0.67821	310.2	0.00562533	1.50638658
686.00	6.1	-26.5	0.49163	311.0	0.00596859	1.51235516
676.00	5.5	-38.1	0.14554	311.6	0.00325088	1.51560604
667.00	5.3	-42.5	0.09014	312.7	0.00108222	1.51668826
658.00	5.0	-36.9	0.17074	313.5	0.00119792	1.51788618
649.00	4.6	-26.0	0.54995	314.3	0.00330929	1.52119547
639.00	3.8	-21.4	0.87829	314.7	0.00728692	1.52848239
630.00	3.2	-18.7	1.15193	315.4	0.00932240	1.53780479
621.00	2.2	-17.9	1.25911	315.5	0.01107109	1.54887588
612.00	1.7	-16.6	1.45377	316.2	0.01245713	1.56133301
603.50	1.0	-17.4	1.36335	316.7	0.01221713	1.57355014
594.00	0.3	-17.9	1.31647	317.3	0.01298892	1.58653906
586.00	-0.5	-18.2	1.30141	317.6	0.01068523	1.59722429
578.00	-1.5	-19.5	1.16789	317.8	0.01007879	1.60730308
569.00	-2.3	-20.0	1.13158	318.2	0.01055878	1.61786186
560.00	-3.2	-20.2	1.12326	318.6	0.01035387	1.62821573
552.00	-4.1	-20.9	1.06372	318.8	0.00892647	1.63714220
544.00	-4.9	-21.4	1.03192	319.2	0.00855363	1.64569583
536.50	-5.8	-21.6	1.02337	319.4	0.00786463	1.65356046
529.00	-6.8	-21.9	1.01528	319.6	0.00780096	1.66136142
520.50	-8.0	-22.3	0.98789	319.5	0.00868718	1.67004860
512.00	-8.9	-25.2	0.75325	319.9	0.00755083	1.67759943
504.50	-9.7	-27.3	0.62107	320.3	0.00525885	1.68285828
498.00	-10.1	-27.8	0.59595	321.0	0.00403602	1.68689430
490.00	-10.6	-26.9	0.66338	321.9	0.00514011	1.69203441
482.00	-11.1	-35.0	0.28700	322.8	0.00387911	1.69591353
475.00	-11.7	-38.3	0.20447	323.4	0.00175526	1.69766878

WASHINGTON,D.C. 9/13/68 1530Z WATER VAPOR DATA

P (mb)	T (°C)	F (°C)	w (g/kg)	θ (°K)	M (cm)	ΣM (cm)
468.00	-12.4	-36.1	0.26418	324.0	0.00167373	1.69934252
461.00	-13.4	-35.8	0.27574	324.1	0.00192829	1.70127081
454.00	-14.4	-35.6	0.28794	324.2	0.00201317	1.70328397
446.00	-15.5	-35.7	0.28903	324.5	0.00235499	1.70563897
439.00	-16.4	-36.1	0.28164	324.8	0.00203810	1.70767706
432.00	-17.4	-36.8	0.26364	325.0	0.00194740	1.70962447
424.00	-18.3	-37.9	0.23823	325.7	0.00204845	1.71167291
417.00	-19.4	-38.1	0.23597	325.8	0.00169359	1.71336651
410.00	-20.4	-38.3	0.23690	326.0	0.00168882	1.71505532
404.00	-21.3	-38.6	0.23126	326.3	0.00143312	1.71648845
398.00	-22.5	-39.1	0.22302	326.2	0.00139065	1.71787910
390.50	-23.5	-39.5	0.21609	326.6	0.00168028	1.71955938
384.00	-24.8	-40.3	0.20141	326.5	0.00138457	1.72094395
378.00	-25.8	-41.0	0.18785	326.6	0.00119162	1.72213557
372.00	-26.7	-41.8	0.17553	326.9	0.00111238	1.72324795
366.00	-27.6	-42.6	0.16239	327.2	0.00103444	1.72428239
359.00	-28.5	-43.5	0.14925	327.8	0.00111302	1.72539541
353.00	-29.6	-44.3	0.13712	328.0	0.00087667	1.72627208
348.00	-30.5	-45.1	0.12729	328.0	0.00067452	1.72694659
342.00	-31.5	-45.4	0.12533	328.4	0.00077330	1.72771990
336.00	-32.4	-45.7	0.12212	328.8	0.00075750	1.72847740
330.00	-33.6	-45.6	0.12570	328.8	0.00075866	1.72923606
324.00	-34.5	-46.9	0.11016	329.4	0.00072204	1.72995810
318.50	-35.6	-47.6	0.10300	329.4	0.00059817	1.73055627
313.00	-36.6	-47.9	0.10158	329.7	0.00057409	1.73113036
308.00	-37.4	-47.8	0.10431	330.0	0.00052524	1.73165561
303.00	-38.5	-47.9	0.10493	330.1	0.00053380	1.73218940
297.50	-39.6	-48.1	0.10359	330.2	0.00058516	1.73277456
292.00	-40.4	-49.7	0.08690	330.9	0.00053453	1.73330909
287.00	-41.3	-50.7	0.07839	331.2	0.00042164	1.73373073
282.00	-42.2	-51.6	0.07155	331.6	0.00038248	1.73411321
277.00	-43.0	-52.5	0.06477	332.1	0.00034775	1.73446096
272.00	-44.1	-52.8	0.06345	332.3	0.00032710	1.73478806
266.50	-45.1	-53.3	0.06052	332.8	0.00034788	1.73513594
261.00	-45.9	-54.0	0.05668	333.6	0.00032889	1.73546483
256.00	-46.7	-55.1	0.05009	334.2	0.00027238	1.73573721
251.00	-47.9	-55.8	0.04648	334.3	0.00024636	1.73598357
246.00	-49.0	-56.1	0.04610	334.6	0.00023618	1.73621975
241.00	-50.1	-56.9	0.04204	335.0	0.00022484	1.73644460
236.00	-51.0	-58.3	0.03594	335.6	0.00019891	1.73664351
231.00	-51.9	-58.8	0.03407	336.3	0.00017859	1.73682210
226.50	-52.9	-59.6	0.03136	336.7	0.00015023	1.73697232
222.00	-54.1	-60.2	0.02942	336.8	0.00013955	1.73711187
217.00	-55.1	-60.9	0.02741	337.4	0.00014498	1.73725685
212.50	-55.9	-61.4	0.02598	338.2	0.00012258	1.73737943
208.00	-57.0	-62.1	0.02416	338.6	0.00011512	1.73749455
203.00	-57.6	-62.7	0.02296	339.9	0.00012022	1.73761477
198.50	-58.3	-62.7	0.02348	341.0	0.00010664	1.73772141
194.00	-59.4	-63.0	0.02292	341.5	0.00010655	1.73782796
190.00	-60.6	-63.8	0.02109	341.6	0.00008982	1.73791778
186.00	-61.6	-64.0	0.02094	342.1	0.00008577	1.73800355
182.00	-62.6	-63.5	0.02287	342.6	0.00008940	1.73809295
178.00	-63.1	-64.9	0.01914	343.9	0.00008573	1.73817868
173.70	-63.1	-65.7	0.01747	346.3	0.00008032	1.73825900
169.00	-62.9	-66.1	0.01710	349.5	0.00008291	1.73834191

WASHINGTON,D.C. 9/13/68 1530Z WATER VAPOR DATA

P (mb)	T (°C)	F (°C)	w (g/kg)	θ (°K)	M (cm)	ΣM (cm)
165.50	-62.9	-67.2	0.01478	351.6	0.00005694	1.73839885
162.00	-62.6	-68.5	0.01262	354.2	0.00004893	1.73844778
158.00	-62.3	-70.1	0.01011	357.2	0.00004638	1.73849416
154.00	-62.6	-71.3	0.00876	359.3	0.00003850	1.73853266
150.00	-62.9	-73.0	0.00691	361.6	0.00003198	1.73856464
146.00	-63.1	-74.5	0.00558	364.0	0.00002549	1.73859013
142.70	-62.6	-76.0	0.00454	367.3	0.00001705	1.73860718
139.00	-62.3	-76.5	0.00433	370.5	0.00001675	1.73862393
135.50	-62.3	-76.7	0.00428	373.2	0.00001537	1.73863930
132.00	-62.3	-77.8	0.00367	376.0	0.00001418	1.73865348
128.50	-61.6	-78.0	0.00367	380.2	0.00001309	1.73866658
125.00	-60.6	-78.6	0.00343	385.0	0.00001268	1.73867925
122.00	-60.9	-79.2	0.00319	387.2	0.00001014	1.73868940
118.00	-61.6	-79.3	0.00321	389.6	0.00001308	1.73870247
115.50	-61.8	-79.4	0.00324	391.5	0.00000822	1.73871070
112.50	-62.3	-79.8	0.00314	393.5	0.00000976	1.73872046
109.50	-62.6	-79.8	0.00323	396.1	0.00000974	1.73873020
107.00	-62.9	-79.9	0.00325	398.3	0.00000827	1.73873847
103.80	-62.3	-80.1	0.00321	402.7	0.00001056	1.73874902
101.00	-61.6	-81.0	0.00285	407.3	0.00000866	1.73875769
97.70	-60.9	-81.8	0.00257	412.6	0.00000912	1.73876681
95.00	-61.1	-82.0	0.00256	415.5	0.00000706	1.73877387
92.30	-60.9	-82.2	0.00255	419.4	0.00000704	1.73878090
89.80	-60.6	-82.2	0.00262	423.2	0.00000660	1.73878750
87.10	-59.7	-82.1	0.00275	428.8	0.00000740	1.73879490
84.80	-59.2	-81.7	0.00305	433.0	0.00000680	1.73880170
82.20	-59.0	-82.5	0.00273	437.3	0.00000767	1.73880937
80.00	-58.3	-83.0	0.00259	442.1	0.00000597	1.73881534
77.80	-58.1	-83.2	0.00257	446.1	0.00000579	1.73882113
75.40	-58.5	-83.4	0.00257	449.2	0.00000629	1.73882742
73.20	-58.5	-83.5	0.00260	453.0	0.00000580	1.73883322
71.00	-57.9	-83.5	0.00268	458.4	0.00000593	1.73883915
68.80	-57.2	-83.8	0.00263	464.0	0.00000596	1.73884511
66.80	-57.4	-84.0	0.00262	467.4	0.00000535	1.73885046
64.60	-57.6	-84.4	0.00252	471.4	0.00000577	1.73885623
62.50	-57.2	-84.5	0.00256	476.9	0.00000545	1.73886167
60.40	-56.3	-84.7	0.00256	483.5	0.00000548	1.73886716
58.40	-57.0	-84.6	0.00269	486.7	0.00000536	1.73887251
56.60	-57.2	-84.8	0.00268	490.6	0.00000493	1.73887745
54.70	-57.2	-84.9	0.00272	495.4	0.00000524	1.73888268
52.80	-57.2	-84.9	0.00282	500.4	0.00000537	1.73888806
51.00	-57.2	-85.0	0.00287	505.4	0.00000522	1.73889328
49.20	-57.0	-85.1	0.00292	511.1	0.00000531	1.73889860
47.50	-56.3	-85.2	0.00297	517.8	0.00000511	1.73890371
45.80	-56.1	-85.5	0.00291	523.8	0.00000510	1.73890880
44.10	-55.9	-85.6	0.00297	530.0	0.00000510	1.73891390
42.50	-55.7	-86.0	0.00291	536.1	0.00000480	1.73891870
40.80	-55.5	-86.1	0.00297	542.9	0.00000510	1.73892380
39.30	-55.3	-86.3	0.00297	549.3	0.00000454	1.73892834
37.70	-55.1	-86.3	0.00309	556.4	0.00000495	1.73893329
36.10	-55.1	-86.4	0.00317	563.3	0.00000511	1.73893840
34.60	-54.9	-87.0	0.00299	570.7	0.00000471	1.73894311
33.10	-54.7	-86.9	0.00319	578.5	0.00000473	1.73894783
31.60	-54.3	-86.8	0.00341	587.3	0.00000505	1.73895288
30.20	-53.7	-87.1	0.00336	596.6	0.00000483	1.73895771


20μg/g
10
5
2
1
.2
.5
ASCENT DESCENT
147 169
127 149
20 20
(IN M ATM-CM)
TOTAL OZONE
INTEGRATED OZONE
RESIDUAL OZONE
PARTIAL PRESSURE OF OZONE (μmb)
0
50
100
150
200
250
FROST-PT TEMP
AIR TEMP
WASHINGTON
10/21/68
1755 GMT
MIXING RATIO
10
10⁻⁶
10⁻⁵
PRESSURE (MILLIBARS)
20
40
60
80
100
200
400
600
800
1000
TEMPERATURE (°C)
-80
-60
-40
-20
0
20

WASHINGTON,,D.C. 9/13/68 1530Z OZONE DATA ASCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
1013.80					
968.00	37.90	.00138	16.3	292.2	.06487
942.00	42.61	.00230	15.4	293.5	.07495
908.00	40.32	.00347	13.1	294.3	.07357
881.00	34.70	.00430	10.9	294.6	.06526
837.00	31.28	.00556	7.9	295.7	.06193
824.00	34.05	.00598	7.9	297.1	.06848
797.00	34.70	.00689	7.9	299.9	.07213
783.00	31.34	.00733	7.9	301.4	.06633
757.00	31.26	.00816	7.8	304.2	.06843
730.00	27.75	.00896	7.0	306.5	.06300
705.00	26.78	.00970	6.3	308.8	.06295
690.00	32.75	.01025	6.0	310.4	.07865
679.00	44.16	.01081	5.6	311.3	.10776
657.00	43.67	.01195	5.3	313.9	.11013
629.00	43.48	.01344	3.4	315.8	.11454
618.00	37.64	.01396	2.5	316.2	.10093
604.00	23.43	.01439	1.3	317.0	.06429
592.00	19.39	.01470	.5	317.9	.05428
566.00	18.23	.01534	-1.9	319.1	.05337
550.00	17.08	.01573	-3.9	319.4	.05145
533.00	15.93	.01612	-6.1	319.6	.04951
512.00	13.61	.01655	-8.9	320.0	.04404
490.00	13.60	.01702	-11.0	321.4	.04599
478.00	16.52	.01735	-12.0	322.4	.05727
469.00	22.80	.01769	-12.9	323.1	.08054
459.00	23.93	.01810	-14.2	323.5	.08640
440.00	15.88	.01863	-16.3	324.7	.05981
419.00	15.26	.01921	-18.9	326.1	.06034
399.00	14.77	.01978	-21.1	327.7	.06134
382.00	12.46	.02021	-23.9	328.1	.05407
365.00	11.86	.02064	-27.0	328.3	.05386
347.00	10.71	.02107	-30.0	329.0	.05113
331.00	10.66	.02146	-32.7	329.7	.05336
315.00	10.61	.02188	-35.4	330.8	.05583
300.00	10.64	.02229	-37.9	331.8	.05877
285.00	11.23	.02274	-41.1	332.2	.06529
270.00	10.68	.02320	-43.9	333.3	.06557
256.00	10.67	.02364	-46.3	334.8	.06907
244.00	9.46	.02400	-49.3	335.0	.06422
228.00	9.45	.02451	-52.1	337.3	.06864
217.50	9.93	.02488	-54.2	338.6	.07565
205.00	9.92	.02534	-56.9	340.1	.08017
193.50	11.05	.02584	-59.4	341.8	.09463
183.00	8.09	.02620	-61.8	343.4	.07329
177.00	8.69	.02643	-62.5	345.4	.08133
171.50	16.07	.02683	-61.5	350.2	.15527
166.50	18.80	.02727	-60.6	354.8	.18714
157.50	19.84	.02814	-63.6	355.4	.20869
147.00	19.85	.02922	-63.1	363.4	.22377
142.00	18.21	.02971	-62.0	368.8	.21255
134.50	22.67	.03069	-61.5	375.4	.27926
126.50	31.62	.03222	-61.8	381.6	.41420
119.50	35.86	.03383	-61.5	388.3	.49723
113.00	28.64	.03509	-61.8	394.1	.42003
107.50	27.11	.03616	-61.8	399.8	.41780

