AN ANALYSIS OF CARBON DIOXIDE IN THE ARCTIC ATMOSPHERE AT BARROW, ALASKA DURING 1961-1962-1963

REPORT NO. 2

BY

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ABSTRACT

The results of the measurements of carbon dioxide in air at Barrow, Alaska are presented. Reference gas comparison data are tabulated, and the methods of calculations are discussed. The average daily concentrations of atmospheric carbon dioxide are tabulated for the period 10 July 1961 to 2 October 1963. The diurnal variations of carbon dioxide during this period are also presented. Results of the analysis of carbon dioxide in air, collected in flasks from several locations in addition to Barrow, are given.

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PREFACE

This report presents a summary of measurements of the concentration of carbon dioxide gas in specially prepared mixtures of nitrogen gas used in the analysis of carbon dioxide at Barrow, Alaska. The report follows the general format used by The Scripps Institution of Oceanography [Keeling, 1965].

This work was supported under a contract from the Office of Naval Research [ONR 477(24)] with the Department of Atmospheric Sciences, University of Washington. The analytic program was conducted cooperatively with Dr. C. D. Keeling's (The Scripps Institution of Oceanography, La Jolla, California) atmospheric carbon dioxide program at Mauna Loa, Hawaii, and the South Pole Station, Antarctica.

The carbon dioxide program at Barrow was initiated and maintained from July 1961 to August 1962 by Mr. John J. Kelley, Jr. Operation of the carbon dioxide analyzer was continued by Mr. John Unger from September 1962 to March 1963, and from April 1963 to October 1963 by Mr. Leander Stroschein.

The Director of the Arctic Research Laboratory, Dr. M. C. Brewer and his staff, have provided invaluable assistance to the project.

I. INTRODUCTION

This report presents the results of a program to measure the concentration of carbon dioxide in the atmosphere at Barrow, Alaska from July 1961 through October 1963. Daily average values of the concentration of CO_2 in the surface air are computed from data derived from original strip chart records of a continuous recording infrared gas analyzer installed at the station. All relevant data and computations for the years 1961 through 1963 are contained in this report. The experimental method is described in a Technical Report by Kelley [1964]. Interpretation of the data will be published in a scientific journal. A provisional version of reference gas calibration data for 1961 through 1963 appears in the Technical Report by Kelley [1964].

All data in this report are final values. The procedure for computation follows that used at The Scripps Institution of Oceanography, LaJolla, California as described in Research Reports I through VIII*.

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* Copies of these reports may be obtained from Dr. Charles D. Keeling, S. I. O. LaJolla, California

II. REFERENCE GAS COMPARISONS - TABLE 1

This table lists, in chronological order, both the observed scale differences which were used to calibrate the gas analyzer, and their conversion into index values proportional to CO_2 concentration. The calibrations of the analyzer consisted of repeated comparisons of pairs of specially prepared gas mixtures of CO_2 in nitrogen obtained from The Scripps Institution of Oceanography. These reference gas mixtures were stored in size 7A stainless steel cylinders called "tanks."

Under normal operating conditions ten comparisons were obtained by alternately passing one gas of the pair, and then the other, through the infrared analyzer for five minutes at the same flow rate employed in the air measurements (normally 0.5 liters per minute). As soon as one series of ten comparisons was run, one or both tanks were replaced and another pair of tanks compared. This process was repeated, as a rule, three times during the life of a "working reference" tank: at the beginning of use, when the gas pressure was half depleted, and at 400 p.s.i., before return of the cylinder to Scripps for final calibration. The scale difference between two successive traces, in recorder chart ordinates, was read with a straight-edge scale (30 divisions to the inch) by drawing parallel straight lines through each of the traces belonging to the reference gases. The succession of individual scale differences for each tank pair was entered on data sheets, an example of which is shown in Figure 1. The calibrations described served to establish the recorder sensitivity of the infrared gas analyzer. They

were also used to determine the index values of reference gases known as "working references," used in connection with air measurements.

The general method used by The Scripps Institution for tank standardization (Figure 2) was modified somewhat at Barrow during the period covered by this report. Initially, two reference gases were compared with air every 30 minutes. After modifying the automatic operation of the analyzer, three reference gases were employed. Two of the reference gases were used as comparison standards. The third reference gas was ranked as a "working reference" and compared with air every 30 minutes. The "working reference" was compared directly to the comparison standards, primary and span (high or low), in the absence of a suitable secondary reference at Barrow.

In Table 1, tanks related to each calibration run are identified by tank numbers (permanently stamped into the metal). They are listed in column 1 and 2. Column 1 lists the number of the standard tank; column 2 lists the number of the tank with which it is compared. The average observed scale difference for each tank pair is listed in column 3. A positive number indicates that the compared tank, for that particular comparison, has a higher scale reading, and consequently a higher CO_2 concentration than the standard; a negative number indicates the reverse. The number of comparisons (not always 10) which entered into each average scale difference is listed in column 4.

The recorder sensitivity, determined by comparisons of the primary and secondary standards, is expressed by a "recorder scale factor" listed in column 5. The computed index differences, each with the same

sign as the corresponding scale difference, and the index value of the compared tank, in terms of a prescribed or "assigned" value of the standard tank, are listed in columns 6 and 7.

Weighted average recorder scale factors, column 5, are copied from column 7 of table 2. Index differences, column 6, were computed by the formula given in Section III-D.

The computed index values, column 7, are the algebraic sums of the index values of the standard tanks listed in column 1 and the index differences of column 6. The index values of the standard tanks are those listed in column 8 of Table 7. In the case of primary tanks, designated I_o and I_{LS} in column 1 of Table 7, they depend solely on the measurements made at Scripps. The weighted index values of these tanks are given in column 12 of Table 9.

The data listed in Table 1 are for the period 6 January 1962 to 21 August 1963. Data for the period 10 July 1961 to 5 January 1962 are omitted from this report because the mutual comparison method of reference tank calibration had not been in use. During this time two reference tanks were compared with each other at various times during every day. Recorder scale factors were determined from single set comparisons. These data are presented in Table 3.

The scale differences entered in column 3 of Table 1 are copied from the original entries on the Reference Gas Data Sheets, Fig. 1. The date of analysis is listed in column 8.

III. RECORDER SCALE FACTORS - TABLE 2

A. Definition

The recorder scale factor, RSF, is defined as the index difference between two reference gases divided by the number of scale divisions (30 div. to the inch) between the recorder chart traces for each reference recorded in units. Ten divisions on the scale were equal to one unit. The index of a reference gas tank is defined as a provisional CO_2 concentration in ppm based on the initial analysis of the tank.

B. Standard Computation for Three Mutually Compared Tanks

Columns 1 through 4, except values with asterisks explained below, and the last entry in column 4 for each calibration day, list selected data copied directly from the corresponding columns of Table 1. These data are employed, as shown below, to obtain daily RSF's.

The following format has been adopted from the Scripps (S10 Reports 1-8) scheme for tank standardizations, where the standard tank index values have been assigned the symbols A and B, and the compared tank, without such assignment, the symbol X:

Standard Tank No.	Compared Tank No.	Observed Scale Difference	No. of Comparisons
A	X	[X] - [A]	a
B	X	[X] - [B]	b
A	B	[Y]*	(a or b)*

$$[Y] = ([X] - [A]) - ([X] - [B]) = ([B] - [A])$$

The asterisk on [Y] indicates the calculated value, and the brackets indicate index values. The number of comparisons assigned to [Y] is "a" or "b", whichever is smaller. The observed scale differences were taken from the averages of the individual chart scale differences (Figure 1).

The observed comparisons and calculated values of any group of three tanks, A, B, and X are set off in Table 2 by boxes.

C. Determination of Index Differences

Index differences shown in Table 2, column 5, were obtained from index values of the standard tanks as follows:

Tank Numbers	Index Values	Difference
10063 vs 6074	310.44 - 298.99	11.45
10063 vs 4291	-310.44 + 335.21	24.77
10063 vs 7351	310.44 - 273.22	37.22
10063 vs 4283	-310.44 + 343.02	32.58

The index values of separate tanks are obtained from Column 12 of Table 9.

D. Weighted Average Recorder Scale Factors

Column 6 presents RSF's computed according to the definition given in section III-A. Column 7 presents the weighted average values of the recorder scale factors for each calibration day. The index differences

in Column 6 of Table 1 are computed by the formula:

$$\text{Computed Index Difference} = (\text{Observed Scale Difference})(\text{Weighted Average RSF})$$

IV. SUMMARY OF RECORDER SCALE FACTORS - TABLES 3, 4, 5

Values of RSF's are assembled in chronological order in column 4 of Table 4. Table 5 presents a list of sliding RSF's derived for each day from 1 November 1962 to 31 December 1962. These are adjusted to 30.000 inches of mercury.

Column 7 of Table 3 and column 6 of Table 4 show the result of adjusting the RSF's of column 5 and 4 of Tables 3 and 4 to a standard barometric pressure of 30.000 inches of mercury at Barrow. The following formula was used:

$$\text{Adjusted Recorder Scale Factor} = \frac{(\text{Weighted Average RSF}) \times 30.000 \text{ inches of Hg}}{\text{Observed barometric pressure during test (inches of Hg)}}$$

The data are divided into fifteen periods. The periods are separated according to breaks in continuity of the recorder scale

factors; a graph of the data from Period 1 through Period 11 is shown in Figure 3. During these periods, breaks in continuity were extreme due to the development of a method for determining a standard operating method for infrared analysis at Barrow. Each break is characterized by a change in the span control on the infrared analyzer. Therefore, discrete periods of relatively constant recorder scale factors are created between span changes.

During periods 13, 14 and 15, a constant recorder span setting was used and a mutual comparison method of tank standardization was set up. These data are shown in Figures 4 and 5. A discontinuity existed between 1 November 1962 and 31 December 1962. This was defined as period 14 and Table 5 was produced from this period by drawing a line between the end point of the average RSF curve for Period 13 to the starting point of the average RSF curve for Period 15. Daily RSF's were derived from this curve in Period 14 and defined as sliding recorder scale factors.

V. INDEX VALUES OF WORKING REFERENCE GASES - TABLE 6

This table presents index values based on measurements at Barrow, Alaska for "working reference tanks" (i.e., those tanks compared with air) in use during 1961, 1962, and 1963. The entries in columns 1, 2, 3, 4 and 9 have been copied from columns 1, 2, 4, 7 and 8 of Table 1. Column 8 of Table 6 gives the tank pressure at which the analysis was made. All of the comparisons were made with either the primary or low-span reference gases, numbers 10063 or 7351. Weighted average index values are listed in column 6.