WASHINGTON,D.C. 9/13/68 1530Z OZONE DATA ASCENT

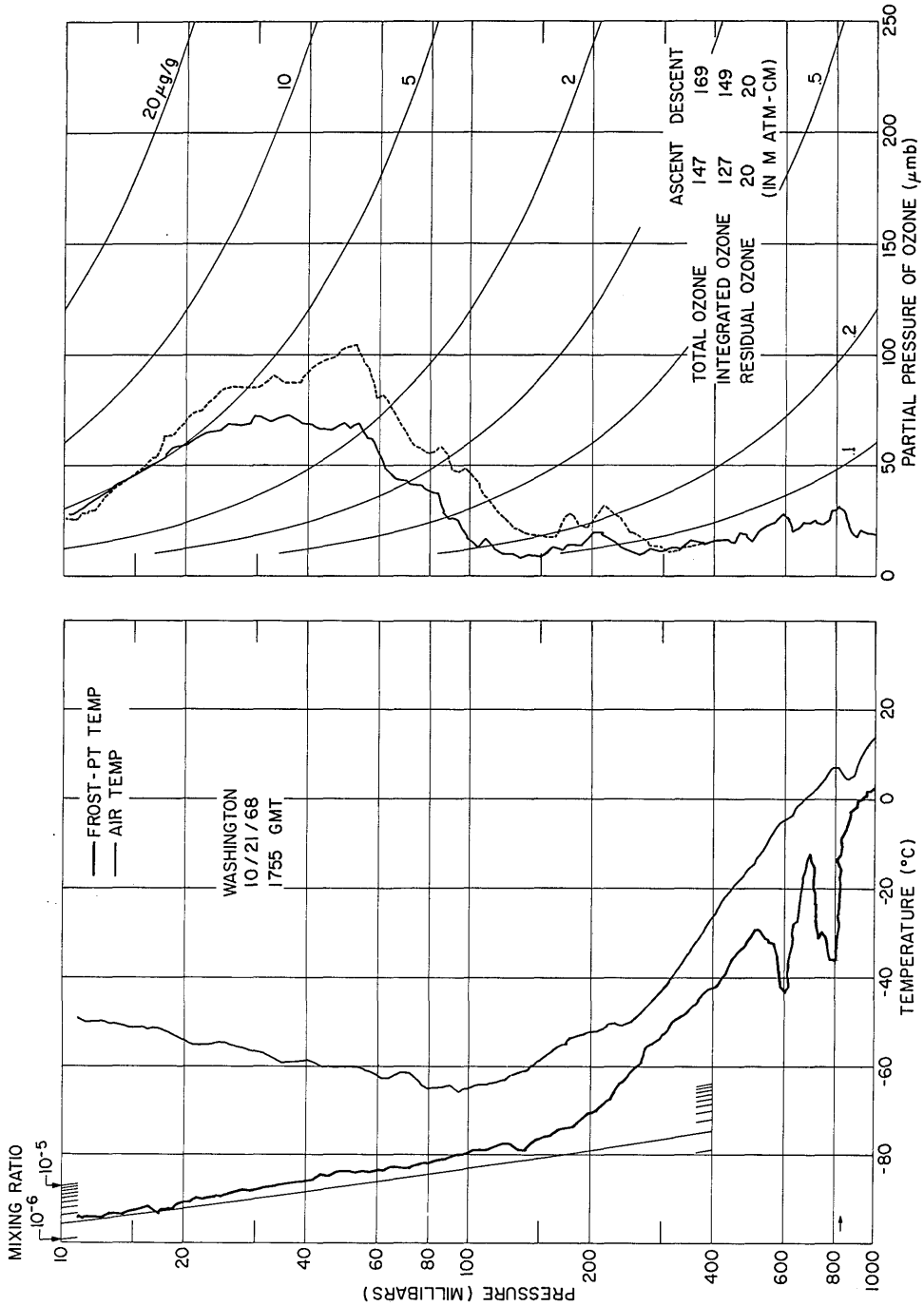
PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
104.50	28.09	.03679	-61.5	403.5	.44541
99.00	43.24	.03863	-61.8	409.3	.72369
94.00	68.00	.04141	-60.1	418.7	1.19868
91.70	69.60	.04278	-60.1	421.7	1.25761
87.60	78.60	.04561	-60.3	426.8	1.48672
83.60	57.28	.04773	-59.6	433.9	1.13527
79.40	61.93	.05025	-58.2	443.2	1.29241
77.40	82.87	.05192	-57.6	447.8	1.77404
75.60	100.60	.05379	-58.0	449.9	2.20490
73.80	81.56	.05534	-58.0	453.0	1.83120
71.70	96.97	.05755	-57.8	457.3	2.24096
70.00	84.76	.05915	-57.6	460.9	2.00634
68.30	84.76	.06080	-56.7	466.0	2.05628
66.60	89.89	.06258	-55.9	471.2	2.23647
65.00	115.50	.06480	-56.7	472.6	2.94446
61.80	107.96	.06911	-57.6	477.6	2.89468
60.20	91.43	.07100	-58.0	480.2	2.51659
58.50	89.37	.07302	-57.8	484.6	2.53142
55.60	98.87	.07699	-56.9	493.7	2.94645
54.00	107.23	.07946	-56.7	498.4	3.29027
51.40	111.43	.08380	-56.3	506.4	3.59207
48.80	113.02	.08843	-54.8	517.4	3.83743
47.50	112.69	.09084	-55.0	521.0	3.93115
44.00	124.41	.09835	-55.6	531.0	4.68532
41.80	134.64	.10381	-55.4	539.3	5.33731
40.50	130.92	.10707	-55.4	544.2	5.35632
39.50	131.37	.10967	-55.2	548.6	5.51077
37.50	142.18	.11550	-55.0	557.4	6.28262
36.50	144.85	.11859	-54.6	562.8	6.57586
34.80	150.25	.12425	-53.6	573.1	7.15396
33.10	147.54	.13008	-53.8	580.8	7.38567
31.50	149.34	.13592	-54.6	586.9	7.85575
30.00	143.40	.14145	-54.8	594.6	7.92037
26.90	145.07	.15394	-52.1	621.2	8.93587
25.60	141.89	.15949	-51.1	632.8	9.18384
24.20	140.55	.16573	-50.9	643.5	9.62366
22.90	139.23	.17180	-51.1	653.2	10.07445
22.20	133.13	.17506	-51.3	658.5	9.93640
21.60	133.18	.17795	-50.9	664.8	10.21661
20.90	141.12	.18162	-50.0	673.8	11.18809
20.40	153.72	.18455	-49.8	679.1	12.48619
19.30	159.38	.19153	-47.5	697.0	13.68312
18.60	159.35	.19618	-46.5	707.6	14.19599
17.60	151.55	.20279	-47.4	716.1	14.26779
16.60	151.55	.20979	-46.9	729.9	15.12730
15.70	151.46	.21646	-45.7	745.4	15.98581
15.00	151.03	.22190	-45.5	755.8	16.68391
14.30	146.23	.22741	-44.9	768.3	16.94478
13.90	144.06	.23064	-44.7	775.2	17.17302
13.00	144.93	.23830	-45.2	788.4	18.47296
12.25	141.40	.24494	-44.7	803.7	19.12630
11.50	136.26	.25173	-44.5	818.9	19.63297
11.15	132.91	.25498	-44.2	827.3	19.75176
10.80	132.48	.25831	-44.0	835.5	20.32534
10.00	127.35	.26605	-43.2	857.0	21.10150

WASHINGTON,D.C. 9/13/68 1530Z OZONE DATA ASCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
9.50	123.11	.27104	-43.1	870.3	21.47286
9.00	118.41	.27609	-42.8	885.0	21.80062
8.50	114.14	.28124	-42.5	900.8	22.25070
8.00	109.44	.28648	-42.0	918.4	22.66805
7.60	101.07	.29057	-42.5	930.1	22.03684
7.15	91.80	.29500	-42.9	944.5	21.27557
6.80	87.64	.29847	-43.2	956.8	21.35596
6.50	83.82	.30146	-42.6	971.9	21.36773
6.30	81.92	.30348	-41.1	987.2	21.54675
6.13	76.47	.30513	-39.3	1002.7	20.67132
6.00	72.64	.30636	-38.4	1012.7	20.06091
5.92	70.75	.30711	-38.5	1015.9	19.80173
5.90	72.45	.30730	-38.4	1017.6	20.34608

WASHINGTON,D.C. 9/13/68 1530Z OZONE DATA DESCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
960.00					
937.00	69.25	.00133	15.7	294.3	.12247
915.00	67.93	.00260	14.6	295.1	.12302
884.00	64.97	.00437	12.2	295.6	.12179
861.00	61.19	.00564	10.5	296.0	.11775
840.00	58.07	.00677	8.5	296.0	.11455
819.00	54.76	.00787	7.0	296.6	.11079
800.00	47.78	.00875	8.4	300.0	.09896
789.00	40.07	.00919	9.1	302.0	.08416
766.00	46.77	.01028	9.7	305.2	.10117
747.00	50.10	.01127	9.6	307.3	.11114
737.00	44.19	.01174	9.1	308.0	.09935
716.00	37.09	.01259	7.8	309.1	.08583
696.00	36.16	.01340	6.6	310.3	.08608
686.00	40.98	.01387	6.2	311.1	.09900
676.00	50.25	.01445	5.4	311.6	.12318
667.00	54.02	.01502	5.3	312.6	.13421
637.00	28.18	.01604	3.7	315.0	.07329
619.00	25.36	.01662	2.3	315.9	.06787
602.00	21.69	.01709	.9	316.9	.05969
583.00	20.05	.01760	-.7	317.9	.05699
566.00	19.06	.01805	-2.7	318.2	.05581
556.00	18.60	.01831	-3.5	318.9	.05542
541.00	17.60	.01869	-5.4	319.2	.05390
525.00	17.68	.01911	-7.3	319.6	.05581
508.00	17.67	.01956	-9.4	320.1	.05764
493.00	24.03	.02013	-10.5	321.5	.08076
484.00	28.12	.02054	-10.9	322.7	.09626
469.00	23.62	.02113	-12.2	324.0	.08345
461.00	20.73	.02141	-13.3	324.2	.07451
447.00	17.07	.02182	-15.2	324.7	.06328
432.00	17.15	.02229	-17.3	325.1	.06579
417.00	17.67	.02278	-19.4	325.9	.07021
403.00	16.58	.02322	-21.5	326.3	.06818
390.00	16.57	.02365	-23.8	326.3	.07042
375.00	17.00	.02418	-26.1	327.0	.07510
364.00	17.45	.02459	-27.8	327.5	.07945
351.00	15.32	.02503	-30.0	327.9	.07234
339.00	15.27	.02545	-31.8	328.8	.07465
327.00	14.29	.02585	-34.1	329.0	.07239
315.00	14.29	.02627	-36.1	329.8	.07514
304.00	14.79	.02669	-38.1	330.3	.08063
293.00	15.23	.02713	-40.2	330.9	.08613
287.00	15.69	.02739	-41.1	331.5	.09059
278.00	15.65	.02778	-42.8	332.1	.09329
267.00	15.09	.02826	-44.9	332.9	.09365
255.00	14.57	.02879	-46.9	334.4	.09470
245.00	14.06	.02923	-49.1	334.9	.09511
235.00	14.94	.02972	-50.9	336.1	.10535
225.00	15.30	.03025	-53.0	337.1	.11268
215.00	15.71	.03081	-55.2	338.1	.12108
206.00	16.50	.03137	-57.1	339.3	.13275
201.00	16.50	.03169	-58.0	340.3	.13605
196.50	14.99	.03196	-58.9	341.0	.12642
188.00	14.46	.03246	-61.3	341.5	.12746
183.00	15.39	.03279	-62.3	342.6	.13936


20μg/g
10
5
2
1
.2
.5
ASCENT DESCENT
147 169
127 149
20 20
(IN M ATM-CM)
TOTAL OZONE
INTEGRATED OZONE
RESIDUAL OZONE
PARTIAL PRESSURE OF OZONE (μmb)
0
50
100
150
200
250
FROST-PT TEMP
AIR TEMP
WASHINGTON
10/21/68
1755 GMT
MIXING RATIO
10
10⁻⁶
10⁻⁵
PRESSURE (MILLIBARS)
20
40
60
80
100
200
400
600
800
1000
TEMPERATURE (°C)
-80
-60
-40
-20
0
20

WASHINGTON, D.C. 9/13/68 1530Z OZONE DATA DESCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
8.35	105.61	.31280	-42.9	903.6	20.95822
7.75	97.64	.31855	-43.2	921.8	20.87535
7.30	92.75	.32293	-43.2	937.6	21.05209
6.85	88.49	.32737	-42.3	958.8	21.40606
6.53	82.05	.33047	-41.5	975.2	20.82153
6.30	78.24	.33268	-40.9	987.9	20.57893
6.12	75.99	.33442	-40.0	1000.0	20.57395
6.03	74.30	.33529	-39.9	1004.9	20.41838
6.00	73.02	.33558	-39.9	1006.3	20.16448
5.97	70.02	.33586	-39.6	1009.0	19.43423
5.93	71.29	.33623	-39.0	1013.5	19.91897
5.90	72.45	.33652	-38.4	1017.6	20.34608

WASHINGTON,D.C. 10/21/68 1755Z WATER VAPOR DATA

P (mb)	T (°C)	F (°C)	w (g/kg)	θ (°K)	M (cm)	ΣM (cm)
1005.00	14.6	2.9	4.62346	287.3		
1001.00	14.1	2.9	4.64207	287.2	0.01890923	0.01890923
990.00	13.4	2.1	4.43733	287.4	0.05095580	0.06986503
979.00	12.9	2.1	4.48755	287.8	0.05008857	0.11995360
966.00	12.3	2.1	4.54838	288.3	0.05993215	0.17988575
953.00	11.3	0.6	4.13890	288.4	0.05761971	0.23750546
940.00	10.2	0.6	4.19653	288.5	0.05528600	0.29279145
929.00	9.3	-0.1	4.07190	288.5	0.04640441	0.33919587
917.00	8.1	-0.1	4.12554	288.3	0.05018835	0.38938422
904.00	6.6	-1.5	3.73690	287.9	0.05214880	0.44153302
891.00	5.4	-2.1	3.59029	287.9	0.04859870	0.49013172
879.00	5.1	-2.8	3.45063	288.7	0.04310767	0.53323939
868.00	4.7	-5.1	2.85650	289.3	0.03539715	0.56863654
855.00	5.3	-7.3	2.40935	291.2	0.03492654	0.60356308
842.00	6.2	-8.3	2.24182	293.4	0.03084956	0.63441263
830.00	6.9	-10.1	1.92700	295.4	0.02552335	0.65993598
818.00	7.6	-31.0	0.25952	297.4	0.01338683	0.67332281
806.00	7.5	-33.7	0.19826	298.5	0.00280270	0.67612552
793.00	7.3	-36.0	0.15770	299.7	0.00236093	0.67848645
782.00	6.9	-36.1	0.15743	300.4	0.00176856	0.68025501
770.00	6.2	-34.0	0.20064	301.0	0.00219222	0.68244723
758.00	5.1	-31.2	0.27493	301.2	0.00291161	0.68535884
746.00	4.1	-29.6	0.33149	301.5	0.00371277	0.68907161
733.00	3.3	-30.8	0.29508	302.1	0.00415586	0.69322747
720.00	2.4	-25.4	0.52311	302.7	0.00542678	0.69865425
707.50	1.6	-14.6	1.50947	303.3	0.01296287	0.71161712
697.00	1.0	-11.9	1.96634	304.0	0.01862040	0.73023753
683.50	0.5	-14.2	1.61683	305.0	0.02467998	0.75491750
671.00	-0.2	-17.7	1.19396	305.9	0.01792590	0.77284340
660.00	-0.5	-23.1	0.72318	307.0	0.01075942	0.78360283
648.00	-1.6	-27.4	0.47733	307.4	0.00735006	0.79095289
635.00	-2.9	-27.6	0.47696	307.7	0.00632946	0.79728235
623.00	-3.6	-35.8	0.20394	308.6	0.00416876	0.80145111
612.00	-4.1	-42.3	0.10030	309.5	0.00170748	0.80315859
600.00	-4.5	-43.3	0.09117	310.8	0.00117229	0.80433088
588.50	-5.1	-41.6	0.11284	312.0	0.00119703	0.80552791
578.00	-6.0	-34.8	0.24604	312.5	0.00192259	0.80745050
566.00	-7.3	-32.2	0.33023	312.8	0.00352817	0.81097867
555.00	-8.7	-32.2	0.33678	312.9	0.00374338	0.81472205
543.00	-10.1	-31.0	0.39103	313.2	0.00445598	0.81917803
531.00	-11.5	-30.3	0.43117	313.6	0.00503389	0.82421192
521.00	-12.6	-29.2	0.49385	313.9	0.00471948	0.82893140
510.00	-13.9	-29.0	0.51466	314.3	0.00565998	0.83459138
500.00	-14.7	-30.7	0.44089	315.0	0.00487521	0.83946660
488.00	-15.7	-31.6	0.41173	316.0	0.00522007	0.84468667
478.00	-16.7	-33.2	0.35199	316.6	0.00389649	0.84858316
468.00	-17.7	-33.7	0.34152	317.3	0.00353829	0.85212145
457.50	-18.7	-34.8	0.31088	318.2	0.00349498	0.85561643
447.50	-19.9	-35.7	0.28850	318.6	0.00305805	0.85867449
437.00	-20.8	-37.6	0.23812	319.7	0.00282120	0.86149569
433.00	-21.4	-40.3	0.17791	319.7	0.00084906	0.86234475
427.00	-22.3	-40.9	0.16853	319.9	0.00106053	0.86340527
420.00	-23.3	-41.3	0.16456	320.2	0.00118961	0.86459488
413.00	-24.3	-41.7	0.15869	320.4	0.00115449	0.86574937
406.50	-25.2	-42.3	0.15102	320.7	0.00102711	0.86677648

WASHINGTON,D.C. 10/21/68 1755Z WATER VAPOR DATA

P (mb)	T (°C)	F (°C)	w (g/kg)	θ (°K)	M (cm)	ΣM (cm)
400.00	-26.3	-42.6	0.14764	320.8	0.00099044	0.86776692
393.50	-27.7	-42.9	0.14628	320.5	0.00097472	0.86874164
387.00	-28.7	-43.0	0.14685	320.6	0.00097210	0.86971375
380.00	-29.7	-43.4	0.14217	321.0	0.00103220	0.87074594
373.00	-30.9	-44.3	0.13111	321.2	0.00097598	0.87172193
366.80	-32.0	-45.1	0.12096	321.1	0.00079735	0.87251927
360.00	-32.8	-46.3	0.10689	321.8	0.00079050	0.87330977
354.00	-33.9	-47.2	0.09685	321.9	0.00062372	0.87393349
348.00	-34.8	-47.5	0.09522	322.3	0.00058797	0.87452146
342.00	-36.0	-48.1	0.09056	322.2	0.00056869	0.87509015
336.00	-36.8	-48.4	0.08815	322.7	0.00054707	0.87563722
329.70	-38.1	-48.9	0.08501	322.8	0.00055660	0.87619382
323.00	-39.2	-49.7	0.07867	323.1	0.00055952	0.87675334
317.50	-40.2	-50.1	0.07584	323.3	0.00043358	0.87718692
312.00	-41.2	-51.4	0.06586	323.5	0.00039763	0.87758455
305.40	-42.1	-52.4	0.05942	324.3	0.00042187	0.87800642
299.00	-43.0	-53.4	0.05372	325.0	0.00036944	0.87837586
292.00	-43.9	-54.1	0.05025	325.9	0.00037133	0.87874719
286.00	-44.8	-54.6	0.04786	326.6	0.00030034	0.87904753
280.00	-45.6	-55.2	0.04517	327.4	0.00028479	0.87933231
275.00	-46.5	-55.6	0.04379	327.7	0.00022696	0.87955927
269.50	-47.2	-58.9	0.02874	328.7	0.00020353	0.87976280
264.00	-48.0	-59.3	0.02798	329.5	0.00015916	0.87992196
259.00	-48.6	-59.8	0.02670	330.3	0.00013950	0.88006146
253.00	-49.5	-61.1	0.02287	331.3	0.00015177	0.88021323
248.00	-50.0	-62.2	0.02009	332.4	0.00010962	0.88032285
242.00	-50.3	-62.9	0.01858	334.2	0.00011840	0.88044125
237.00	-50.5	-63.4	0.01777	336.0	0.00009275	0.88053399
232.00	-50.3	-64.7	0.01506	338.3	0.00008376	0.88061775
227.00	-50.0	-66.2	0.01240	340.9	0.00007004	0.88068779
221.50	-50.1	-67.8	0.01011	343.1	0.00006316	0.88075095
217.00	-51.2	-68.3	0.00965	343.5	0.00004537	0.88079632
212.00	-51.7	-69.1	0.00871	344.9	0.00004683	0.88084315
207.50	-51.9	-69.9	0.00799	346.8	0.00003834	0.88088149
202.50	-52.1	-70.5	0.00749	348.9	0.00003950	0.88092099
198.00	-52.2	-71.1	0.00700	350.9	0.00003328	0.88095427
193.00	-52.4	-71.6	0.00663	353.2	0.00003478	0.88098905
188.50	-52.8	-72.4	0.00601	355.0	0.00002901	0.88101805
184.00	-53.0	-73.2	0.00549	357.1	0.00002639	0.88104445
180.00	-53.5	-73.4	0.00544	358.5	0.00002230	0.88106675
176.00	-54.1	-73.8	0.00522	359.9	0.00002175	0.88108850
172.00	-54.8	-73.9	0.00523	361.0	0.00002133	0.88110982
168.00	-55.2	-74.2	0.00513	362.8	0.00002114	0.88113097
163.60	-56.0	-75.3	0.00443	364.3	0.00002146	0.88115243
159.00	-56.8	-75.4	0.00446	365.9	0.00002085	0.88117328
155.50	-57.6	-75.6	0.00446	366.8	0.00001592	0.88118920
152.00	-58.2	-76.0	0.00426	368.2	0.00001557	0.88120477
147.60	-59.1	-76.4	0.00410	369.8	0.00001878	0.88122356
143.50	-59.7	-77.5	0.00355	371.7	0.00001601	0.88123956
140.00	-60.6	-78.6	0.00308	372.7	0.00001183	0.88125139
136.00	-61.1	-79.1	0.00290	375.0	0.00001220	0.88126359
132.50	-61.5	-79.0	0.00302	377.0	0.00001058	0.88127417
129.00	-62.0	-77.8	0.00376	379.1	0.00001211	0.88128628
125.50	-62.5	-77.4	0.00415	381.2	0.00001414	0.88130042
122.00	-63.2	-77.5	0.00417	383.0	0.00001487	0.88131529

WASHINGTON,D.C. 10/21/68 1755Z WATER VAPOR DATA

P (mb)	T (°C)	F (°C)	w (g/kg)	θ (°K)	M (cm)	ΣM (cm)
118.70	-63.2	-78.0	0.00399	386.0	0.00001375	0.88132905
115.00	-63.4	-78.4	0.00384	389.1	0.00001478	0.88134383
111.60	-63.7	-78.9	0.00367	392.0	0.00001303	0.88135686
108.00	-63.9	-78.9	0.00375	395.2	0.00001363	0.88137049
105.00	-64.2	-79.0	0.00381	397.9	0.00001157	0.88138206
101.50	-64.7	-79.2	0.00380	400.8	0.00001358	0.88139564
98.10	-64.9	-79.9	0.00355	404.3	0.00001274	0.88140839
95.00	-65.4	-80.1	0.00353	407.0	0.00001120	0.88141958
92.00	-64.7	-80.6	0.00333	412.3	0.00001049	0.88143007
89.20	-64.2	-80.9	0.00330	416.9	0.00000946	0.88143953
86.50	-64.4	-81.2	0.00322	420.1	0.00000898	0.88144851
83.80	-64.7	-81.5	0.00315	423.4	0.00000878	0.88145729
81.40	-64.9	-81.6	0.00320	426.4	0.00000778	0.88146507
78.50	-64.9	-82.0	0.00310	430.9	0.00000932	0.88147439
75.80	-63.7	-82.4	0.00299	437.8	0.00000838	0.88148277
73.30	-62.2	-82.7	0.00296	445.1	0.00000759	0.88149036
71.00	-61.5	-82.9	0.00297	450.6	0.00000696	0.88149732
68.60	-61.1	-83.0	0.00303	456.0	0.00000735	0.88150467
66.40	-61.8	-83.1	0.00304	458.8	0.00000682	0.88151149
64.00	-62.7	-83.3	0.00306	461.6	0.00000748	0.88151896
62.10	-62.7	-83.7	0.00293	465.6	0.00000581	0.88152477
60.00	-62.2	-83.7	0.00303	471.3	0.00000639	0.88153117
58.00	-61.5	-84.0	0.00300	477.4	0.00000616	0.88153732
56.00	-61.1	-84.0	0.00311	483.3	0.00000623	0.88154355
54.10	-60.2	-84.2	0.00312	490.1	0.00000604	0.88154959
52.10	-60.2	-84.1	0.00329	495.4	0.00000654	0.88155613
50.30	-60.2	-83.8	0.00357	500.4	0.00000629	0.88156242
48.40	-60.2	-84.1	0.00354	506.0	0.00000689	0.88156931
46.70	-60.2	-84.3	0.00356	511.2	0.00000616	0.88157547
45.00	-59.9	-85.2	0.00316	517.1	0.00000582	0.88158129
43.30	-59.7	-84.7	0.00355	523.4	0.00000582	0.88158711
41.50	-59.1	-85.5	0.00321	531.4	0.00000621	0.88159331
39.70	-58.7	-85.8	0.00319	539.2	0.00000587	0.88159919
38.20	-58.7	-86.0	0.00321	545.2	0.00000489	0.88160408
36.50	-59.1	-86.4	0.00314	551.2	0.00000550	0.88160958
34.80	-59.3	-86.7	0.00312	558.2	0.00000543	0.88161501
33.10	-58.2	-87.1	0.00306	569.1	0.00000536	0.88162037
31.40	-57.4	-87.6	0.00295	580.0	0.00000521	0.88162558
29.40	-56.6	-87.9	0.00298	593.2	0.00000605	0.88163163
27.50	-55.8	-88.2	0.00301	606.8	0.00000581	0.88163744
25.90	-55.2	-89.0	0.00279	619.0	0.00000474	0.88164218
24.20	-54.8	-89.6	0.00265	632.2	0.00000472	0.88164690
23.00	-55.0	-90.0	0.00262	640.9	0.00000323	0.88165013
21.70	-55.2	-90.2	0.00266	651.1	0.00000351	0.88165363
20.60	-54.8	-90.8	0.00252	662.0	0.00000291	0.88165654
19.60	-54.1	-91.0	0.00253	673.8	0.00000258	0.88165912
18.65	-53.2	-92.3	0.00211	686.3	0.00000225	0.88166137
17.90	-52.2	-92.3	0.00220	697.3	0.00000165	0.88166303
16.40	-51.5	-91.8	0.00264	717.2	0.00000371	0.88166673
15.80	-51.4	-92.2	0.00256	725.5	0.00000159	0.88166833
15.20	-51.2	-92.7	0.00241	734.1	0.00000152	0.88166985
14.70	-51.2	-92.8	0.00243	741.2	0.00000124	0.88167108
14.20	-51.0	-93.3	0.00228	749.1	0.00000120	0.88167228
13.70	-50.5	-93.5	0.00230	758.6	0.00000117	0.88167345
13.30	-50.5	-93.6	0.00231	765.1	0.00000094	0.88167439

WASHINGTON,D.C. 10/21/68 1755Z WATER VAPOR DATA

P (mb)	T (°C)	F (°C)	w (g/kg)	θ (°K)	M (cm)	ΣM (cm)
12.90	-50.3	-93.9	0.00226	772.4	0.00000093	0.88167532
12.50	-50.1	-94.2	0.00221	780.0	0.00000091	0.88167623
11.50	-50.0	-94.0	0.00246	799.4	0.00000238	0.88167862
11.25	-49.8	-94.6	0.00226	805.0	0.00000060	0.88167922
11.00	-49.5	-94.0	0.00258	811.4	0.00000062	0.88167983
10.75	-48.8	-95.8	0.00187	819.2	0.00000057	0.88168040
10.50	-48.1	-96.3	0.00175	827.2	0.00000046	0.88168086