VI. COMBINED SCRIPPS AND BARROW INDEX VALUES OF WORKING REFERENCE GASES - TABLE 7

This table summarizes the index values of all reference gases used at Barrow during 1961, 1962, and 1963. The weighted average index from 10 July 1961 to 1 August 1961 was determined from Scripps tank comparisons alone. No mutual tank comparison data were available for Barrow at that time. The reference tank to which each of the working reference tanks were compared at Barrow is designated by the symbols I_o or I_{LS}. I_o identifies the primary tank and I_{LS} identifies the low span.

Entries in columns 2 and 3 are the numbers of comparisons and weighted average index values based on measurements at Scripps prior to use. They are copied from Scripps Research Reports II through VII.

Entries in columns 4 and 5 are numbers of comparisons and weighted average index values based on measurements at Barrow. They are copied from columns 5 and 6 of Table 6.

Entries in columns 6, 7 and 8 are based on measurements at Scripps after use. They are found in Scripps Research Reports II through VIII.

Entries in columns 9 and 10 list the total number of comparisons and weighted average index values based on all measurements at Scripps and at Barrow, except as indicated in footnotes.

VII. COMPARISON OF SCRIPPS AND BARROW INDEX VALUES OF WORKING REFERENCE GASES - TABLE 8

This table presents the results of all analyses of Barrow reference tanks used in the daily comparison with air. The table compares the results of the analyses made at the Scripps Institution of Oceanography with those made at Barrow. The total number of comparisons and indices shown in columns 2 and 3 are taken from columns 2, 3, 6 and 7 of Table 7. The number of comparisons and reference tank indices in columns 4 and 5 of Table 8 are copied from column 4 and 5 of Table 7. Entries in column 6 are the differences between index values in parts per million CO_2 obtained from measurements at Barrow and Scripps, and represent the index departure from Scripps values. These data are plotted in Figure 6.

VIII. SCRIPPS INDEX VALUES OF PRINCIPAL REFERENCE GASES - TABLE 9

This table presents a summary of the index determination of all principal reference gases before and after use at Barrow. Column 1 indicates tank rank. The symbols are:

I	Primary tank
II	Secondary tank
I_{HS}	High Span
I_{LS}	Low Span

Columns 3 and 4 present the initial number of runs and index values before shipment of the tank to Barrow. This information may be found in the Scripps Reports, whose numbers are listed in column 6. Column 7 and 8 list the number of runs and index value of the same tank determined at Scripps after use at Barrow. These values are to be found in the Scripps report listed in column 10.

Entries in columns 11 and 12 give the total number of comparisons and index value for principal reference gases. These values are final values and are used in determining the recorder scale factor.

Column 13 lists the time intervals that these tanks were in use at Barrow.

IX. INDEX VALUES OF AIR WITH CONTINUOUS ANALYZER - TABLE 10

A. Computation of Index Values

This table contains all daily CO_2 values at Barrow for 1961 through 1963. Column 1 lists the calendar date of the comparison with air. Column 2 shows the observed daily average scale difference between the air trace and the working reference gas trace. Column 3 lists the total number of comparisons for the day. A full day consists of forty-eight half-hour comparisons. Column 4 records the average barometric pressure for the day. These values were obtained from the original Carbon Dioxide Daily Data Sheets. The observed scale difference in column 2 was adjusted to a standard barometric pressure of 30.000 inches of mercury

by the formula:

$$\text{Adjusted Scale Difference} = \text{Observed Scale Difference} \times \frac{30.000 \text{ inches of Hg}}{\text{Average pressure for the day (inches of Hg)}}$$

and this adjusted scale difference is recorded in column 5.

Column 6 lists the RSF's to be used in converting scale differences to index units. These are based on values listed in Tables 3, 4 and 5 which have been adjusted to standard atmospheric pressure.

The computed index difference in column 7 is obtained by:

$$\text{Computed Index Difference} = \text{RSF} \times \text{Adjusted Scale Difference}$$

The working reference tank used in the comparison with air is listed in column 8, its index in column 9. These data are taken from Table 7. For the period 10 July to 18 September 1961 the index values are found in column 8. For all air data from 19 September 1961 to 2 October 1963 working reference tank indices are to be found in column 10 of Table 7.

The daily average air index values in column 10 are the algebraic sums of entries in columns 7 and 9.

In several instances reference tank changes were made during the day. In these cases the daily index was computed by first computing an air index for all of the observations with one tank in use, and doing the same for the data taken with the replacement tank. These data are reported separately in column 10. The daily index is taken as the average of the two separate index values.

B. Manometric Concentration Scale

Throughout this report, the CO_2 data have been reported in terms of an index scale. It was established provisionally at Scripps in 1959 that the true concentration in parts per million by volume is related to the index scale by:

$$\text{Manometric Concentration} = (C - 311.51)\ 1.2186 + 311.51$$

where C is the index value.

This equation is based on the absolute calibration of primary and span reference gases by means of a mercury manometer. It is possible that future manometric calibrations may result in further adjustment of the index scale. The intercept value (311.51) is believed to be correct within 1 ppm; the slope value (1.2186) within 0.001. This well-determined value of the slope means that no significant error exists in comparing different concentrations in the range of 300 to 320 ppm.

This equation has been used to report atmospheric CO_2 concentrations

by Keeling [1960], Bolin and Keeling [1963], Kelley [1964], Pales and Keeling [1965], and Brown and Keeling [1965].

Column 11 lists the manometric concentration of the index values reported in column 10 in ppm CO_2 by volume dry air. The data are shown graphically in Figure 7.

X. MONTHLY SUMMARY OF AIR DATA - TABLE 12

This table presents the monthly average concentration (manometric) of CO_2 in the atmosphere at Barrow, Alaska, from July 1961 to September 1963.

Columns 2, 5, and 8 list the number of days for which air index values are quoted in Table 10. Columns 3, 6, and 9 list the monthly manometric indices in ppm CO_2 for index values quoted in columns 3, 6, and 9 of Table 11.

The averages of the monthly values for each year are given in columns 3, 6, and 9.

XI. CONCENTRATIONS OF AIR REFERRED TO A CONSTANT DATUM - TABLE 13

This table lists monthly average concentrations from Table 12 referred to a datum of January 1960 on the assumption that the concentration of CO_2 in the atmosphere over Barrow increased at the rate of

0.06 ppm per month. The period of observation at Barrow was too short to establish such a rate with certainty. However, the 0.06 ppm per month rate of increase of CO_2 was accepted, based on the observations at Mauna Loa Pales and Keeling, [1965] and, in the Antarctic by Brown and Keeling [1965].

Composite averages appear in column 5. Column 6 lists the departure of these averages from the annual mean value of 314.76 ppm.

XII. TWELVE MONTH RUNNING MEAN CONCENTRATION OF CARBON DIOXIDE - TABLE 14

A twelve-month running mean concentration of CO_2 is presented in columns 2 and 3 from data in Table 12.

XIII. THE DIURNAL VARIATION OF CO_2 - TABLE 15

The diurnal variation of CO_2 was calculated from the half-hourly observations recorded on the original Carbon Dioxide Data Sheets. The diurnal variations are based on hourly air indices by finding the average index for each hour of the day for each month, as shown graphically in Figure 8.

XIV. INDICES AND MANOMETRIC CONCENTRATIONS OF FLASK SAMPLES - TABLES 16, 17, 18, 19

During the course of analysis of air at Barrow, Alaska, with the infrared analyzer, samples of air were collected periodically in evacuated 18-liter glass flasks and sent to The Scripps Laboratory for analysis. These samples were taken primarily to check the continuous analyzer against an independent set of data.

Information in columns 1, 2, 3 and 4 is taken directly from the original Flask Sampling Sheets logged at Barrow by the operator of the CO_2 program. Entries in columns 5, 6, 7, and 8 of Table 17 and 19 and 5, 6, 7, 8, and 9 of Tables 16 and 18 are copied from Flask Sample Laboratory Data Sheets.

Column 4 of Table 16 lists the place (first two letters) where the flasks were opened. The observer at the time of the flask sampling is indicated by the second two letters.

LOG OF SYMBOLS

Locations

PB = Point Barrow
AR = Arlis I, II
T3 = T-3
BT = Bettles
AN = Anaktuvuk
UM = Umiat
NA = Natchik

Observers

RS = R. Sommerfeld
BM = B. Mendenhall
RR = R. Roulette
LS = L. Stroschein
BL = B. Lieske
RS = R. Shaver
DB = D. Bailey
HP = H. Peyton
JK = J. Kelley
CC = C. Cooke
AH = A. Hanson
PD = P. Dix
PW = P. Witt
RP = R. Priebe
JU = J. Unger

During 1962, evacuated flask pairs were opened at various Alaskan locations listed in column 8 of Tables 17 and 19 and column 9 of Table 18. Aircraft flights were made to each of these locations and the samples were taken at 10,000 feet above the ground surface.

The range entered in column 7 is the concentration difference between flask pairs. The data are presented in Table 17.

Flask pairs were opened at various heights over Barrow, Alaska, during 1962 and 1963. The data are reported in Table 18.

During August and September 1962, flask samples of air were collected from the Arctic Research Laboratory research vessel NATCHIK at several locations along the coast of the Arctic Ocean, Chukchi, and Bering Seas. The concentration data are presented in Table 19.

Figure 10 presents a map illustrating the various flask sampling locations and cruise course of the NATCHIK.

XV. INDICES AND MANOMETRIC CONCENTRATIONS OF AIR FOR TIMES OF FLASK SAMPLING - TABLE 20

This table presents CO_2 concentrations in air as measured by the infrared analyzer at times when air samples were collected in glass flasks as reported in Table 16.

Columns 1 and 2 show the date and time when the flask samples were collected. Entries in columns 3, 4, 5, 6, 7, 8, 9, 10, and 11 correspond

respectively to entries in columns 2, 4, 5, 6, 7, 8, 9, 10, and 11 of Table 10 and were obtained in the same manner except that columns 3, 4, 5, 7, 10, and 11 are average values which apply to a thirty to sixty minute period near the time when the flask sample was taken, rather than daily values.