WASHINGTON,D.C. 10/21/68 1755Z OZONE DATA ASCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
1005.00					
995.00	17.38	.00014	13.8	287.3	.02895
969.00	18.63	.00053	12.5	288.2	.03185
943.00	19.04	.00093	10.6	288.5	.03345
918.00	19.68	.00135	8.2	288.4	.03551
903.00	16.40	.00156	6.5	287.9	.03009
876.00	18.37	.00200	5.0	288.9	.03474
863.00	22.30	.00227	4.7	289.8	.04282
837.00	28.72	.00296	6.6	294.3	.05685
812.00	30.24	.00368	7.6	298.0	.06171
799.00	28.84	.00405	7.5	299.2	.05980
785.00	29.01	.00445	6.9	300.1	.06124
773.00	25.14	.00476	6.3	300.8	.05388
749.00	22.66	.00532	4.6	301.6	.05014
733.00	22.65	.00571	3.3	302.1	.05120
707.00	24.31	.00640	1.7	303.5	.05698
695.00	23.05	.00671	.9	304.1	.05497
667.00	22.97	.00746	-.2	306.4	.05707
641.00	20.43	.00810	-2.4	307.4	.05281
627.50	19.77	.00843	-3.3	308.3	.05221
616.00	24.37	.00879	-3.9	309.3	.06555
592.00	27.47	.00965	-4.9	311.6	.07688
579.00	25.79	.01010	-5.7	312.6	.07381
567.00	22.78	.01048	-7.1	312.8	.06658
542.00	22.05	.01126	-10.2	313.2	.06741
519.00	19.37	.01192	-12.9	313.9	.06183
497.00	14.28	.01241	-15.0	315.3	.04761
476.00	18.00	.01303	-17.0	316.7	.06267
464.00	18.71	.01340	-18.1	317.6	.06682
453.00	14.12	.01367	-19.3	318.3	.05165
430.00	15.54	.01431	-21.5	320.2	.05986
409.00	14.86	.01490	-24.0	321.6	.06018
391.00	14.18	.01540	-26.8	322.2	.06009
370.00	14.46	.01603	-30.1	322.9	.06476
351.00	15.05	.01665	-33.5	323.3	.07107
332.00	11.79	.01717	-36.8	323.8	.05886
322.00	12.48	.01747	-38.5	324.4	.06422
306.00	11.15	.01792	-41.2	325.3	.06037
296.00	10.45	.01820	-43.3	325.5	.05852
280.00	11.73	.01871	-46.0	326.7	.06944
265.00	8.87	.01910	-48.3	328.6	.05544
250.00	10.17	.01956	-50.0	331.7	.06742
236.00	12.13	.02011	-51.0	335.6	.08516
224.00	15.33	.02075	-50.7	341.2	.11342
211.50	18.45	.02158	-50.5	347.1	.14457
201.00	19.63	.02237	-50.7	351.9	.16178
190.00	13.62	.02297	-51.4	356.5	.11876
173.50	13.67	.02396	-53.2	362.9	.13057
168.00	11.12	.02424	-54.1	364.7	.10965
159.50	12.38	.02474	-55.4	367.9	.12864
151.00	8.42	.02511	-57.2	370.6	.09242
142.00	9.05	.02555	-58.9	374.3	.10557
134.00	8.25	.02592	-60.4	377.8	.10197
126.50	9.57	.02636	-61.7	381.7	.12536
119.00	9.58	.02682	-62.5	387.1	.13342
115.00	11.45	.02713	-63.2	389.5	.16502

WASHINGTON,D.C. 10/21/68 1755Z OZONE DATA ASCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
108.50	16.19	.02787	-64.4	393.8	.24721
104.50	12.48	.02824	-64.4	398.0	.19790
98.80	16.83	.02899	-64.7	403.9	.28223
93.80	24.71	.03000	-65.2	409.0	.43645
91.10	26.29	.03061	-65.2	412.4	.47810
88.90	25.75	.03110	-63.9	417.8	.47995
86.40	27.74	.03173	-62.2	424.6	.53205
83.70	36.71	.03265	-62.5	428.0	.72668
80.90	37.30	.03365	-62.9	431.2	.76392
77.40	39.37	.03502	-63.4	435.7	.84278
75.40	40.75	.03586	-61.3	443.4	.89544
71.40	41.23	.03764	-60.2	452.8	.95694
67.50	43.23	.03956	-61.5	457.2	1.06123
65.40	43.71	.04065	-61.7	460.8	1.10758
62.00	49.31	.04272	-61.1	469.4	1.31792
58.80	59.17	.04520	-59.3	480.5	1.66737
57.20	61.76	.04654	-59.7	483.4	1.78915
55.80	62.15	.04776	-60.2	485.8	1.84552
53.20	69.53	.05038	-60.6	491.5	2.16554
50.30	66.74	.05333	-60.0	500.9	2.19864
48.90	69.49	.05488	-59.5	506.0	2.35464
45.60	66.16	.05853	-59.5	516.2	2.40397
43.20	66.71	.06138	-59.7	523.7	2.55865
41.10	68.27	.06406	-60.0	530.7	2.75253
38.90	69.03	.06706	-60.0	539.1	2.94032
35.90	72.27	.07164	-58.0	556.6	3.33549
35.10	72.81	.07294	-58.0	560.2	3.43733
33.40	71.39	.07574	-58.0	568.2	3.54194
32.40	70.30	.07742	-57.6	574.2	3.59512
31.50	71.39	.07901	-57.2	580.0	3.75558
29.30	72.94	.08318	-56.8	593.2	4.12483
28.40	69.42	.08489	-56.4	599.6	4.05019
26.90	68.45	.08782	-55.0	612.9	4.21613
25.50	69.19	.09074	-54.8	622.8	4.49583
24.40	66.81	.09307	-53.7	634.0	4.53722
23.10	65.96	.09592	-53.7	644.0	4.73176
21.90	64.55	.09864	-53.7	653.9	4.88434
20.70	61.25	.10136	-54.1	663.4	4.90264
19.70	59.68	.10370	-55.0	669.9	5.02009
18.65	58.64	.10623	-54.8	681.1	5.21005
18.20	57.74	.10734	-54.1	688.2	5.25672
17.40	53.31	.10924	-53.2	700.1	5.07657
16.40	51.35	.11164	-51.9	716.1	5.18799
15.50	48.13	.11378	-51.2	730.1	5.14472
14.65	45.74	.11582	-51.0	742.5	5.17326
13.90	43.04	.11760	-51.0	753.7	5.13063
13.00	40.61	.11975	-50.5	770.1	5.17563
12.50	38.41	.12094	-50.0	780.6	5.09165
12.00	35.54	.12208	-49.3	792.1	4.90789
11.50	33.23	.12320	-48.5	804.8	4.78864
11.10	31.02	.12407	-48.1	814.2	4.63116
10.35	28.12	.12562	-47.0	834.8	4.50209
9.85	28.15	.12672	-46.4	849.1	4.73588
9.65	25.73	.12714	-45.6	857.1	4.41817

WASHINGTON,D.C. 10/21/68 1755Z OZONE DATA DESCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
393.00					
377.50	14.23	.00045	-30.2	320.9	.06248
363.00	13.66	.00087	-32.4	321.6	.06237
356.00	12.48	.00107	-33.6	321.8	.05811
343.50	12.53	.00142	-35.6	322.4	.06045
333.00	11.96	.00171	-37.5	322.6	.05952
323.00	10.83	.00197	-39.2	323.1	.05555
311.00	10.26	.00228	-41.6	323.2	.05465
296.00	12.47	.00276	-43.3	325.5	.06980
283.00	11.31	.00317	-45.1	327.1	.06621
277.00	13.39	.00339	-46.2	327.5	.08008
272.00	15.75	.00362	-47.0	328.1	.09595
265.00	16.95	.00397	-47.8	329.3	.10598
248.00	19.30	.00498	-50.0	332.4	.12898
241.00	23.41	.00550	-50.3	334.6	.16093
236.00	25.37	.00592	-50.7	336.1	.17811
225.00	27.93	.00698	-49.8	342.1	.20569
215.00	31.22	.00810	-51.5	343.8	.24063
203.00	26.16	.00928	-52.1	348.7	.21350
194.00	21.47	.01005	-52.2	352.9	.18340
185.00	23.04	.01091	-53.0	356.6	.20632
180.00	26.87	.01149	-53.5	358.5	.24733
176.00	27.30	.01198	-54.1	359.9	.25707
171.00	25.76	.01256	-55.0	361.3	.24959
162.00	17.28	.01330	-56.4	364.6	.17676
154.00	17.26	.01399	-58.0	367.2	.18573
141.00	18.57	.01528	-60.2	372.8	.21819
137.00	19.17	.01572	-61.1	374.3	.23183
129.00	21.72	.01675	-62.0	379.1	.27898
122.00	25.26	.01786	-63.4	382.6	.34305
114.00	31.31	.01954	-63.7	389.6	.45513
107.00	36.60	.02137	-63.9	396.3	.56681
103.50	43.59	.02251	-64.2	399.6	.69786
96.80	48.44	.02507	-65.7	404.3	.82914
93.40	47.00	.02640	-64.9	410.0	.83375
90.20	47.67	.02771	-64.2	415.6	.87567
87.30	55.28	.02913	-64.4	419.0	1.04919
84.40	58.14	.03069	-64.4	423.0	1.14138
81.80	55.82	.03206	-64.7	426.3	1.13074
78.60	55.50	.03381	-64.9	430.7	1.16994
72.90	58.81	.03731	-62.0	446.2	1.33671
70.60	61.92	.03887	-61.5	451.3	1.45323
63.20	77.89	.04568	-63.4	461.7	2.04216
61.00	81.63	.04797	-62.5	468.5	2.21736
58.90	80.60	.05020	-61.7	474.8	2.26752
56.50	93.98	.05328	-61.1	482.0	2.75632
54.80	96.60	.05561	-60.4	487.8	2.92084
52.50	104.54	.05915	-60.2	494.3	3.29933
48.70	102.46	.06523	-60.2	505.1	3.48620
46.70	99.20	.06852	-60.2	511.2	3.51990
44.90	98.47	.07157	-60.0	517.5	3.63391
43.10	96.99	.07470	-59.5	524.6	3.72876
40.90	94.19	.07860	-58.9	534.1	3.81602
38.60	89.83	.08271	-58.2	544.6	3.85609
38.10	87.91	.08361	-58.9	545.1	3.82311
34.90	87.40	.08966	-59.3	557.8	4.14955

WASHINGTON,D.C. 10/21/68 1755Z OZONE DATA DESCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
32.90	90.66	.09389	-58.9	568.4	4.56607
30.00	85.40	.10011	-56.8	589.2	4.71684
26.10	85.91	.10956	-55.4	617.1	5.45414
24.25	84.38	.11445	-54.8	631.8	5.76560
21.80	75.31	.12079	-55.2	650.2	5.72414
20.50	73.64	.12436	-54.8	662.9	5.95200
18.50	63.86	.12954	-53.2	687.9	5.72008
17.70	63.16	.13174	-52.1	700.1	5.91279
16.90	54.20	.13372	-51.7	710.6	5.31447
15.50	49.20	.13708	-51.4	729.5	5.25955
14.20	43.82	.14011	-51.2	748.6	5.11385
13.30	40.22	.14219	-50.5	765.1	5.01120
12.50	35.34	.14392	-50.1	780.0	4.68517
11.80	30.10	.14529	-50.0	793.5	4.22642
11.50	30.08	.14590	-50.0	799.4	4.33443
11.20	28.54	.14650	-49.8	806.1	4.22225
10.90	28.52	.14711	-49.5	813.6	4.33549
10.70	26.00	.14749	-48.6	820.9	4.02575
10.40	26.00	.14807	-48.0	830.1	4.14188
10.20	26.00	.14847	-46.8	838.9	4.22309
9.90	25.86	.14908	-46.0	849.1	4.32883
9.70	25.80	.14949	-45.6	855.8	4.40674

WASHINGTON,D.C. 10/21/68 1755Z OZONE DATA DESCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
32.90	90.66	.09389	-58.9	568.4	4.56607
30.00	85.40	.10011	-56.8	589.2	4.71684
26.10	85.91	.10956	-55.4	617.1	5.45414
24.25	84.38	.11445	-54.8	631.8	5.76560
21.80	75.31	.12079	-55.2	650.2	5.72414
20.50	73.64	.12436	-54.8	662.9	5.95200
18.50	63.86	.12954	-53.2	687.9	5.72008
17.70	63.16	.13174	-52.1	700.1	5.91279
16.90	54.20	.13372	-51.7	710.6	5.31447
15.50	49.20	.13708	-51.4	729.5	5.25955
14.20	43.82	.14011	-51.2	748.6	5.11385
13.30	40.22	.14219	-50.5	765.1	5.01120
12.50	35.34	.14392	-50.1	780.0	4.68517
11.80	30.10	.14529	-50.0	793.5	4.22642
11.50	30.08	.14590	-50.0	799.4	4.33443
11.20	28.54	.14650	-49.8	806.1	4.22225
10.90	28.52	.14711	-49.5	813.6	4.33549
10.70	26.00	.14749	-48.6	820.9	4.02575
10.40	26.00	.14807	-48.0	830.1	4.14188
10.20	26.00	.14847	-46.8	838.9	4.22309
9.90	25.86	.14908	-46.0	849.1	4.32883
9.70	25.80	.14949	-45.6	855.8	4.40674

WASHINGTON,D.C. 11/25/68 1630Z WATER VAPOR DATA

P (mb)	T (°C)	F (°C)	w (g/kg)	θ (°K)	M (cm)	ΣM (cm)
396.00	-35.7	-62.6	0.01181	309.4	0.00008567	0.57716000
389.00	-36.4	-63.1	0.01134	310.1	0.00008265	0.57724266
382.00	-36.9	-63.4	0.01100	311.0	0.00007977	0.57732242
374.50	-37.2	-63.8	0.01058	312.4	0.00008258	0.57740501
367.00	-37.4	-64.5	0.00990	314.0	0.00007838	0.57748339
360.50	-37.5	-64.5	0.01008	315.4	0.00006626	0.57754965
354.00	-37.5	-64.5	0.01026	317.1	0.00006746	0.57761711
347.00	-37.6	-64.5	0.01037	318.7	0.00007369	0.57769080
340.00	-37.9	-65.4	0.00934	320.2	0.00007040	0.57776120
334.00	-38.3	-66.7	0.00793	321.2	0.00005286	0.57781406
328.00	-38.5	-66.7	0.00807	322.7	0.00004897	0.57786302
321.30	-38.5	-66.6	0.00832	324.6	0.00005602	0.57791904
315.00	-38.6	-68.4	0.00654	326.2	0.00004777	0.57796682
309.00	-38.6	-69.4	0.00572	328.0	0.00003753	0.57800435
303.00	-38.6	-69.6	0.00572	329.9	0.00003499	0.57803934
297.00	-38.6	-69.4	0.00595	331.8	0.00003570	0.57807504
291.00	-39.2	-69.4	0.00613	332.9	0.00003696	0.57811200
285.00	-39.6	-69.2	0.00638	334.3	0.00003829	0.57815029
279.00	-39.3	-69.2	0.00658	336.7	0.00003967	0.57818996
273.00	-38.8	-69.8	0.00610	339.7	0.00003882	0.57822879
267.00	-38.3	-71.0	0.00523	342.4	0.00003470	0.57826349
261.00	-38.1	-71.5	0.00500	345.1	0.00003131	0.57829479
254.00	-38.2	-71.7	0.00493	347.6	0.00003546	0.57833025
249.00	-38.6	-72.0	0.00484	348.9	0.00002492	0.57835517
243.00	-39.2	-72.5	0.00458	350.5	0.00002881	0.57838399
237.50	-39.6	-73.1	0.00432	352.1	0.00002496	0.57840895
232.00	-40.1	-73.6	0.00404	353.8	0.00002345	0.57843239
226.50	-40.7	-73.9	0.00397	355.4	0.00002246	0.57845485
221.00	-41.1	-74.3	0.00382	357.2	0.00002187	0.57847672
216.50	-42.1	-74.5	0.00378	357.7	0.00001747	0.57849419
212.00	-42.7	-74.8	0.00371	358.9	0.00001720	0.57851139
207.00	-43.5	-75.0	0.00368	360.2	0.00001885	0.57853024
203.00	-44.0	-75.0	0.00371	361.4	0.00001509	0.57854533
198.00	-44.3	-75.2	0.00373	363.5	0.00001899	0.57856432
193.00	-44.6	-75.4	0.00367	365.7	0.00001887	0.57858319
189.00	-45.2	-75.9	0.00348	366.9	0.00001459	0.57859778
185.00	-46.0	-76.0	0.00352	367.8	0.00001428	0.57861205
180.50	-46.8	-76.1	0.00353	369.1	0.00001617	0.57862822
176.00	-47.7	-76.5	0.00339	370.4	0.00001589	0.57864411
171.50	-48.7	-76.8	0.00333	371.5	0.00001544	0.57865956
167.00	-49.5	-77.1	0.00324	372.9	0.00001510	0.57867466
162.50	-50.2	-77.5	0.00315	374.6	0.00001469	0.57868934
158.00	-50.8	-77.8	0.00310	376.7	0.00001437	0.57870371
154.00	-52.2	-78.1	0.00301	377.0	0.00001248	0.57871619
150.00	-53.4	-78.4	0.00292	378.0	0.00001211	0.57872830
146.00	-53.9	-78.7	0.00290	379.9	0.00001189	0.57874019
142.00	-54.7	-78.9	0.00288	381.6	0.00001181	0.57875200
138.00	-55.9	-79.2	0.00283	382.6	0.00001167	0.57876367
134.00	-57.1	-79.3	0.00285	383.6	0.00001160	0.57877527
130.50	-58.2	-79.5	0.00283	384.6	0.00001014	0.57878541
128.00	-59.3	-79.8	0.00275	384.8	0.00000712	0.57879253
123.50	-60.2	-79.9	0.00279	387.1	0.00001271	0.57880524
119.00	-61.1	-80.4	0.00269	389.5	0.00001258	0.57881782
116.00	-60.9	-80.7	0.00260	392.8	0.00000810	0.57882592
113.00	-60.9	-80.8	0.00264	395.8	0.00000802	0.57883393

WASHINGTON,D.C. 11/25/68 1630Z WATER VAPOR DATA

P (mb)	T (°C)	F (°C)	w (g/kg)	θ (°K)	M (cm)	ΣM (cm)
109.50	-60.7	-80.7	0.00279	399.8	0.00000969	0.57884362
106.00	-60.7	-80.5	0.00295	403.5	0.00001025	0.57885387
103.00	-60.2	-80.8	0.00289	407.7	0.00000894	0.57886281
100.00	-59.3	-81.0	0.00291	412.9	0.00000888	0.57887169
96.90	-60.4	-81.0	0.00296	414.4	0.00000929	0.57888098
94.00	-61.6	-81.2	0.00295	415.8	0.00000875	0.57888973
91.40	-62.6	-81.3	0.00299	417.2	0.00000788	0.57889760
88.70	-63.3	-81.5	0.00301	419.3	0.00000827	0.57890587
86.00	-64.1	-81.7	0.00299	421.5	0.00000826	0.57891413
83.50	-65.4	-81.8	0.00304	422.4	0.00000769	0.57892182
81.10	-65.4	-82.1	0.00294	425.9	0.00000732	0.57892914
78.50	-65.1	-82.4	0.00292	430.4	0.00000777	0.57893692
76.00	-63.8	-82.8	0.00283	437.2	0.00000734	0.57894425
73.70	-62.8	-83.0	0.00281	443.1	0.00000661	0.57895087
71.40	-61.6	-83.6	0.00261	449.7	0.00000635	0.57895722
69.00	-60.4	-83.8	0.00259	456.7	0.00000636	0.57896358
66.80	-60.2	-83.8	0.00271	461.4	0.00000595	0.57896953
64.70	-60.2	-84.0	0.00269	465.6	0.00000578	0.57897531
62.50	-60.4	-84.3	0.00263	469.8	0.00000597	0.57898128
60.40	-60.7	-84.5	0.00265	473.9	0.00000566	0.57898694
58.50	-60.9	-84.6	0.00270	477.7	0.00000519	0.57899213
56.60	-60.9	-84.7	0.00271	482.2	0.00000525	0.57899738
54.70	-60.9	-84.9	0.00273	486.9	0.00000527	0.57900265
52.70	-60.9	-85.1	0.00271	492.1	0.00000555	0.57900820
50.80	-60.2	-85.3	0.00274	499.0	0.00000528	0.57901349
48.80	-59.1	-85.5	0.00277	507.4	0.00000562	0.57901910
47.10	-58.8	-85.6	0.00279	513.1	0.00000482	0.57902392
45.40	-59.1	-85.8	0.00281	518.0	0.00000485	0.57902877
43.70	-58.8	-86.1	0.00279	524.2	0.00000485	0.57903362
42.00	-58.4	-86.3	0.00277	531.2	0.00000483	0.57903845
40.30	-58.2	-86.5	0.00281	538.1	0.00000484	0.57904329
38.70	-58.0	-86.7	0.00283	544.9	0.00000460	0.57904789
37.10	-58.0	-86.9	0.00282	551.5	0.00000462	0.57905251
35.50	-57.8	-87.1	0.00286	559.0	0.00000464	0.57905715
34.00	-57.8	-87.4	0.00285	566.0	0.00000437	0.57906152
32.50	-57.8	-87.8	0.00275	573.3	0.00000429	0.57906581
30.90	-57.8	-88.0	0.00280	581.7	0.00000454	0.57907034
29.40	-58.0	-88.2	0.00285	589.4	0.00000433	0.57907467
27.80	-57.6	-88.3	0.00297	600.1	0.00000475	0.57907942
26.30	-56.5	-88.9	0.00279	612.6	0.00000441	0.57908383
24.40	-56.1	-89.4	0.00276	627.1	0.00000538	0.57908921
23.30	-56.5	-90.0	0.00260	634.2	0.00000301	0.57909221
22.00	-56.5	-90.7	0.00242	644.7	0.00000333	0.57909554
21.00	-56.5	-91.0	0.00240	653.3	0.00000246	0.57909800
20.00	-56.5	-91.2	0.00242	662.5	0.00000246	0.57910046
19.00	-56.5	-91.3	0.00250	672.2	0.00000251	0.57910297
18.10	-56.5	-91.8	0.00238	681.6	0.00000224	0.57910521
17.30	-54.1	-92.2	0.00230	698.1	0.00000191	0.57910712
16.60	-54.1	-92.3	0.00235	706.4	0.00000166	0.57910878
16.00	-54.3	-92.2	0.00249	713.2	0.00000148	0.57911026
15.35	-54.5	-92.3	0.00254	721.1	0.00000167	0.57911193
14.80	-54.5	-92.7	0.00247	728.7	0.00000141	0.57911333
14.20	-54.5	-92.9	0.00247	737.3	0.00000151	0.57911485
13.70	-54.5	-93.1	0.00246	744.9	0.00000126	0.57911610
13.25	-54.5	-93.5	0.00238	752.1	0.00000111	0.57911721

WASHINGTON,D.C. 11/25/68 1630Z WATER VAPOR DATA

P (mb)	T (°C)	F (°C)	w (g/kg)	θ (°K)	M (cm)	ΣM (cm)
12.80	-54.1	-93.7	0.00236	760.9	0.00000109	0.57911830
12.40	-53.9	-93.1	0.00271	768.5	0.00000103	0.57911934
12.00	-53.9	-93.1	0.00280	775.7	0.00000113	0.57912046
11.60	-54.1	-93.1	0.00290	782.6	0.00000116	0.57912163
11.20	-54.3	-93.0	0.00307	789.8	0.00000122	0.57912284
10.90	-54.5	-93.2	0.00302	795.2	0.00000093	0.57912378
10.60	-54.5	-93.5	0.00297	801.6	0.00000092	0.57912469
10.35	-54.3	-93.5	0.00305	807.8	0.00000077	0.57912546
10.10	-54.3	-93.6	0.00305	813.4	0.00000078	0.57912624
9.90	-54.1	-94.1	0.00285	818.8	0.00000060	0.57912684
9.70	-53.9	-94.3	0.00278	824.3	0.00000057	0.57912742

WASHINGTON,D.C. 11/25/68 1630Z OZONE DATA ASCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
1005.00					
961.00	9.69	.00034	5.0	281.3	.01670
929.00	11.75	.00066	1.5	280.5	.02096
900.00	10.04	.00091	-1.8	279.6	.01848
884.00	12.31	.00108	-3.3	279.5	.02308
837.00	20.95	.00198	-5.8	281.3	.04147
810.00	24.47	.00262	-7.1	282.6	.05006
779.00	25.37	.00340	-8.7	284.0	.05397
766.00	25.59	.00374	-9.6	284.4	.05536
737.00	24.18	.00447	-9.6	287.6	.05435
712.50	23.69	.00511	-9.6	290.3	.05509
686.00	23.96	.00582	-10.7	292.2	.05788
662.00	21.93	.00644	-12.9	292.8	.05489
648.00	24.43	.00685	-14.0	293.3	.06248
624.00	23.66	.00756	-16.2	294.0	.06282
601.00	22.00	.00821	-18.5	294.6	.06065
590.00	21.72	.00852	-20.0	294.4	.06101
567.50	21.70	.00919	-22.6	294.6	.06335
536.00	22.16	.01019	-26.0	295.4	.06851
516.00	20.29	.01080	-28.0	296.2	.06517
500.00	21.04	.01132	-30.2	296.2	.06974
485.00	20.33	.01181	-31.4	297.3	.06945
450.00	18.57	.01291	-34.2	300.2	.06838
442.00	25.11	.01326	-34.9	300.9	.09413
423.00	28.49	.01425	-35.4	304.0	.11161
415.00	26.44	.01465	-36.8	303.9	.10557
395.00	37.66	.01612	-38.2	306.4	.15800
379.00	45.73	.01761	-38.6	309.5	.19995
363.00	54.27	.01946	-38.5	313.5	.24774
355.00	50.90	.02035	-37.8	316.4	.23759
347.00	52.03	.02129	-37.1	319.4	.24846
335.00	61.29	.02299	-37.9	321.5	.30317
327.00	57.52	.02409	-38.8	322.6	.29147
313.00	56.86	.02605	-40.1	324.8	.30103
308.00	57.00	.02678	-40.2	326.1	.30665
301.00	60.29	.02787	-40.2	328.3	.33191
295.00	61.04	.02884	-39.8	330.8	.34285
283.00	58.08	.03075	-39.1	335.8	.34005
272.00	53.18	.03241	-38.1	341.0	.32394
265.00	52.28	.03349	-37.8	344.0	.32691
255.00	52.72	.03509	-38.3	347.0	.34259
248.00	51.39	.03622	-39.1	348.7	.34334
244.00	47.49	.03683	-39.5	349.6	.32249
239.00	37.73	.03744	-39.5	351.7	.26159
228.00	27.14	.03845	-39.6	356.3	.19725
223.00	23.75	.03887	-39.8	358.3	.17647
218.50	24.16	.03925	-40.5	359.3	.18322
208.00	29.37	.04040	-42.3	361.6	.23395
204.00	27.27	.04081	-43.2	362.1	.22153
199.50	26.27	.04128	-44.1	363.0	.21822
191.00	28.95	.04227	-46.0	364.5	.25115
181.50	29.00	.04344	-47.2	368.0	.26475
175.00	30.43	.04431	-47.5	371.3	.28816
170.00	31.34	.04503	-47.7	374.1	.30543
162.00	31.98	.04625	-49.4	376.4	.32715
155.00	31.46	.04735	-51.1	378.2	.33633

WASHINGTON,D.C. 11/25/68 1630Z OZONE DATA ASCENT

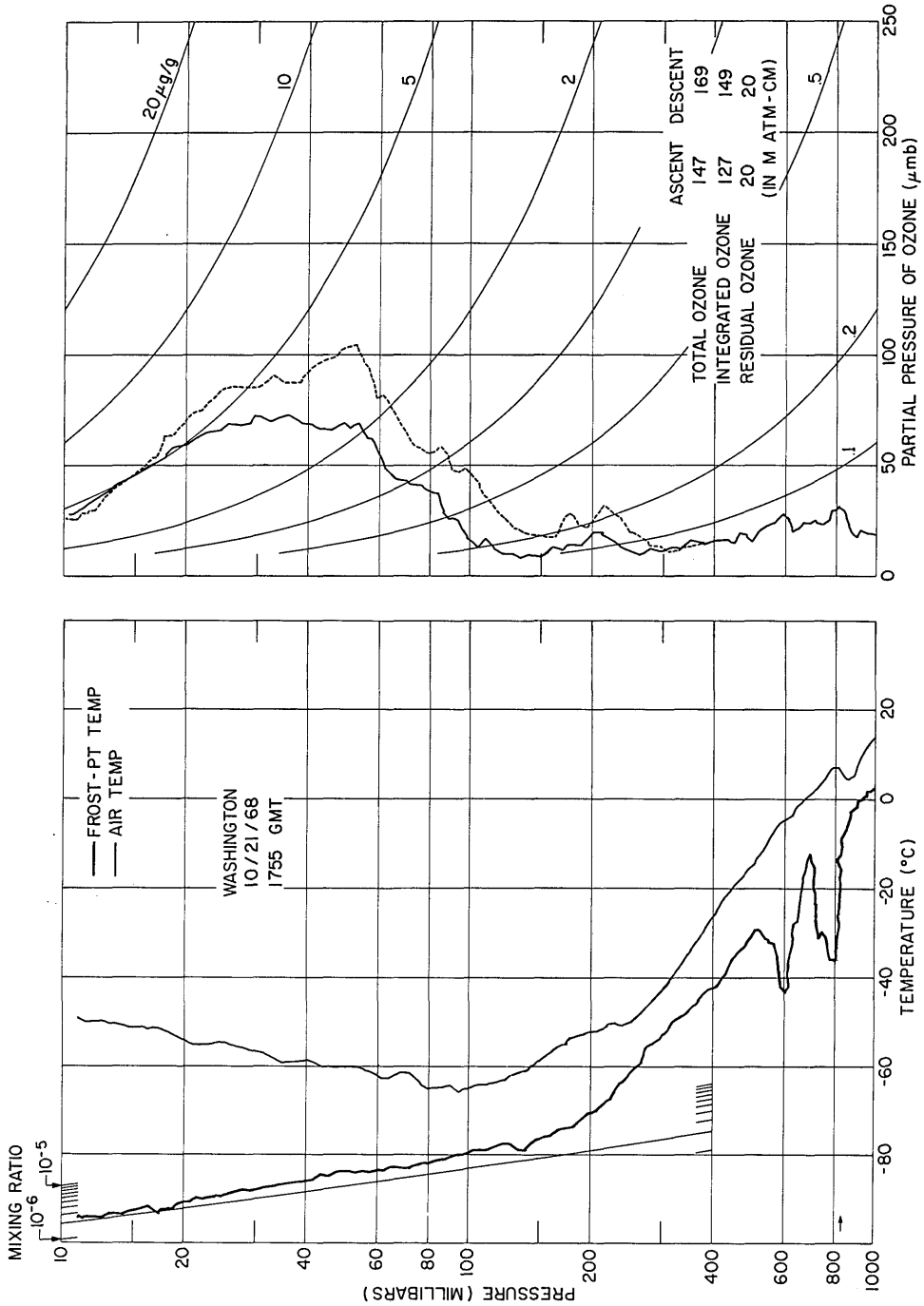
PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
147.50	28.32	.04845	-53.4	379.8	.31810
141.00	28.72	.04947	-55.3	381.3	.33754
137.50	28.30	.05004	-56.3	382.3	.34105
131.00	29.13	.05115	-58.2	384.2	.36840
125.00	29.59	.05224	-58.9	388.2	.39229
121.50	29.49	.05291	-59.1	391.0	.40221
116.00	28.40	.05394	-60.2	394.1	.40571
110.00	30.33	.05521	-60.9	398.8	.45691
104.00	29.80	.05653	-61.4	404.4	.47481
99.20	31.77	.05772	-60.4	411.7	.53067
93.30	36.49	.05949	-62.1	415.7	.64810
91.00	37.12	.06022	-62.8	417.2	.67593
88.20	37.08	.06113	-63.6	419.5	.69658
84.00	35.34	.06249	-65.4	421.7	.69712
81.60	33.16	.06325	-66.2	423.5	.67336
77.70	33.56	.06455	-64.1	433.9	.71566
75.50	57.65	.06586	-61.4	443.1	1.26530
72.00	79.63	.06884	-61.4	449.2	1.83248
68.30	97.07	.07288	-60.4	458.0	2.35508
65.80	114.18	.07624	-60.2	463.4	2.87531
64.40	114.80	.07819	-60.7	465.2	2.95380
61.60	123.75	.08254	-60.7	471.2	3.32879
60.20	126.95	.08484	-60.4	474.8	3.49427
57.50	117.23	.08909	-60.4	481.1	3.37827
56.30	116.26	.09102	-60.2	484.5	3.42177
54.80	118.10	.09354	-60.4	487.7	3.57106
52.40	124.84	.09796	-60.7	493.5	3.94770
51.30	123.44	.10002	-60.9	495.9	3.98705
48.90	128.70	.10489	-60.0	505.0	4.36117
47.90	122.53	.10689	-58.9	510.6	4.23857
46.70	121.69	.10933	-59.1	513.8	4.31783
45.70	123.94	.11145	-59.1	517.0	4.49389
44.60	133.56	.11402	-58.9	521.1	4.96217
42.80	139.40	.11855	-59.3	526.2	5.39695
41.60	136.68	.12162	-60.2	528.3	5.44403
40.60	136.46	.12424	-59.3	534.2	5.56935
38.90	129.13	.12860	-57.1	546.2	5.50026
38.00	136.98	.13113	-56.1	552.5	5.97307
35.60	136.46	.13816	-55.7	564.0	6.35138
34.70	149.43	.14118	-55.5	568.6	7.13540
33.90	147.07	.14389	-55.5	572.4	7.18866
33.10	148.34	.14669	-55.7	575.8	7.42576
32.40	142.96	.14910	-56.1	578.3	7.31110
30.90	147.36	.15462	-56.5	585.0	7.90208
30.10	148.29	.15769	-56.5	589.5	8.16350
29.50	147.40	.16003	-56.5	592.9	8.27951
28.10	138.09	.16533	-56.3	601.7	8.14311
27.40	137.27	.16807	-58.0	601.4	8.30153
26.20	139.94	.17301	-57.1	611.5	8.85024
24.50	128.94	.17984	-55.9	626.9	8.72065
23.90	128.50	.18236	-55.5	632.6	8.90897
23.35	126.75	.18469	-55.1	637.9	8.99436
22.80	126.75	.18708	-54.9	642.9	9.21133
22.30	128.50	.18933	-55.1	646.4	9.54818
21.30	127.16	.19393	-55.1	654.9	9.89192