XVI. COMPARISON OF CONTINUOUS ANALYZER AND FLASK SAMPLES - TABLE 21

This table compares the concentration of individual flask samples collected at Barrow, Alaska, with the average concentration observed by the continuous infrared analyzer near the time of collection. Manometric concentrations are used.

Flask concentrations copied from column 7 of Table 16 are listed in column 3. Analyzer concentrations copied from column 11 of Table 20 are listed in column 4. Differences (analyzer minus flask concentration) are listed in column 5.

Figure 11 shows the departure of the IR analyzer CO_2 concentrations from flask sample concentrations.

REFERENCES

Bolin, B. and C. D. Keeling, Large scale atmospheric mixing as deduced from the seasonal and meridional variations in carbon dioxide, J. Geophys. Res., 68, 3899-3920, 1963.

Brown, C. W., and C. D. Keeling, The concentration of atmospheric carbon dioxide in Antarctica, J. Geophys. Res., 70, 6077-6086, 1965.

Keeling, C. D., The concentration and isotopic abundance of carbon dioxide in the atmosphere, Tellus, 12, 200-203, 1960.

Kelley, J. J., Analysis of carbon dioxide in the Arctic atmosphere at Point Barrow, Alaska. Technical Report, Office of Naval Research Contract 477(24), University of Washington, 1964.

Pales, J. C. and C. D. Keeling, The concentration of atmospheric carbon dioxide in the Hawaiian Islands, J. Geophys. Res. 70, 6053-6076, 1965.

ATMOSPHERIC CARBON DIOXIDE PROGRAM

POINT BARROW, ALASKA

ONR 477/24

DATE April 20, 1963

Tank No.	7351 / 7362	10063 / 7362	7351 / 10063
Scale Diff. 1	17.37	2.15	15.02
2	17.28	2.21	14.98
3	17.22	2.19	15.01
4	17.23	2.19	15.06
5	17.22	2.06	15.07
6	17.18	2.14	15.12
7	17.24	2.10	15.06
8	17.13	2.10	15.06
9	17.28	2.14	15.05
10	17.29	2.13	15.00
	172.44	21.41	150.43
Av. Scale Diff	17.24	2.14	15.04

	7362	10063	7351
Tank Press (PSI):	1800	1020	1500
Flow Rate (LPM):	0.5		
Zero Setting:	527/442/548		
Span Setting:	594		
Time Test Began:	1200		
Time Test Ended:	1730		
Freezer Temp. °F:	-55		
Freezer Defrosted (hours ago):	5		
Scale Used on Chart:	30 div/inch	(=3.0 units)	

FIG. 1: Sample Data Sheet for Computing Reference Gas Index Values and Recorder Scale Factors

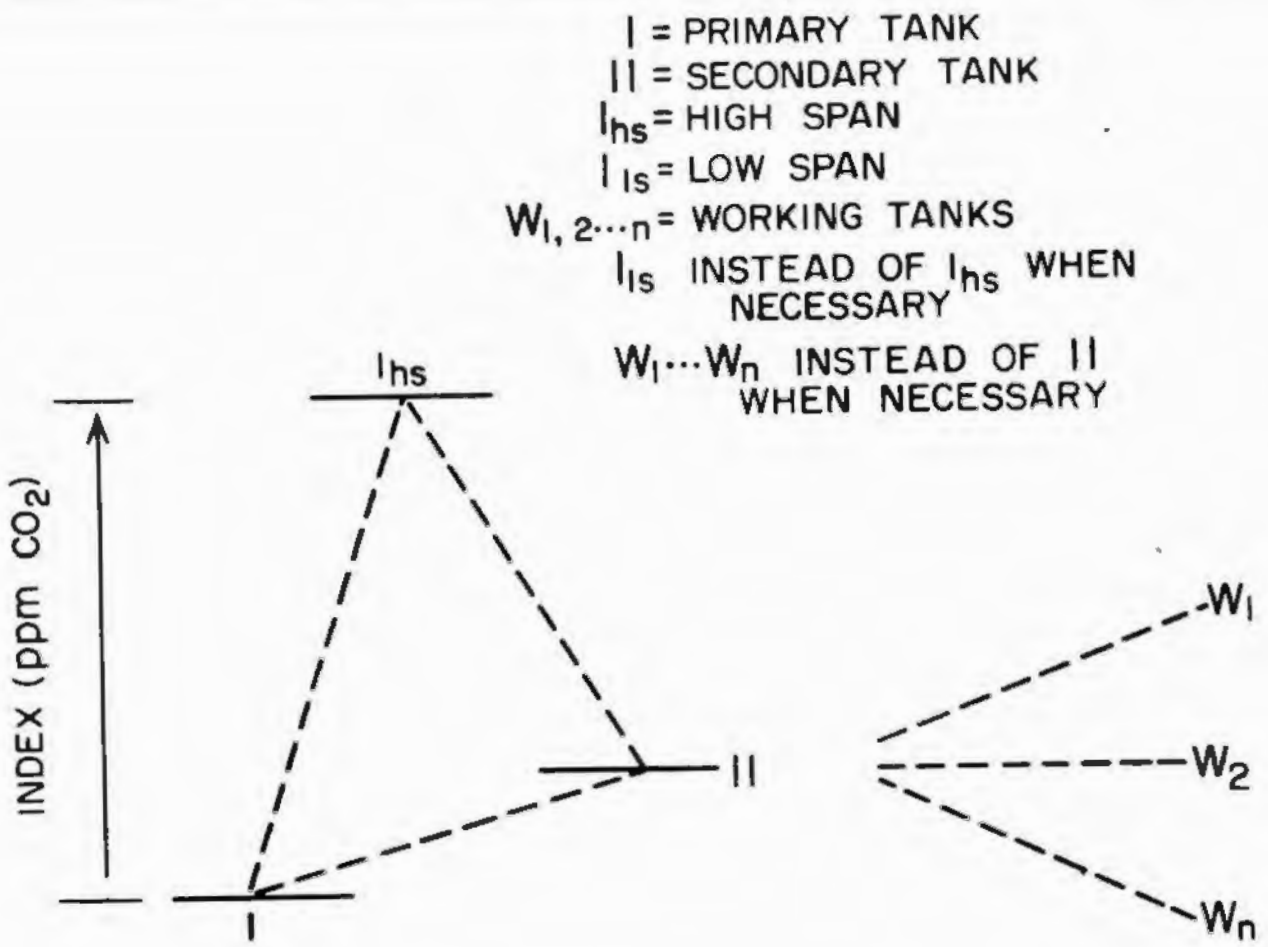

FIG. 2: Mutual Comparison Method for Tank Standardization

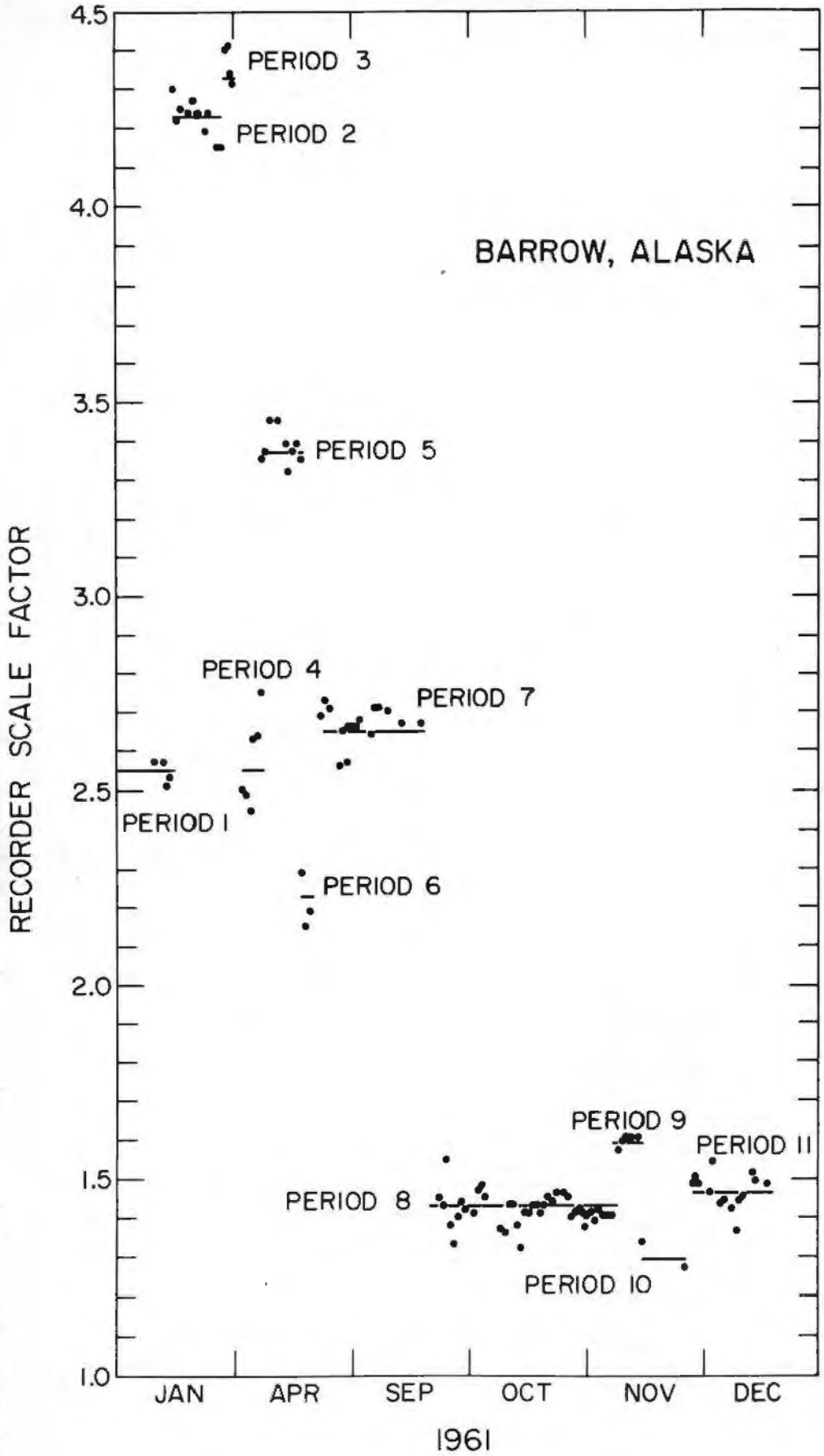

FIG. 3: Recorder Scale Factors (RSF's) Adjusted to Standard Barometric Pressure Versus Calendar Dates. Period 1-11