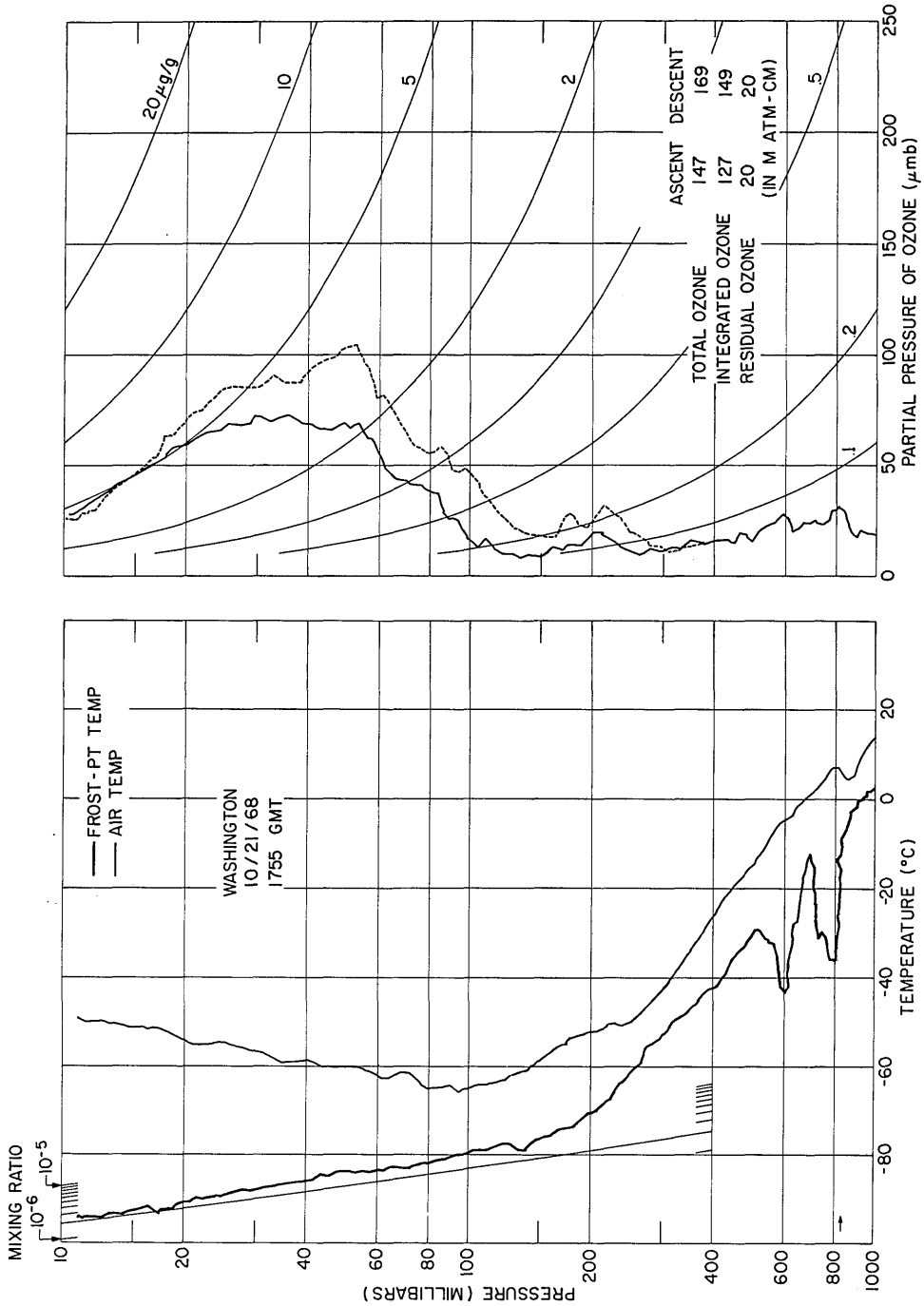
WASHINGTON,D.C. 11/25/68 1630Z OZONE DATA ASCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
20.40	124.41	.19817	-55.1	663.0	10.10527
19.20	117.03	.20377	-55.9	672.1	10.09970
18.15	111.12	.20871	-56.1	682.4	10.14441
17.40	115.88	.21257	-52.2	703.0	11.03513
16.70	113.02	.21623	-54.5	704.0	11.21436
16.00	115.48	.22014	-54.5	712.6	11.95904
15.30	112.93	.22413	-54.5	721.8	12.23036
14.60	108.63	.22814	-54.5	731.5	12.32819
14.30	106.27	.22988	-54.5	735.9	12.31389
14.00	109.94	.23172	-53.9	742.3	13.01235
13.60	102.90	.23408	-51.5	756.8	12.53696
13.00	97.84	.23756	-52.4	763.4	12.47081
12.50	94.30	.24048	-52.8	770.7	12.50103
12.00	88.65	.24334	-52.8	779.7	12.24087
11.40	86.43	.24684	-53.0	790.6	12.56206
11.00	82.00	.24915	-53.2	798.0	12.35159
10.50	78.82	.25205	-53.2	808.7	12.43921
10.25	76.60	.25351	-53.2	814.3	12.38266
10.00	75.67	.25498	-53.9	817.2	12.53818
9.83	75.42	.25600	-53.9	821.2	12.71353
9.70	74.57	.25678	-52.2	830.7	12.73845
9.58	73.35	.25750	-51.3	837.1	12.68721

WASHINGTON,D.C. 11/25/68 1630Z OZONE DATA DESCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
405.00					
396.00	55.73	.00099	-35.7	309.4	.23320
377.00	60.71	.00334	-37.2	311.8	.26686
370.00	60.53	.00424	-37.4	313.3	.27108
355.00	60.09	.00620	-37.5	316.8	.28049
343.00	58.73	.00780	-37.9	319.4	.28374
328.00	60.60	.00994	-38.5	322.7	.30613
316.00	59.84	.01170	-38.6	325.9	.31376
304.00	59.54	.01352	-38.6	329.6	.32455
291.00	56.38	.01546	-39.2	332.9	.32103
279.00	49.54	.01711	-39.3	336.7	.29422
266.00	50.63	.01902	-38.3	342.8	.31538
253.00	43.46	.02074	-38.3	347.7	.28464
242.00	32.27	.02187	-39.3	350.7	.22095
236.00	27.20	.02241	-39.8	352.6	.19097
230.00	29.71	.02301	-40.2	354.5	.21408
219.00	27.31	.02407	-41.4	357.7	.20662
210.00	28.18	.02500	-43.1	359.4	.22232
206.00	30.69	.02547	-43.7	360.4	.24684
201.00	30.79	.02606	-44.1	362.2	.25385
196.00	32.83	.02672	-44.4	364.3	.27753
191.00	33.84	.02741	-45.1	366.0	.29357
183.00	36.57	.02864	-46.2	368.7	.33117
178.00	36.93	.02945	-47.3	369.8	.34381
168.50	38.25	.03111	-49.4	372.2	.37614
160.00	38.05	.03266	-50.3	376.3	.39406
151.00	38.68	.03443	-53.2	377.6	.42445
143.00	39.63	.03613	-54.5	381.1	.45915
135.00	39.48	.03792	-56.9	383.2	.48459
128.00	37.41	.03950	-58.9	385.6	.48429
124.00	36.32	.04041	-60.2	386.7	.48534
117.00	36.89	.04210	-60.9	391.9	.52240
110.00	41.34	.04411	-60.9	398.8	.62279
107.00	45.70	.04511	-60.9	402.0	.70770
100.50	46.10	.04739	-59.3	412.3	.76004
97.00	46.12	.04868	-60.7	413.9	.78786
91.50	49.18	.05095	-62.6	417.0	.89068
86.20	52.66	.05343	-64.3	420.7	1.01235
81.30	59.91	.05620	-65.4	425.6	1.22105
78.50	70.44	.05815	-65.1	430.4	1.48681
76.00	85.57	.06033	-63.8	437.1	1.86574
73.50	110.07	.06324	-62.6	444.0	2.48136
68.70	127.73	.07005	-60.2	457.7	3.08087
66.60	142.71	.07355	-60.2	461.8	3.55073
64.30	144.63	.07756	-60.2	466.5	3.72706
60.00	136.79	.08504	-60.7	474.7	3.77776
58.30	131.79	.08803	-60.7	478.7	3.74559
54.40	138.81	.09562	-60.4	488.8	4.22817
52.20	145.88	.10037	-60.9	493.5	4.63080
50.50	144.53	.10415	-60.2	499.8	4.74221
48.30	145.88	.10928	-58.9	509.4	5.00471
46.60	152.04	.11358	-59.1	514.1	5.40633
45.00	151.07	.11775	-59.3	518.7	5.56260
43.00	144.94	.12295	-58.9	526.6	5.58530
41.40	143.05	.12723	-58.4	533.4	5.72564
39.70	154.84	.13236	-58.2	540.4	6.46255


20μg/g
10
5
2
1
.2
.5
ASCENT DESCENT
147 169
127 149
20 20
(IN M ATM-CM)
TOTAL OZONE
INTEGRATED OZONE
RESIDUAL OZONE
PARTIAL PRESSURE OF OZONE (μmb)
0
50
100
150
200
250
FROST-PT TEMP
AIR TEMP
WASHINGTON
10/21/68
1755 GMT
MIXING RATIO
10
10⁻⁶
10⁻⁵
PRESSURE (MILLIBARS)
20
40
60
80
100
200
400
600
800
1000
TEMPERATURE (°C)
-80
-60
-40
-20
0
20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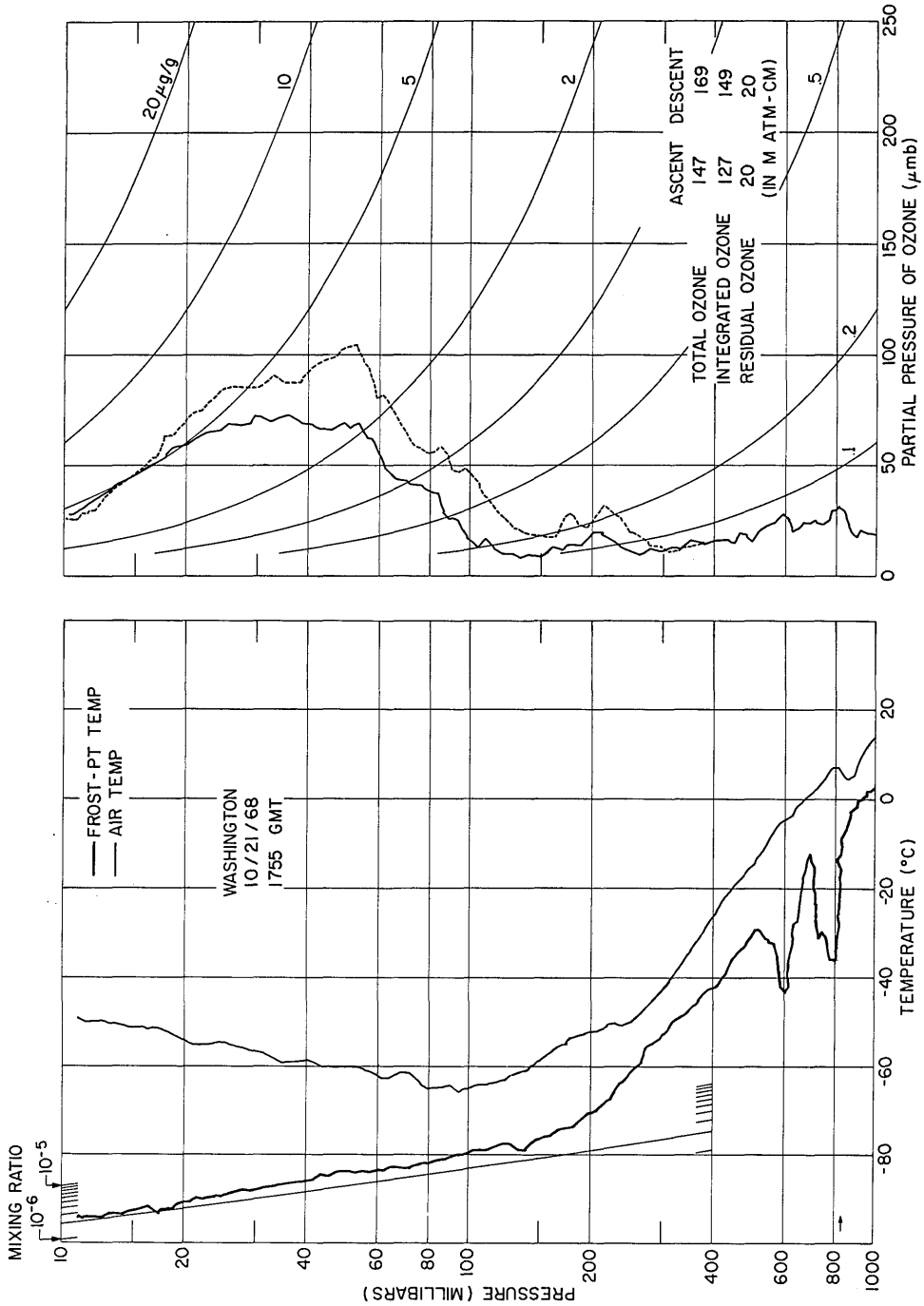
100
200
400
600
800
1000
TEMPERATURE (°C)
-80
-60
-40
-20
0
20