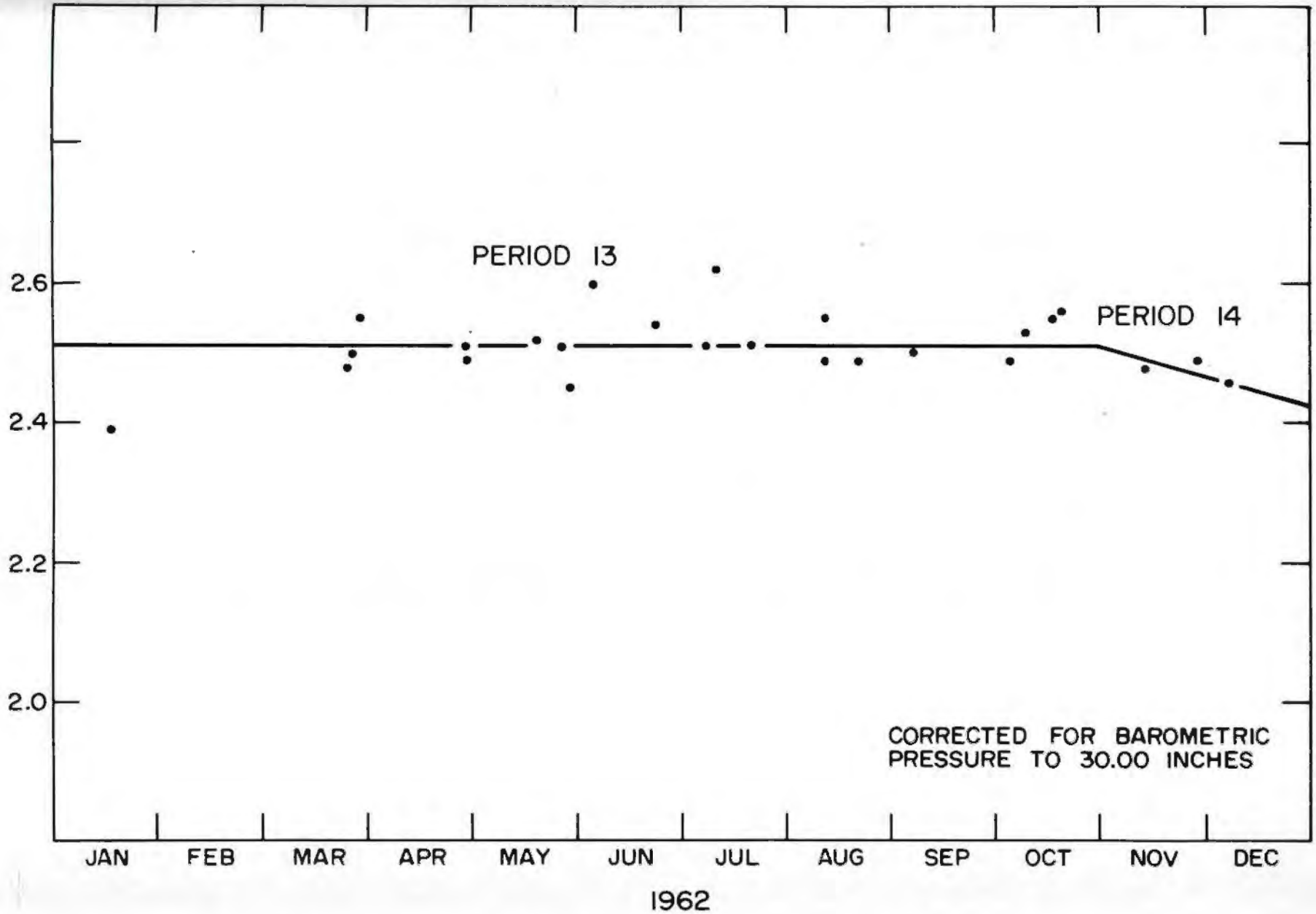

FIG. 4: Recorder Scale Factors (RSF's) Adjusted to Standard Barometric Pressure Versus Calendar Dates, Period 13-14

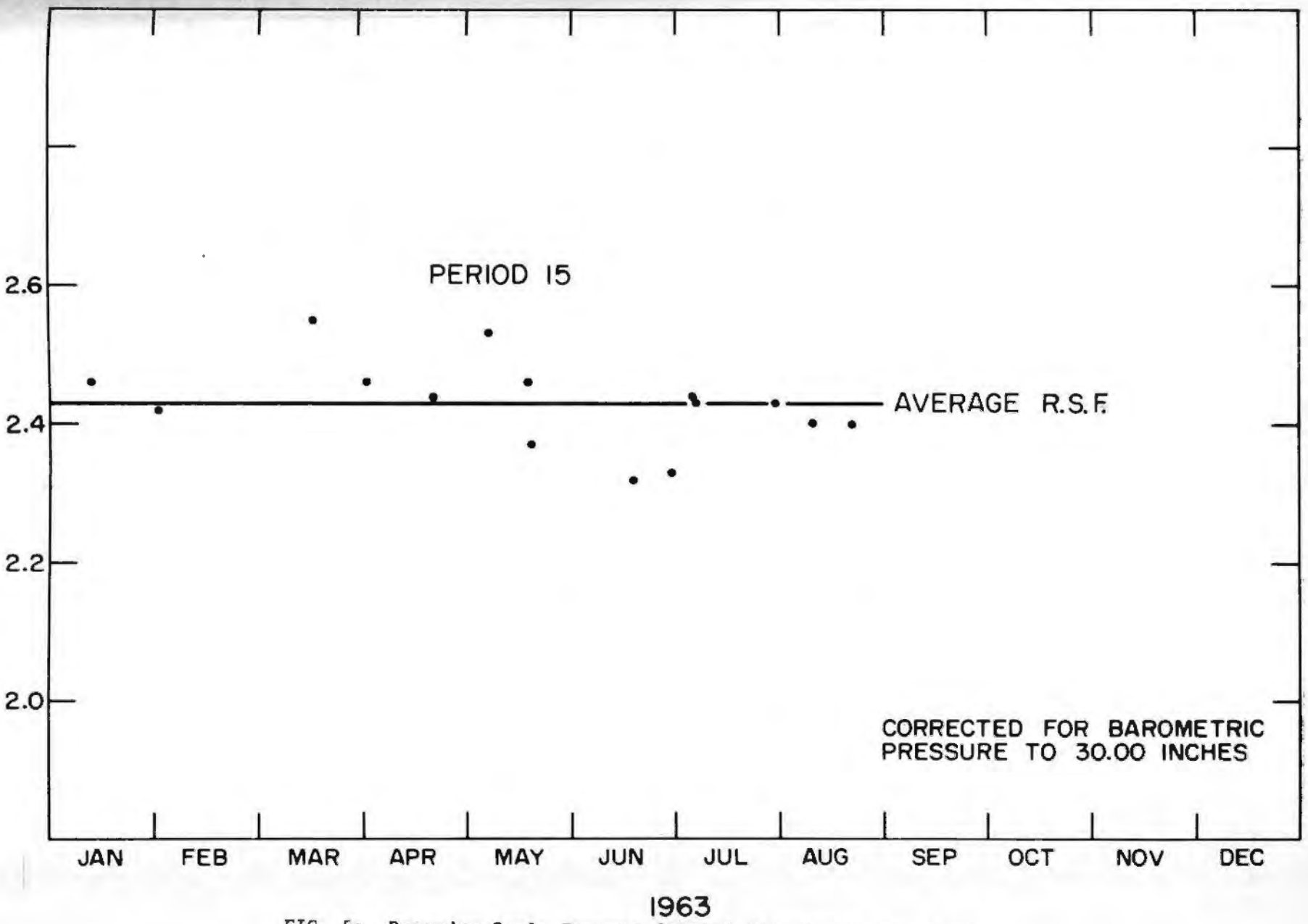

FIG. 5: Recorder Scale Factors (RSF's) Adjusted to Standard Barometric Pressure Versus Calendar Dates. Period 15