WASHINGTON,D.C. 12/10/68 1603Z WATER VAPOR DATA

P (mb)	T (°C)	F (°C)	w (g/kg)	θ (°K)	M (cm)	ΣM (cm)
486.00	-27.6	-35.7	0.26432	301.8	0.00189061	0.10937200
478.00	-28.6	-35.7	0.26875	302.0	0.00217580	0.11154780
470.60	-29.5	-35.6	0.27767	302.2	0.00206301	0.11361081
463.00	-30.6	-35.4	0.28711	302.3	0.00218995	0.11580076
456.20	-31.5	-35.6	0.28644	302.4	0.00198985	0.11779061
449.00	-32.6	-36.0	0.27660	302.4	0.00206830	0.11985891
442.00	-33.4	-36.9	0.25439	302.7	0.00189639	0.12175530
435.00	-34.5	-37.9	0.23101	302.7	0.00173358	0.12348887
428.00	-35.5	-38.6	0.21716	302.9	0.00160062	0.12508949
420.00	-36.2	-38.9	0.21460	303.6	0.00176230	0.12685179
414.00	-36.9	-39.3	0.20801	303.9	0.00129370	0.12814549
407.00	-37.6	-41.1	0.17228	304.5	0.00135817	0.12950366
400.00	-38.2	-44.1	0.12461	305.3	0.00106032	0.13056398
393.00	-39.1	-45.4	0.10871	305.7	0.00083326	0.13139724
386.20	-40.0	-45.8	0.10521	306.0	0.00074215	0.13213939
380.00	-40.7	-46.4	0.09927	306.4	0.00064682	0.13278621
373.30	-41.6	-48.3	0.08049	306.8	0.00061450	0.13340071
367.00	-42.7	-49.9	0.06736	306.9	0.00047523	0.13387594
360.80	-43.7	-49.9	0.06852	307.1	0.00042981	0.13430575
354.00	-44.5	-50.6	0.06457	307.7	0.00046173	0.13476748
348.00	-45.4	-52.2	0.05338	307.9	0.00036108	0.13512856
342.00	-46.6	-53.5	0.04585	307.8	0.00030377	0.13543233
336.70	-47.6	-54.6	0.04070	307.8	0.00023403	0.13566637
331.00	-48.7	-55.7	0.03590	307.9	0.00022276	0.13588913
325.00	-49.5	-56.8	0.03178	308.3	0.00020718	0.13609630
319.00	-50.6	-57.7	0.02847	308.4	0.00018444	0.13628074
313.70	-51.5	-58.8	0.02525	308.6	0.00014528	0.13642603
308.00	-52.3	-59.8	0.02247	309.2	0.00013878	0.13656481
302.50	-52.3	-60.4	0.02098	310.8	0.00012193	0.13668673
297.00	-52.3	-60.8	0.02037	312.4	0.00011605	0.13680279
291.50	-52.3	-60.9	0.02037	314.1	0.00011432	0.13691711
286.00	-52.5	-62.2	0.01733	315.5	0.00010577	0.13702288
280.70	-52.7	-63.5	0.01475	317.0	0.00008675	0.13710963
275.00	-52.9	-64.3	0.01357	318.5	0.00008237	0.13719200
270.00	-53.1	-64.5	0.01331	319.9	0.00006857	0.13726057
264.00	-53.3	-64.6	0.01348	321.7	0.00008202	0.13734259
259.30	-53.7	-64.9	0.01322	322.8	0.00006404	0.13740663
254.00	-54.0	-65.2	0.01287	324.1	0.00007056	0.13747719
249.40	-54.2	-65.6	0.01239	325.5	0.00005928	0.13753647
244.00	-54.0	-66.4	0.01130	327.9	0.00006526	0.13760173
239.00	-53.8	-67.6	0.00963	330.1	0.00005340	0.13765513
234.00	-53.5	-69.5	0.00744	332.7	0.00004355	0.13769868
229.70	-53.1	-71.2	0.00587	335.1	0.00002921	0.13772789
225.00	-52.9	-72.8	0.00476	337.3	0.00002550	0.13775340
220.40	-52.9	-73.4	0.00439	339.3	0.00002147	0.13777487
216.00	-53.1	-73.6	0.00439	341.0	0.00001969	0.13779456
211.50	-53.1	-74.3	0.00399	343.1	0.00001924	0.13781380
207.00	-53.3	-75.1	0.00363	344.9	0.00001751	0.13783132
202.50	-53.7	-75.5	0.00345	346.4	0.00001625	0.13784757
198.00	-54.2	-75.9	0.00334	347.7	0.00001558	0.13786315
193.60	-54.4	-76.3	0.00320	349.6	0.00001467	0.13787782
189.50	-54.9	-76.8	0.00302	351.1	0.00001301	0.13789083
185.30	-54.4	-77.1	0.00292	354.0	0.00001275	0.13790358
182.00	-54.0	-77.5	0.00281	356.5	0.00000966	0.13791324
177.30	-53.3	-77.7	0.00279	360.5	0.00001344	0.13792668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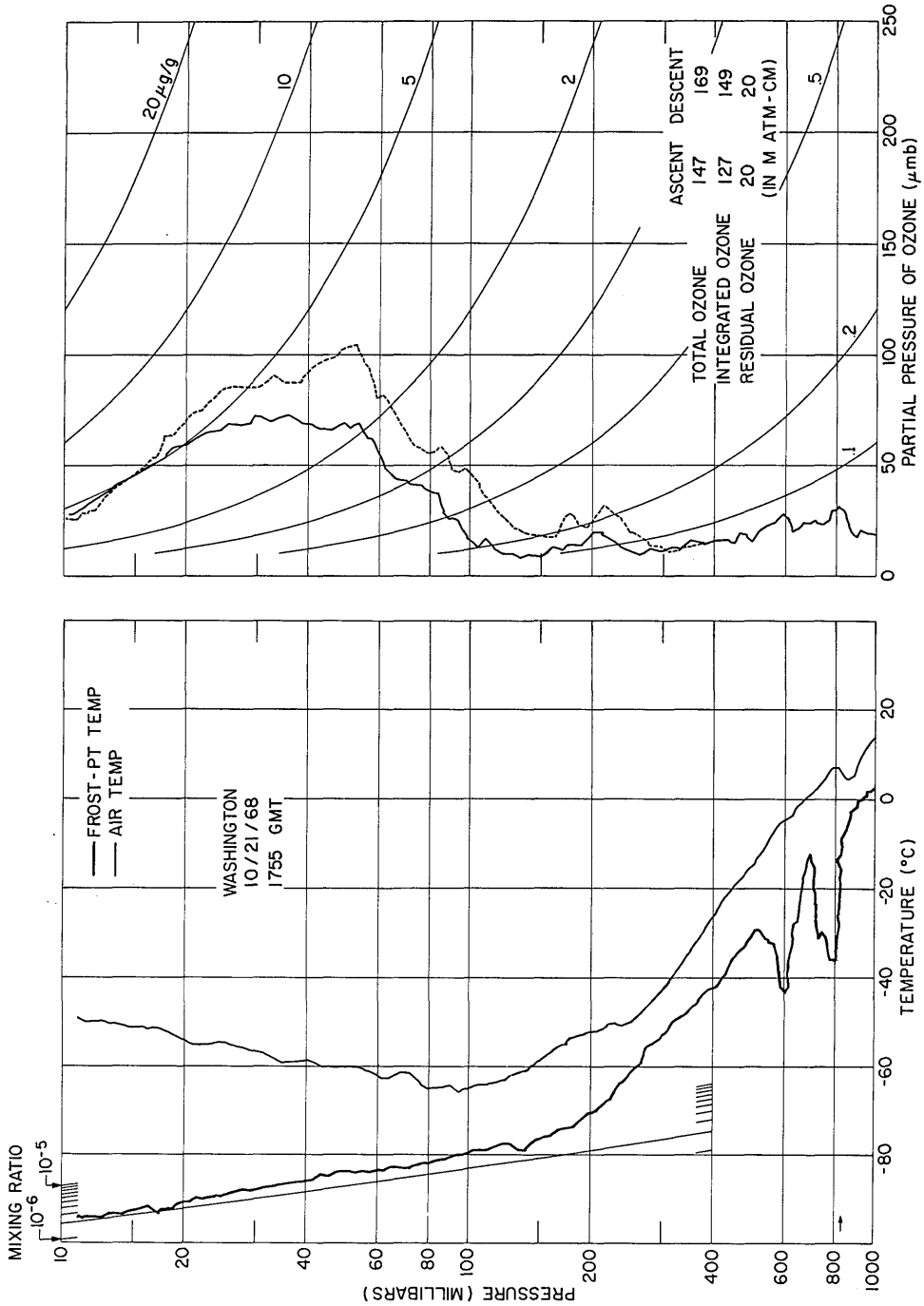
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TEMPERATURE (°C)
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-20
0
20

WASHINGTON,D.C. 12/10/68 1603Z OZONE DATA ASCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
798.00					
768.00	34.55	.00105	-6.5	287.6	.07454
751.00	27.57	.00153	-5.2	290.8	.06083
736.00	24.33	.00192	-6.4	291.2	.05478
707.00	24.82	.00271	-8.3	292.4	.05817
677.50	22.96	.00348	-10.0	294.2	.05617
650.00	27.63	.00438	-11.7	295.7	.07042
636.00	21.86	.00476	-13.0	296.1	.05694
609.00	21.21	.00548	-16.0	296.3	.05772
582.00	22.61	.00629	-18.9	296.8	.06437
569.00	21.34	.00667	-20.3	297.1	.06215
554.00	21.83	.00713	-21.7	297.7	.06529
530.00	20.50	.00785	-22.4	300.6	.06410
506.00	19.18	.00855	-24.5	302.1	.06282
495.00	20.43	.00890	-26.0	302.1	.06840
475.00	18.88	.00952	-28.2	303.0	.06586
454.00	18.87	.01019	-30.7	303.8	.06886
434.00	18.80	.01086	-34.1	303.4	.07177
422.00	17.49	.01125	-35.8	303.7	.06867
402.00	16.85	.01189	-38.2	304.8	.06946
394.00	17.52	.01217	-39.2	305.2	.07370
383.00	16.33	.01254	-40.4	306.1	.07066
366.00	16.22	.01312	-43.0	306.7	.07344
357.00	15.62	.01342	-44.5	306.9	.07250
348.00	14.41	.01371	-45.9	307.2	.06861
331.00	13.19	.01423	-48.3	308.4	.06602
323.00	13.80	.01450	-48.7	310.1	.07080
314.50	17.49	.01487	-49.4	311.4	.09216
297.00	21.81	.01585	-51.5	313.5	.12169
288.50	26.66	.01646	-51.7	315.8	.15310
270.00	30.04	.01803	-52.1	321.3	.18437
262.00	30.04	.01875	-52.1	324.1	.19000
247.00	33.52	.02031	-52.5	329.0	.22489
239.00	38.84	.02132	-52.5	332.1	.26931
232.00	40.67	.02227	-52.7	334.7	.29049
219.00	22.07	.02328	-51.7	341.7	.16696
213.00	26.80	.02386	-52.1	343.9	.20852
202.00	29.35	.02509	-53.3	347.3	.24077
197.50	39.84	.02580	-53.9	348.6	.33425
192.50	43.43	.02668	-54.2	350.5	.37383
183.00	44.59	.02846	-55.1	354.3	.40374
178.00	46.38	.02948	-55.1	357.1	.43174
172.50	31.29	.03025	-54.2	361.7	.30056
168.50	48.24	.03114	-53.9	364.8	.47440
164.00	54.89	.03232	-53.3	368.6	.55460
161.00	56.24	.03314	-52.9	371.2	.57884
157.00	52.91	.03419	-52.7	374.2	.55846
153.50	54.39	.03516	-53.1	376.0	.58709
150.00	51.05	.03608	-53.9	377.1	.56390
146.00	50.64	.03716	-55.1	377.9	.57474
142.00	52.21	.03831	-55.1	380.9	.60929
139.00	56.38	.03926	-55.5	382.6	.67204
136.00	57.85	.04026	-55.7	384.6	.70481
130.50	49.89	.04188	-56.1	388.4	.63353
125.00	39.96	.04324	-57.2	391.3	.52972
123.00	38.77	.04373	-57.4	392.7	.52234