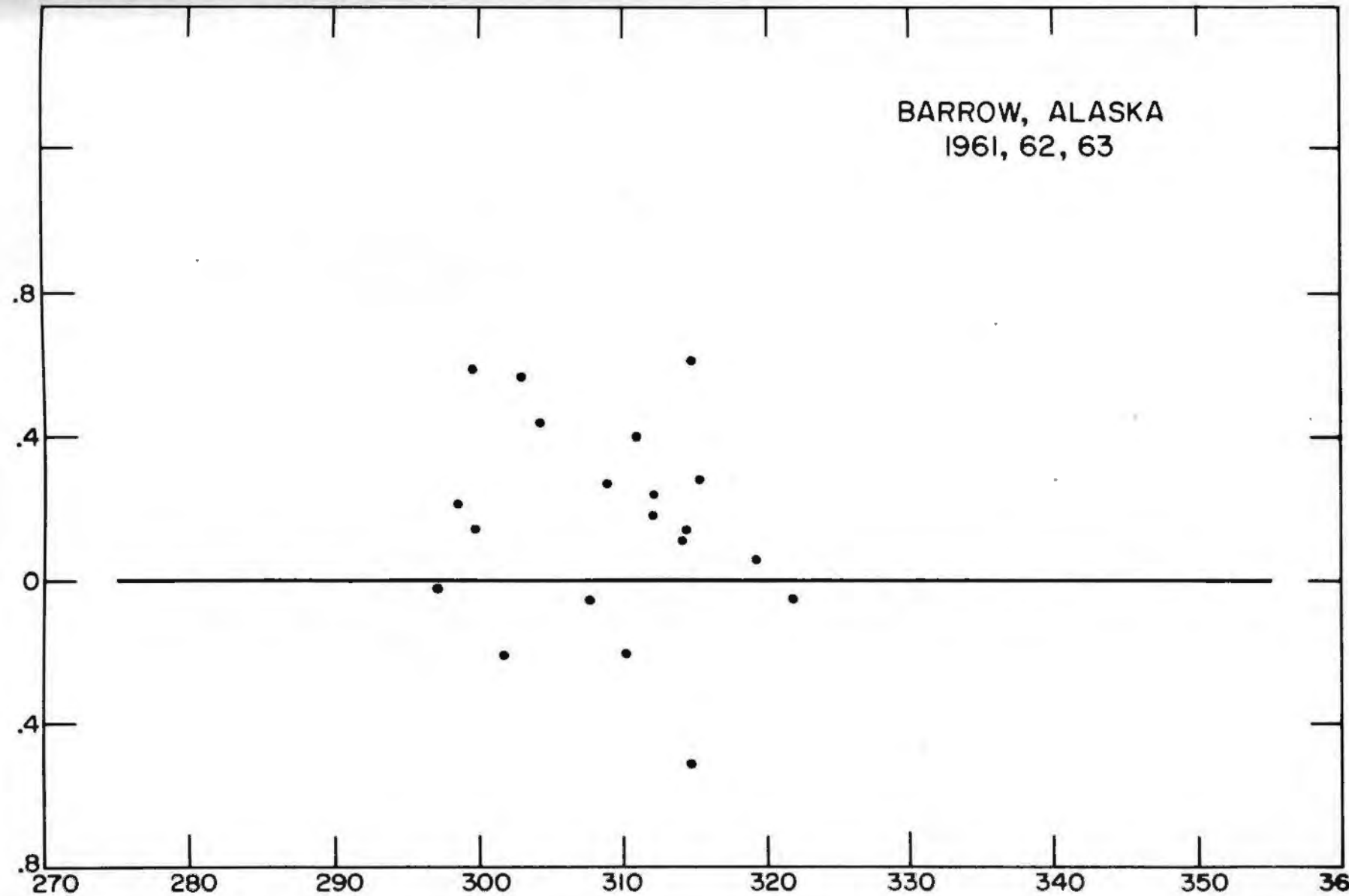

FIG. 6: Differences Between Index Values (ppm) Obtained from Measurements at Barrow and Scripps