WASHINGTON,D.C. 12/10/68 1603Z OZONE DATA ASCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
118.00	50.65	.04539	-55.7	400.5	.71128
113.00	54.16	.04724	-56.5	403.9	.79413
108.00	49.71	.04902	-57.8	406.7	.76269
104.00	49.66	.05050	-58.0	410.7	.79116
102.00	53.86	.05132	-58.0	413.0	.87489
98.00	61.55	.05327	-58.0	417.8	1.04078
95.80	68.21	.05449	-58.3	420.0	1.17987
91.70	72.88	.05701	-59.2	423.5	1.31698
87.70	77.74	.05974	-59.8	427.6	1.46878
85.40	85.54	.06154	-59.8	430.8	1.65977
81.60	99.96	.06513	-59.6	437.0	2.02976
80.00	127.46	.06712	-59.4	439.9	2.64003
77.80	142.24	.07026	-58.5	445.3	3.02942
76.20	145.12	.07264	-58.3	448.4	3.15572
74.50	127.60	.07491	-58.0	451.8	2.83806
71.10	126.77	.07958	-57.2	459.7	2.95430
69.20	134.23	.08245	-57.4	462.8	3.21425
66.20	151.82	.08777	-57.4	468.7	3.80009
64.60	152.23	.09071	-57.6	471.5	3.90483
63.00	150.34	.09368	-57.8	474.5	3.95417
61.70	151.32	.09617	-57.6	477.8	4.06392
60.00	150.83	.09950	-57.4	482.1	4.16548
58.70	145.23	.10201	-56.5	487.0	4.09960
57.20	121.80	.10450	-56.3	491.1	3.52828
55.70	107.64	.10676	-57.8	491.5	3.20228
54.20	103.74	.10900	-59.2	492.2	3.17160
52.70	104.29	.11131	-59.4	495.6	3.27895
51.10	108.51	.11395	-59.8	498.9	3.51854
48.60	121.63	.11876	-59.6	506.7	4.14689
47.40	129.27	.12132	-59.8	509.8	4.51884
46.20	139.59	.12414	-60.1	513.0	5.00650
45.20	157.21	.12686	-59.4	517.8	5.76310
41.90	172.93	.13721	-58.5	531.4	6.83892
40.20	168.04	.14270	-58.9	536.6	6.92638
39.20	167.95	.14605	-58.9	540.5	7.09945
38.10	160.52	.14965	-58.9	544.9	6.98129
36.30	155.06	.15558	-58.9	552.5	7.07802
34.40	160.30	.16238	-59.2	560.5	7.72165
32.90	152.95	.16777	-59.2	567.7	7.70344
31.00	143.17	.17449	-59.4	576.8	7.65256
30.20	136.99	.17732	-58.7	582.9	7.51621
29.50	139.85	.17991	-58.5	587.5	7.85539
28.80	140.34	.18257	-58.3	592.1	8.07419
27.50	137.32	.18758	-57.4	602.5	8.27417
26.00	142.18	.19387	-56.5	614.6	9.06097
25.30	146.08	.19702	-56.3	620.1	9.56725
24.10	147.63	.20268	-55.7	630.5	10.15052
23.40	151.08	.20620	-55.9	635.3	10.69814
22.80	149.27	.20926	-56.3	638.8	10.84851
22.30	149.84	.21188	-56.5	642.2	11.13384
21.60	145.23	.21554	-56.9	646.8	11.14076
20.50	141.35	.22137	-57.8	653.9	11.42534
19.55	137.08	.22651	-57.2	664.8	11.61866
19.00	135.55	.22956	-57.2	670.3	11.82179
18.00	121.34	.23474	-56.1	684.0	11.16964

WASHINGTON,D.C. 12/10/68 1603Z OZONE DATA ASCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
17.50	116.30	.23733	-55.7	690.9	11.01239
17.00	119.59	.24007	-56.1	695.3	11.65649
16.60	114.02	.24221	-56.5	698.7	11.38173
16.20	114.58	.24442	-56.9	702.2	11.71990
15.70	112.67	.24720	-57.2	707.8	11.89113
15.30	107.40	.24939	-56.5	715.2	11.63174
14.50	102.38	.25373	-55.9	728.3	11.69988
13.80	97.71	.25755	-55.5	740.1	11.73239
13.10	93.41	.26139	-55.1	752.6	11.81581
12.60	90.33	.26417	-54.2	763.9	11.87938
11.90	80.73	.26781	-53.9	777.8	11.24175
11.25	75.58	.27116	-54.1	789.7	11.13181
10.60	73.48	.27461	-54.1	803.2	11.48652
10.30	70.31	.27621	-53.1	813.5	11.31144
9.70	60.36	.27907	-51.4	834.0	10.31154
9.35	59.36	.28079	-50.4	846.3	10.51893
9.07	57.41	.28217	-49.5	857.1	10.48898
8.78	52.89	.28352	-47.4	873.2	9.98101

WASHINGTON,D.C. 12/10/68 1603Z OZONE DATA DESCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
754.00					
742.00	40.78	.00052	-7.0	289.8	.09107
722.00	32.77	.00122	-8.4	290.6	.07520
711.00	29.88	.00158	-8.9	291.3	.06964
692.00	27.49	.00217	-10.2	292.1	.06582
681.00	28.10	.00253	-11.0	292.6	.06838
671.00	27.75	.00285	-11.4	293.4	.06853
660.00	33.49	.00329	-11.9	294.2	.08409
641.00	28.75	.00395	-13.9	294.4	.07433
631.00	30.29	.00432	-15.0	294.4	.07955
613.00	27.77	.00496	-16.9	294.7	.07505
593.00	28.49	.00570	-18.5	295.6	.07961
573.00	28.40	.00647	-20.2	296.6	.08212
564.00	28.46	.00683	-21.1	296.9	.08363
546.00	30.53	.00761	-22.1	298.5	.09264
528.00	23.68	.00824	-22.8	300.4	.07431
509.00	24.53	.00895	-24.7	301.3	.07985
491.00	25.40	.00967	-26.7	302.0	.08573
475.00	22.27	.01025	-29.0	302.0	.07769
441.00	19.50	.01139	-33.8	302.4	.07325
425.00	17.27	.01190	-35.8	303.1	.06735
402.00	17.50	.01266	-38.1	305.0	.07213
387.00	18.98	.01323	-39.8	306.0	.08127
372.00	17.77	.01379	-42.0	306.7	.07917
358.00	16.06	.01427	-44.1	307.1	.07433
350.00	16.49	.01457	-45.1	307.8	.07806
337.00	20.49	.01518	-47.6	307.7	.10076
325.00	22.21	.01582	-49.7	308.1	.11326
314.00	25.50	.01651	-51.5	308.5	.13459
305.00	26.97	.01713	-52.1	310.3	.14651
298.00	26.91	.01762	-52.3	312.1	.14965
292.00	29.44	.01809	-52.3	314.0	.16705
280.00	32.26	.01916	-52.5	317.5	.19092
268.00	33.30	.02031	-53.1	320.6	.20589
250.00	33.87	.02217	-54.2	325.3	.22450
244.00	35.55	.02285	-54.1	327.9	.24145
239.00	41.59	.02353	-53.9	330.1	.28832
233.50	43.59	.02433	-53.5	332.9	.30930
229.00	40.75	.02496	-53.1	335.3	.29489
223.00	33.50	.02566	-52.9	338.2	.24892
218.00	28.78	.02618	-53.1	340.1	.21873
208.00	43.30	.02778	-53.3	344.4	.34495
202.50	44.80	.02873	-53.7	346.4	.36659
197.50	47.29	.02966	-54.1	348.3	.39675
193.00	50.95	.03059	-54.5	349.9	.43742
188.00	54.18	.03171	-55.1	351.6	.47750
183.00	57.48	.03293	-54.2	355.6	.52050
178.50	54.09	.03400	-53.7	359.1	.50211
174.50	64.57	.03515	-53.5	361.8	.61314
166.00	52.18	.03721	-52.3	368.9	.52085
162.00	49.64	.03817	-52.9	370.5	.50778
157.00	57.13	.03958	-53.5	372.9	.60299
150.00	61.60	.04180	-54.2	376.4	.68049
145.00	61.09	.04343	-55.1	378.7	.69811
138.00	68.03	.04609	-55.7	383.0	.81682
134.00	56.11	.04739	-56.1	385.5	.69388

WASHINGTON,D.C. 12/10/68 1603Z OZONE DATA DESCENT

PRESS MBAR	OZONE MICMB	TOTOZ ATMCM	TEMP DEG C	POT T DEG K	MIXRT MICGG
130.50	50.84	.04846	-56.9	386.9	.64558
127.00	49.38	.04951	-56.3	391.1	.64421
120.00	64.38	.05240	-55.5	399.0	.88902
116.50	69.59	.05402	-55.7	402.0	.98984
113.00	72.80	.05578	-55.9	405.1	1.06753
107.00	72.32	.05889	-56.9	409.5	1.12001
101.00	69.56	.06206	-58.0	414.2	1.14117
94.60	82.25	.06631	-59.2	419.8	1.44075
91.80	84.24	.06831	-60.1	421.6	1.52051
88.70	91.40	.07079	-60.6	424.8	1.70741
83.00	121.79	.07718	-60.3	433.4	2.43146
80.40	140.46	.08070	-60.3	437.4	2.89482
78.00	152.16	.08434	-59.6	442.6	3.23251
75.40	139.01	.08807	-58.3	449.8	3.05485
72.60	147.09	.09246	-58.3	454.7	3.35704
67.80	157.43	.10096	-58.3	463.6	3.84760
65.30	162.09	.10577	-58.5	468.2	4.11316
62.90	161.72	.11055	-58.5	473.2	4.26022
60.50	153.54	.11527	-58.5	478.5	4.20509
58.40	135.61	.11905	-59.2	481.8	3.84757
56.30	123.12	.12261	-60.1	484.8	3.62354
54.00	122.16	.12663	-60.3	490.0	3.74863
50.30	139.96	.13448	-60.6	499.5	4.61051
46.40	165.36	.14502	-59.6	513.4	5.90518
43.20	184.54	.15543	-58.3	527.4	7.07827
41.80	175.77	.16000	-58.3	532.3	6.96770
40.00	164.56	.16572	-58.3	539.1	6.81700
38.30	160.90	.17124	-58.7	544.7	6.96106
36.60	158.48	.17692	-58.5	552.4	7.17474
32.20	147.04	.19179	-57.6	575.3	7.56637
30.70	140.98	.19710	-57.2	584.4	7.60948
29.20	136.95	.20251	-56.7	594.0	7.77140
26.10	146.63	.21551	-57.2	612.1	9.30921
23.40	141.88	.22774	-57.4	630.9	10.04672
21.00	132.91	.23910	-56.9	652.0	10.48724
18.85	115.59	.24896	-57.2	671.8	10.16052
18.00	113.34	.25308	-57.6	679.3	10.43320
17.10	107.89	.25745	-57.8	688.7	10.45466
16.00	101.45	.26278	-57.4	703.3	10.50674
15.00	93.79	.26756	-56.5	719.2	10.36056
13.95	85.16	.27244	-55.9	736.4	10.11544
12.90	79.53	.27735	-55.1	755.9	10.21525
12.00	74.60	.28161	-55.1	771.7	10.30069
11.20	69.29	.28539	-54.1	790.7	10.25164
10.90	62.50	.28673	-53.3	799.7	9.50174
10.60	58.66	.28802	-52.3	809.7	9.17041
10.30	58.17	.28934	-51.5	819.1	9.35833
9.75	54.25	.29169	-51.4	832.8	9.22038
9.50	52.11	.29276	-49.9	844.5	9.08829
9.30	50.50	.29360	-48.7	854.4	8.99769
9.10	52.61	.29451	-47.8	863.0	9.58024
8.95	52.59	.29520	-46.9	870.4	9.73574
8.83	53.33	.29576	-47.4	871.8	10.00806
8.78	52.38	.29600	-48.1	870.6	9.88517

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13. ABSTRACT

A balloon-borne instrument system has been assembled which can concurrently measure the concentrations of water vapor and ozone in the atmosphere. An observational program has provided the first collection of data of this kind for studies of atmospheric circulation. Nineteen soundings were made during 1967 and 1968 over the Washington, D.C., area, each providing vertical distributions of these two gases. The data from these soundings have been individually recorded in tables and graphs.

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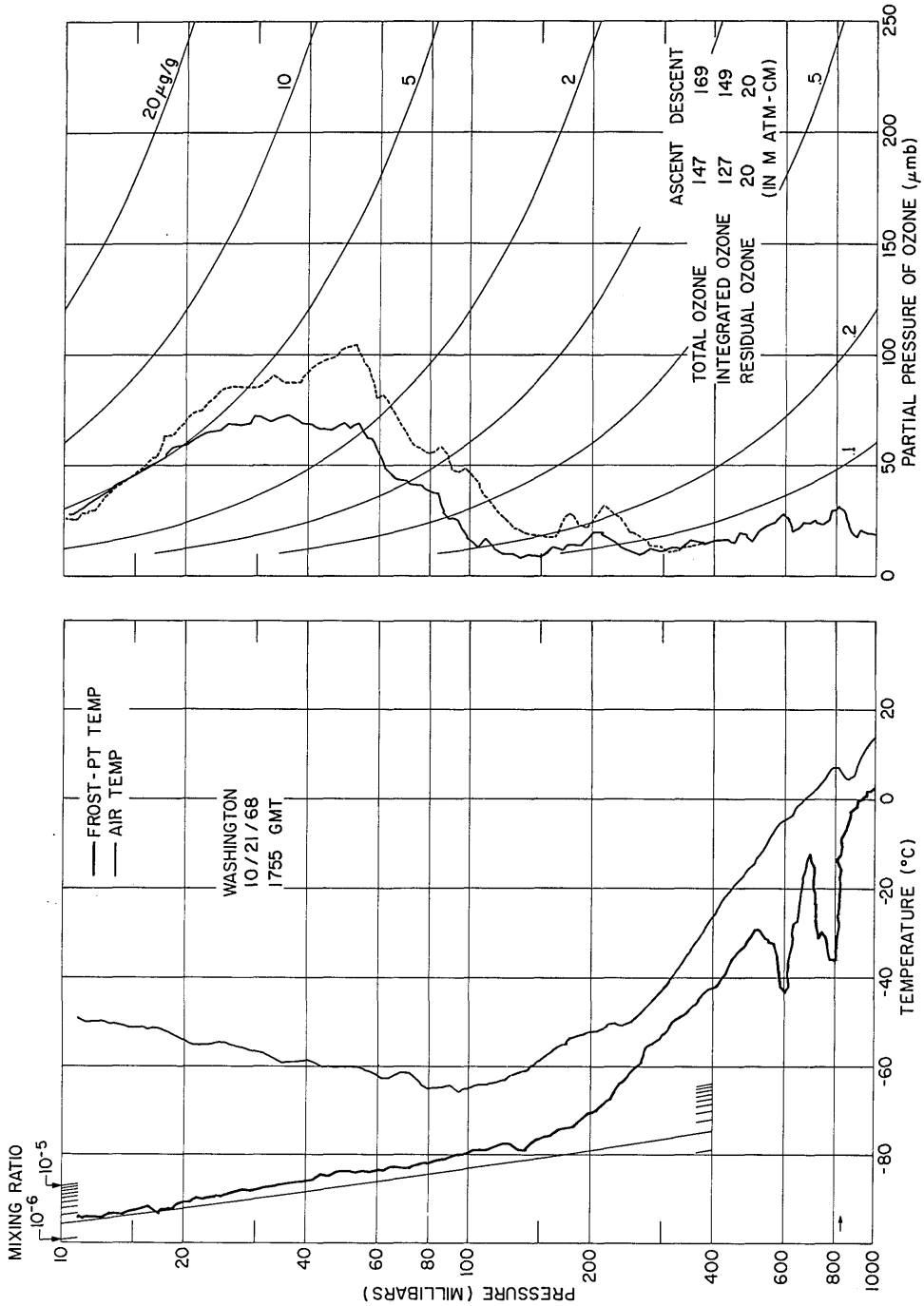
20μg/g
10
5
2
1
.2
.5
ASCENT DESCENT
147 169
127 149
20 20
(IN M ATM-CM)
TOTAL OZONE
INTEGRATED OZONE
RESIDUAL OZONE
PARTIAL PRESSURE OF OZONE (μmb)
0
50
100
150
200
250
FROST-PT TEMP
AIR TEMP
WASHINGTON
10/21/68
1755 GMT
MIXING RATIO
10
10⁻⁶
10⁻⁵
PRESSURE (MILLIBARS)
20
40
60
80
100
200
400
600
800
1000
TEMPERATURE (°C)
-80
-60
-40
-20
0
20