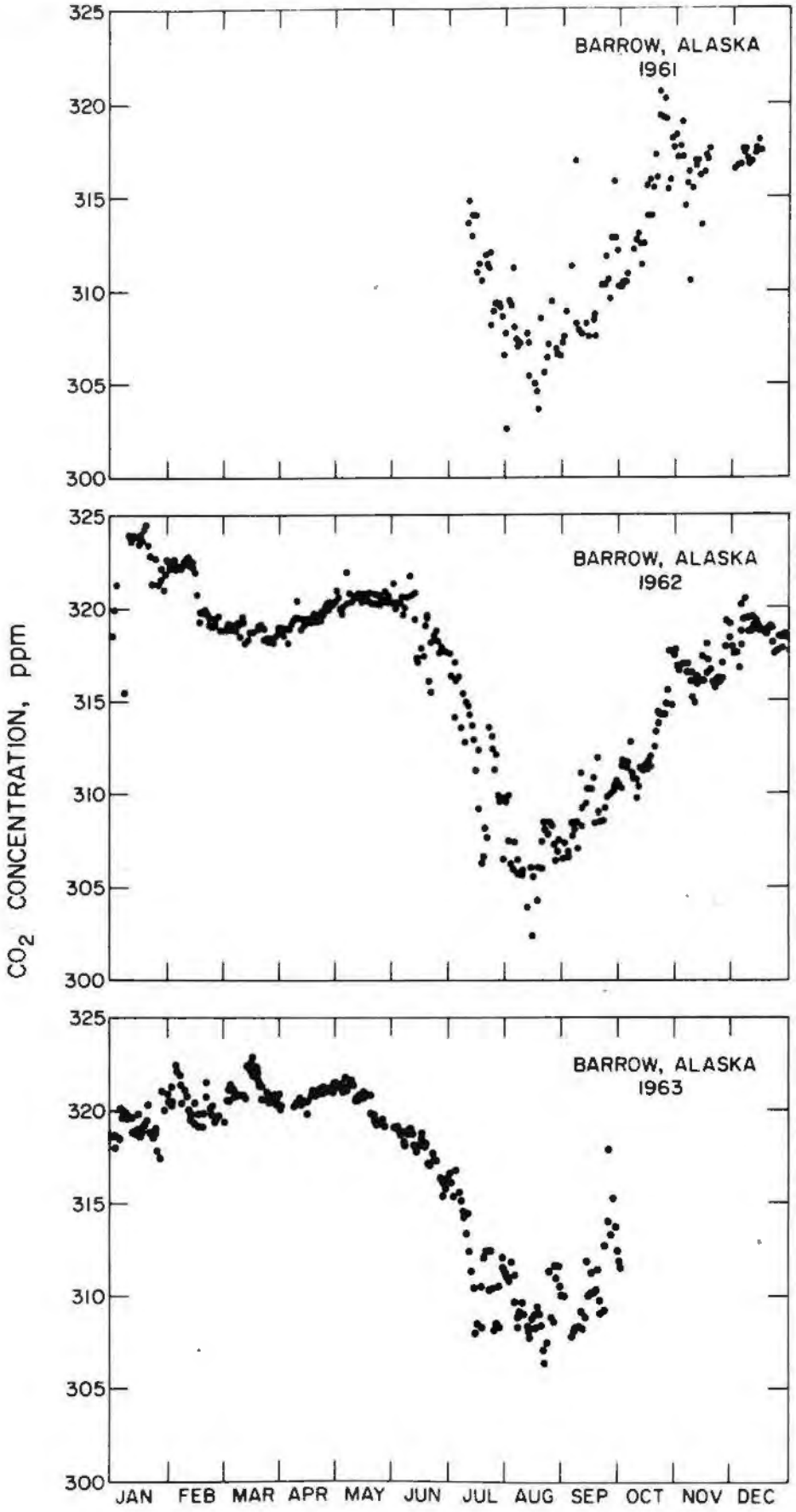

FIG. 7: Daily Average Concentration of CO_2

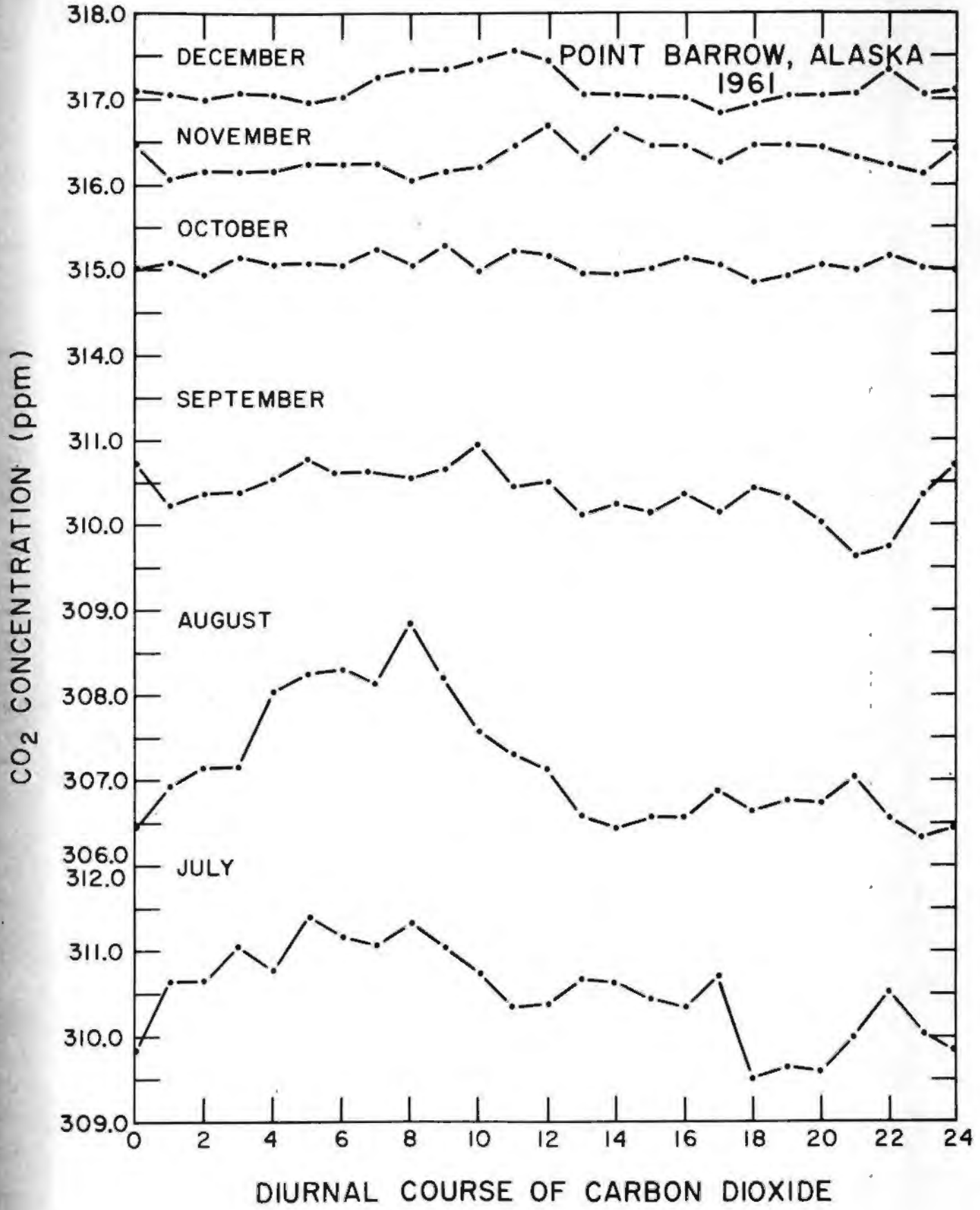

FIG. 8, page 1 of 4 pages: Diurnal Variation of CO_2 at Barrow 1961 to 1963

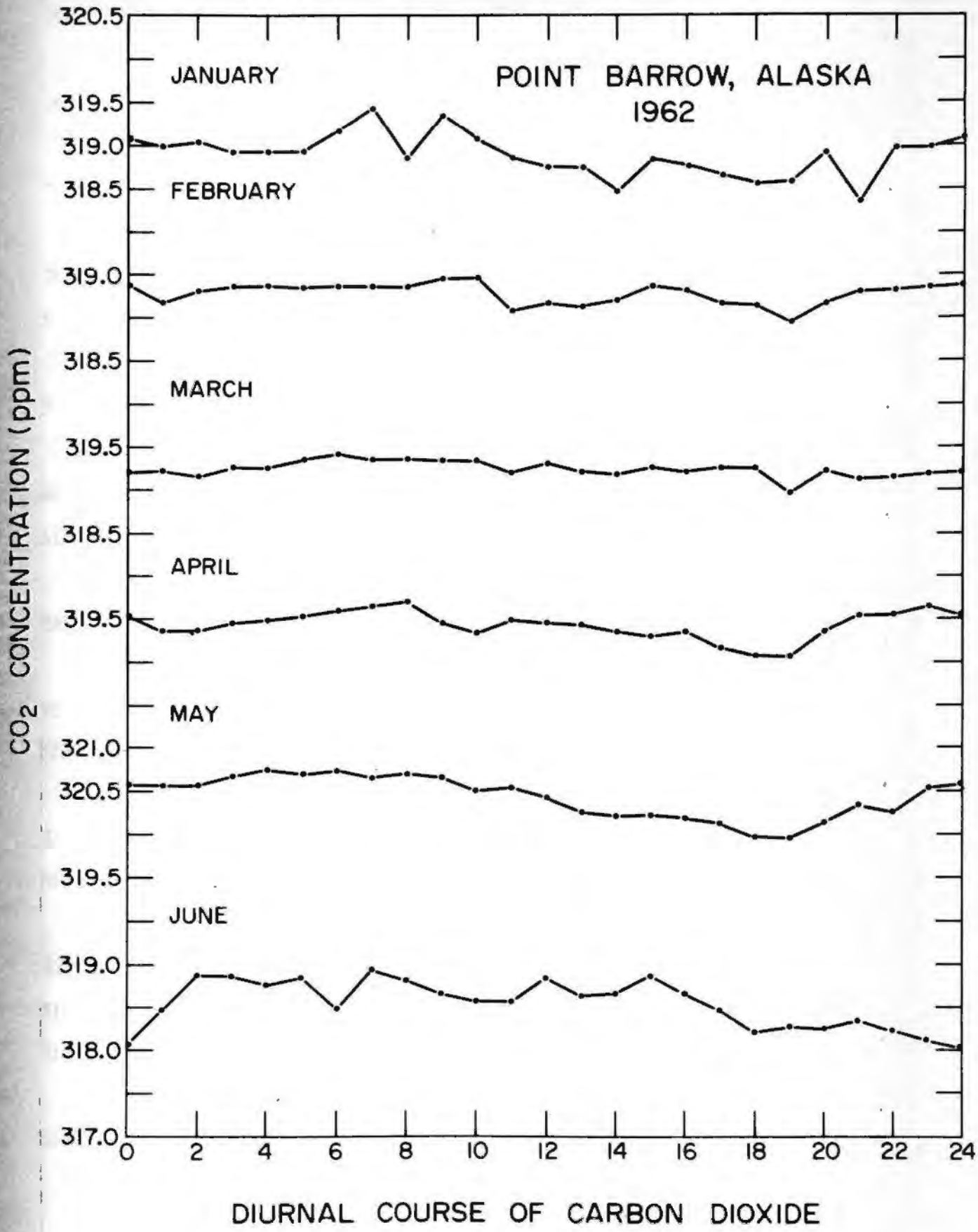

FIG. 8, page 2 of 4 pages: Diurnal Variation of CO_2 at Barrow 1961 to 1963

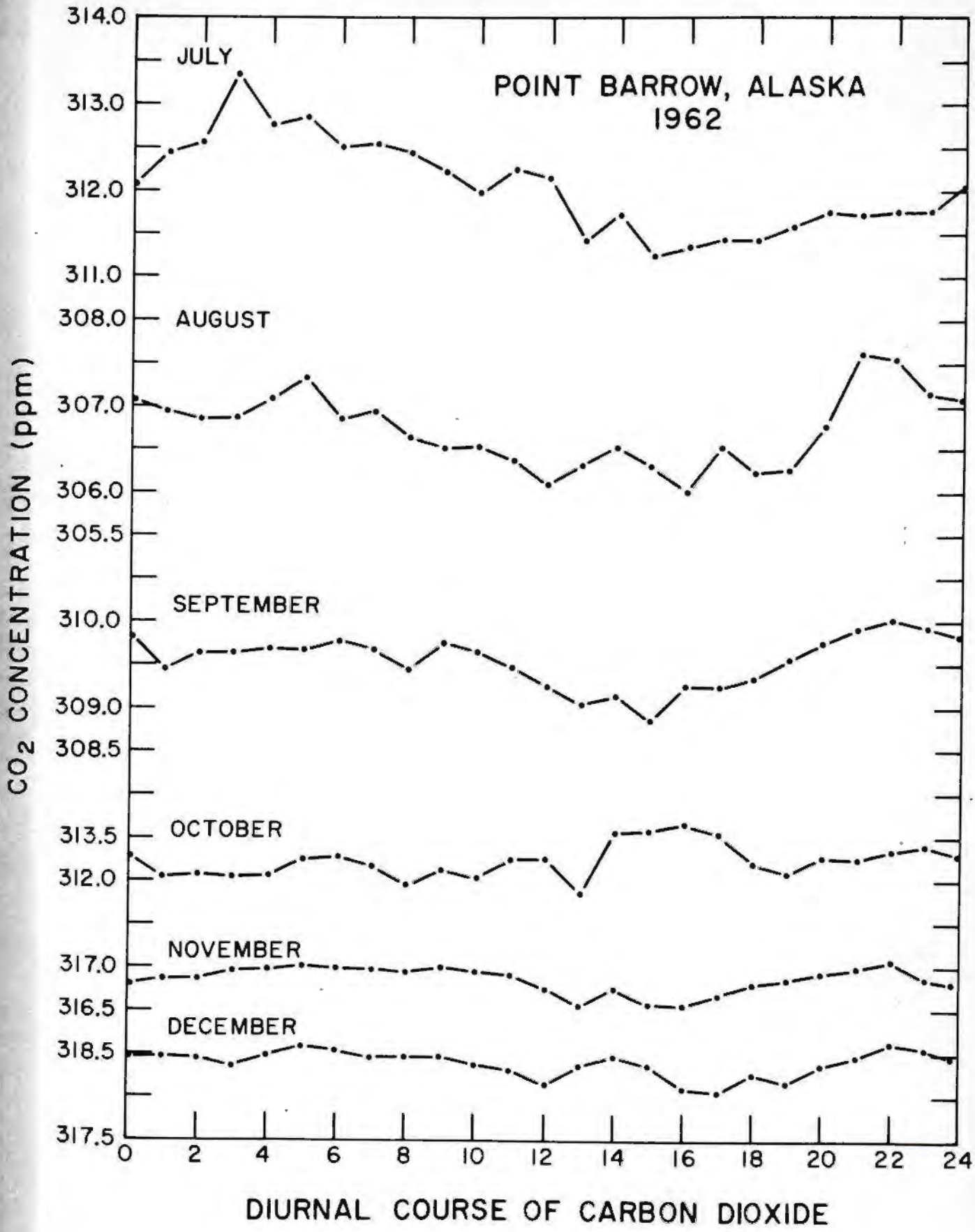

FIG. 6, page 3 of 4 pages:. Diurnal Variation of CO_2 at Barrow 1961 to 1963

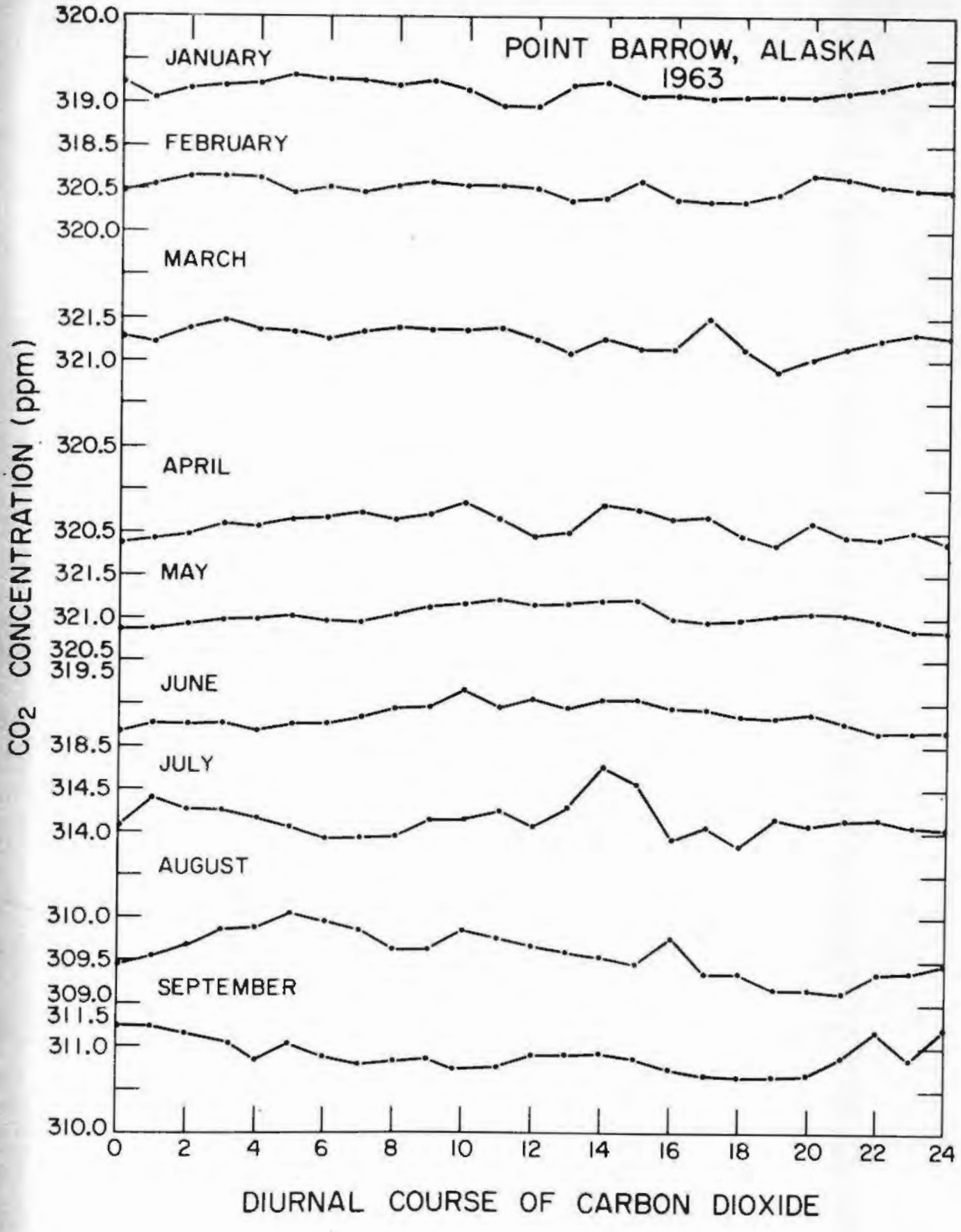

FIG. 8, page 4 of 4 pages: Diurnal Variation of CO_2 at Barrow 1961 to 1963

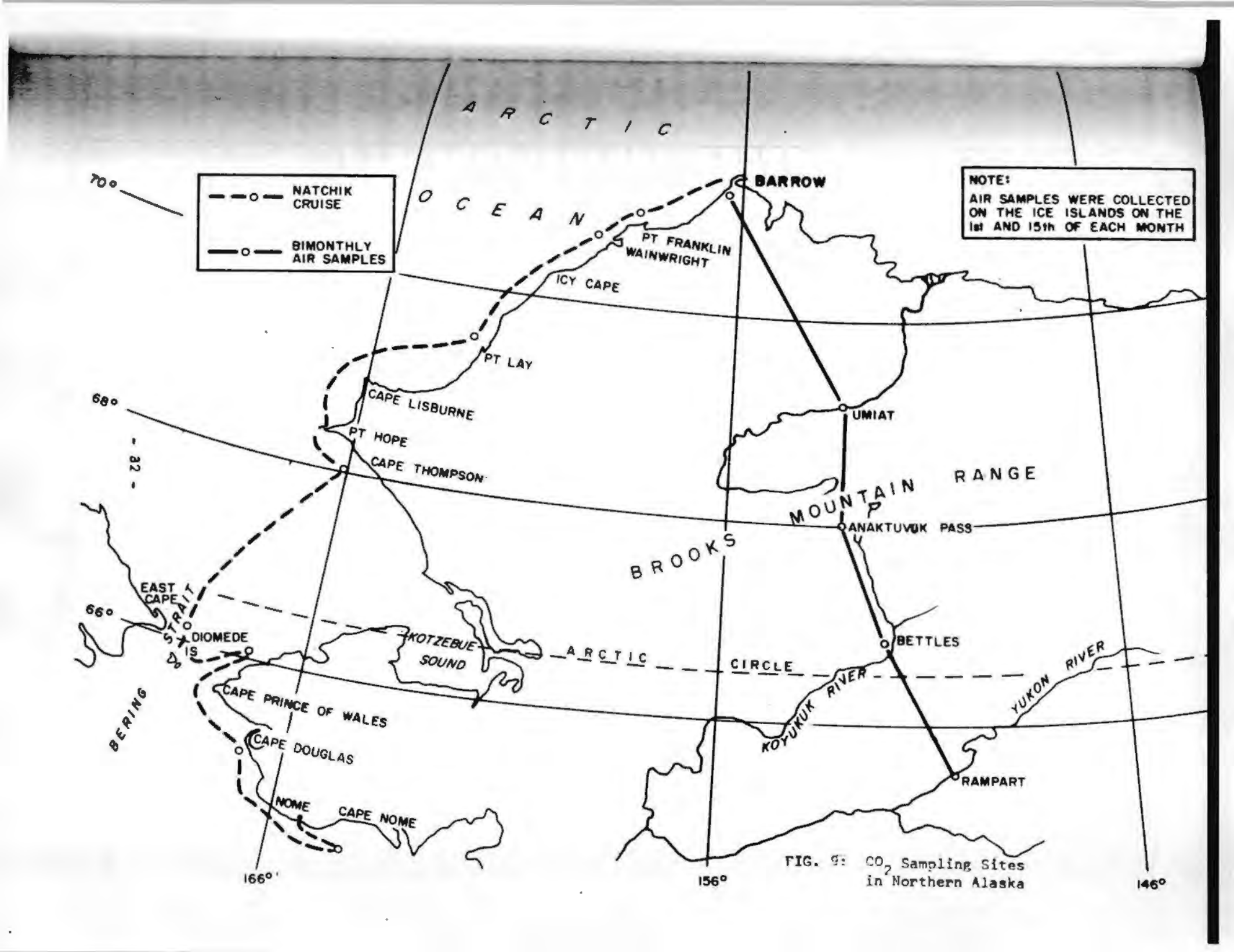

FIG. 9: CO_2 Sampling Sites in Northern Alaska

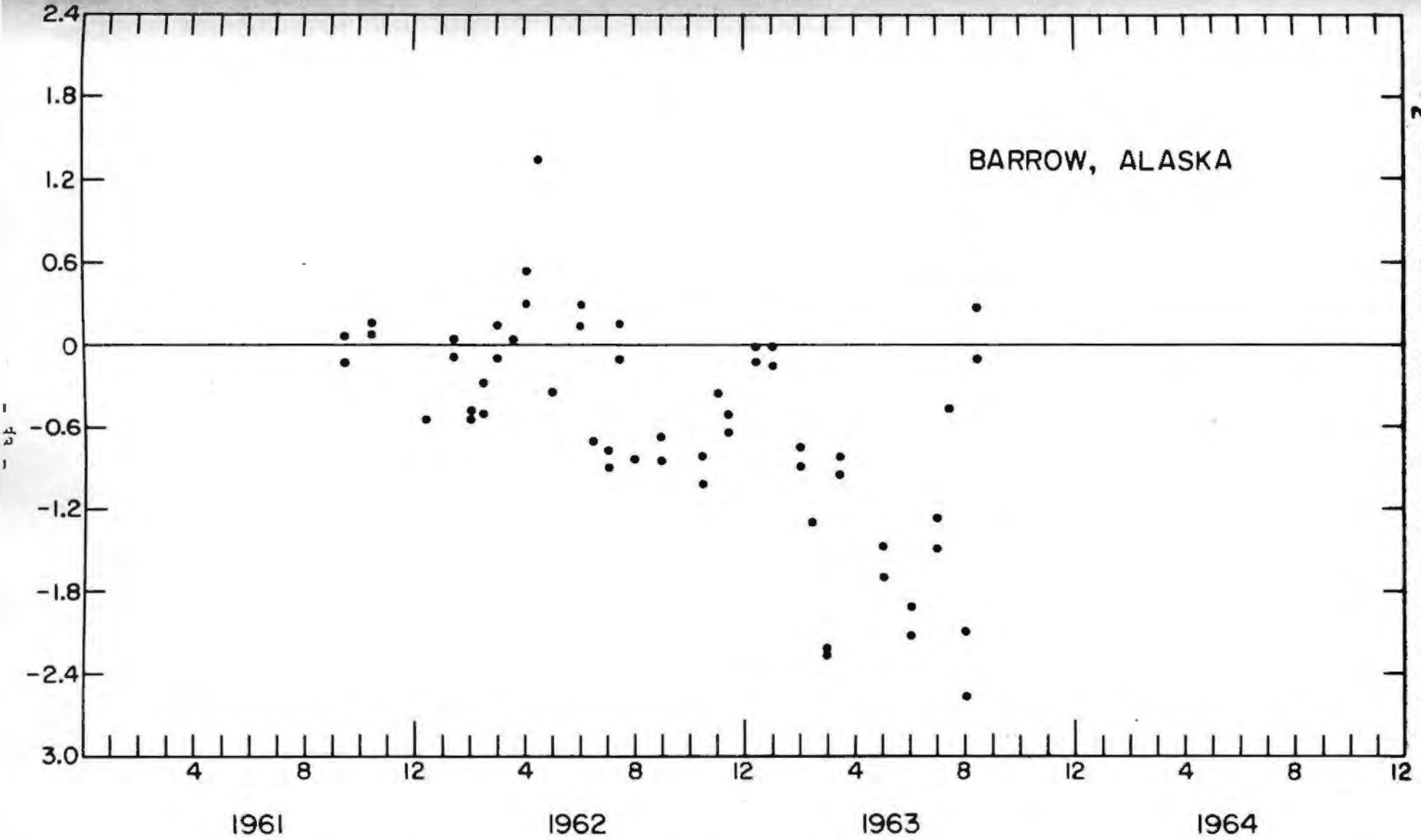

FIG. 10: Departure of IR Analyzer CO_2 Concentrations from Flask Sample Concentrations

TABLE 1: REFERENCE GAS COMPARISONS

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8
Standard Tank No.	Compared Tank No.	Observed Scale Diff.	No. of Compar-isons	Recorder Scale Factor	Computed Index Diff.	Computed Index	Date of Analysis
10063	3756	- 8.18	9	1.62	-13.25	297.32	January 6, 1962
10063	6074	7.06	9				
6074	3756	- 1.15	9		- 1.86	297.27	
10063	3756	- 8.16	9	1.61	-13.13	297.44	January 7
10063	6074	7.08	9				
6074	3756	- 1.10	9		- 1.77	297.36	
4291	10071	- 6.61	17	2.44	-16.13	319.08	January 17
10063	4291	10.09	17				
10063	10071	3.55	17		8.66	319.10	
10063	10073	- 4.63	10	2.49	-11.53	8.91	March 24
10063	4291	9.94	5				
4291	10073	-14.53	5		-36.18	299.03	
10063	10071	3.54	10	2.49	8.81	319.25	March 26
10063	4291	9.86	5				
4291	10071	- 6.44	10		-16.04	319.17	
10063	10068	- 0.55	10	2.53	- 1.39	309.05	March 28
10063	4291	9.69	6				
4291	10068	-10.38	10		-26.26	308.95	
10063	10068	- 0.59	10	2.51	- 1.48	309.09	April 29
10063	4291	9.83	10				
4291	10063	-10.46	10		-26.25	308.96	

TABLE 1: REFERENCE GAS COMPARISONS

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8
Standard Tank No.	Compared Tank No.	Observed Scale Diff.	No. of Compar-isons	Recorder Scale Factor	Computed Index Diff.	Computed Index	Date of Analysis
10063	6078	-2.81	9	2.53	-7.11	303.33	April 29, 1962
10063	4291	9.75	10				
4291	6078	-12.60	10		-31.88	303.33	
10063	6078	- 2.74	10	2.51	- 6.88	303.56	May 19
10063	4291	9.87	10				
4291	6078	-12.66	9		-31.78	303.43	
10063	6078	- 2.87	10	2.51	- 7.20	303.24	May 26
10063	4291	9.91	10				
4291	6078	-12.71	10		-31.90	303.31	
10063	10068	- 0.50	9	2.47	- 1.24	309.35	May 28
10063	4291	9.92	10				
4291	10068	-10.65	10		-26.31	309.10	
10063	3757	- 4.35	10	2.57	-11.18	299.26	June 5
10063	7351	14.59	10				
7351	3757	10.04	10		25.80	299.02	
10063	3757	- 4.36	10	2.54	-11.07	299.37	June 23
10063	7351	14.64	10				
7351	3757	10.37	10		26.34	299.56	
10063	3757	- 4.49	10	2.50	-11.22	299.22	July 7
10063	7351	14.88	10				
7351	3757	10.37	10		25.93	299.15	

TABLE 1: REFERENCE GAS COMPARISONS

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8
Standard Tank No.	Compared Tank No.	Observed Scale Diff.	No. of Comparisons	Recorder Scale Factor	Computed Index Diff.	Computed Index	Date of Analysis
10063	2427	- 5.13	10	2.60	-13.34	297.10	July 10, 1962
10063	7351	14.71	10				
7351	2427	8.78	10		22.83	296.05	
10063	2427	- 4.95	10	2.54	-12.57	298.00	July 20
10063	7351	14.84	10				
7351	2427	9.55	10		24.26	297.87	
10063	2427	- 4.85	10	2.55	-12.37	298.07	August 11
10063	7351	14.66	10				
7351	2427	9.62	10		24.53	297.75	
10063	2426	- 1.13	10	2.49	- 2.81	307.63	
10063	7351	15.00	10				
7351	2426	13.68	10		34.06	307.28	
10063	3756	- 0.20	10	2.49	- 0.50	309.94	August 21
10063	7351	14.93	10				
7351	3756	15.94	10		37.70	310.92	
10063	3756	- 0.15	10	2.50	- 0.38	310.06	September 7
10063	7351	14.90	10				
7351	3756	14.71	10		36.78	309.94	
10063	2426			2.49			October 4
10063	7351	14.95	10				
7351	2426	13.73	10		34.19	307.41	

TABLE 1: REFERENCE GAS COMPARISONS

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8
Standard Tank No.	Compared Tank No.	Observed Scale Diff.	No. of Compar-isons	Recorder Scale Factor	Computed Index Diff.	Computed Index	Date of Analysis
10063	2400			2.53			October 9, 1962
10063	7351	14.72	10				
7351	2400	15.08	10		38.15	311.37	
10063	2400			2.55			October 17
10063	7351	14.62	10				
7351	2400	15.11	10		38.53	311.75	
10063	10071			2.56			October 19
10063	7351	14.53	10				
7351	10071	11.18	10		28.62	301.84	
10063	10071			2.48			November 13
10063	7351	14.99	10				
7351	10071	11.32	10		28.07	301.29	
10063	10071			2.49			November 28
10063	7351	14.98	10				
7351	10071	11.27	10		28.06	301.28	
10063	10072			2.46			December 7
10063	7351	15.02	10				
7351	10072	16.72	10		41.13	314.35	
10063	10072	1.90	10	2.46	4.67	315.11	January 12, 1963
10063	7351	15.04	10				
7351	10072	17.06	10		42.97	315.19	

TABLE 1: REFERENCE GAS COMPARISONS

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8
Standard Tank No.	Compared Tank No.	Observed Scale Diff.	No. of Compar-isons	Recorder Scale Factor	Computed Index Diff.	Computed Index	Date of Analysis
10063	4278	1.61	10	2.43	3.91	314.35	February 1, 1963
10063	7351	15.37	6				
7351	7278	16.78	6		40.78	314.00	
10063	4286	1.48	10	2.53	3.74	314.18	March 16
10063	7351	14.51	10				
7351	4286	16.41	9		41.52	314.74	
10063	4286	1.54	10	2.48	3.82	314.27	April 1
10063	7351	15.00	10				
7351	4286	16.46	10		40.82	314.21	
10063	7362	2.14	10	2.47	5.29	315.73	April 20
10063	7351	15.04	10				
7351	7362	17.24	10		42.58	315.80	
10063	7362	2.11	10	2.47	5.23	315.69	May 6
10063	7351	14.97	10				
7351	7362	17.00	10		42.33	315.55	
10063	7362	2.09	10	2.46	5.14	315.58	May 18
10063	7351	15.23	10				
7351	7362	17.32	10		42.61	315.83	
10063	4284	4.75	10	2.37	11.26	321.70	May 19
10063	4283	13.78	10				
4283	4284	- 8.99	10		-21.31	321.71	

TABLE 1: REFERENCE GAS COMPARISONS

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8
Standard Tank No.	Compared Tank No.	Observed Scale Diff.	No. of Compar-isons	Recorder Scale Factor	Computed Index Diff.	Computed Index	Date of Analysis
10063	4284	4.90	10	2.33	11.42	321.86	June 18, 1963
10063	4283	13.92	10				
4283	4284	- 9.13	10		-21.27	321.75	
10063	4284	5.01	10	2.33	11.67	322.11	June 29
10063	4283	14.10	10				
4283	4284	- 9.06	10		-21.11	322.91	
10063	4272	0.84	8	2.44	1.98	312.42	July 6
10063	7351	15.29	10				
7351	4272	16.11	10		39.21	312.43	
10063	3757	- 0.84	10	2.44	- 2.04	312.48	
10063	7351	15.29	10				
7351	3757	16.04	10		39.15	312.37	
10063	18204	1.70	10	2.43	4.11	314.55	July 29
10063	7351	15.36	9				
7351	18204	17.03	10		41.21	314.43	
10063	18204	1.70	10	2.41	4.11	314.55	August 10
10063	7351	15.41	9				
7351	18204	17.03	9		41.21	314.43	
10063	18204	1.73	9	2.41	4.17	314.61	August 21
10063	7351	15.41	10				
7351	18204	17.20	10		41.45	314.67	

TABLE 2: RECORDER SCALE FACTORS

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8
Standard Tank No.	Compared Tank No.	Observed Scale Diff.	No. of Comparisons	Index Diff.	Recorder Single Set	Scale Factor Wgted. Avg.	Date of Analysis
10063	6074	7.97	3	11.45	1.43		September 26, 1961
10063	3755	4.04	5				
6074	3755	3.98	6				
10063	6074	8.02*	5*	11.45	1.43		
			8			1.43	
10063	6074			11.45			November 27
10063	3756	8.85	16				
6074	3756	-1.35	10				
10063	6074	7.50*	10*	11.45	1.53		
			10			1.53	
10063	6074	7.06	3	11.45	1.62		January 6, 1962
10063	3756	8.18	9				
6074	3756	-1.15	9				
10063	6074	7.03*	9*	11.45	1.63		
			18			1.62	
10063	6074	7.08	8	11.45	1.62		January 7
10063	3756	8.16	9				
6074	3756	-1.10	9				
10063	6074	7.06*	9*	11.45	1.62		
			17			1.62	

* See Text

TABLE 2: RECORDER SCALE FACTORS

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8
Standard Tank No.	Compared Tank No.	Observed Scale Diff.	No. of Comparisons	Index Diff.	Recorder Single Set	Scale Factor Wgted. Avg.	Date of Analysis
10063	4291	10.09	17	24.77	2.45		January 17, 1962
10063	10071	3.55	17				
4291	10071	- 6.61	17				
10063	4291	10.16*	17*	24.77	2.44		
			34			2.44	
10063	4291	9.94	5	24.77	2.49		March 24
10063	10073	4.63	10				
4291	10073	-14.53	5				
10063	4291	9.90*	5*	24.77	2.50		
			10			2.49	
10063	4291	9.86	5	24.77	2.51		March 26
10063	10071	3.54	10				
4291	10071	- 6.44	10				
10063	4291	9.98*	10*	24.77	2.48		
			15			2.49	
10063	4291	9.69	6	24.77	2.56		March 28
10063	10068	0.55	10				
4291	10068	-10.38	10				
10063	4291	9.83*	10*	24.77	2.52		
			16			2.53	
10063	4291	9.83	10	24.77	2.52		April 29
10063	10068	0.59	10				
4291	10068	-10.46	10				
10063	4291	9.87*	10*	24.77	2.51		
			20			2.51	

* See Text

TABLE 2: RECORDER SCALE FACTORS

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8
Standard Tank No.	Compared Tank No.	Observed Scale Diff.	No. of Compar-isons	Index Diff.	Recorder Single Set	Scale Factor Wgted. Avg.	Date of Analysis
10063	4291	9.75	10	24.77	2.54		April 29, 1962
10063	6078	2.81	9				
4291	6078	-12.60	10				
10063	4291	9.79*	9*	24.77	2.53		
			19			2.53	
10063	4291	9.87	10	24.77	2.51		May 19
10063	6078	2.74	10				
4291	6078	-12.66	9				
10063	4291	9.92*	9*	24.77	2.50		
			19			2.51	
10063	4291	9.91	10	24.77	2.50		May 26
10063	6078	2.87	10				
4291	6078	-12.71	10				
10063	4291	9.84*	10*	24.77	2.52		
			20			2.51	
10063	4291	9.92	10	24.77	2.50		May 28
10063	10068	- 0.50	9				
4291	10068	10.65	10				
10063	4291	10.15*	9*	24.77	2.44		
			19			2.47	
10063	7351	14.59	10	37.22	2.55		June 5
10063	3757	4.36	10				
7351	3757	10.04	10				
10063	7351	14.40*	10*	37.22	2.58		
			20			2.57	

* See Text

TABLE 2: RECORDER SCALE FACTORS

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8
Standard Tank No.	Compared Tank No.	Observed Scale Diff.	No. of Comparisons	Index Diff.	Recorder Single Set	Scale Factor Wgted. Avg.	Date of Analysis
10063	7351	14.64	10	37.22	2.54		June 23, 1962
10063	3757	4.36	10				
7351	3757	10.37	10				
10063	7351	14.73*	10*	37.22	2.53		
			20			2.54	
10063	7351	14.88	10	37.22	2.50		July 7
10063	3757	4.49	10				
7351	3757	10.37	10				
10063	7351	14.86*	10*	37.22	2.50		
			20			2.50	
10063	7351	14.71	10	37.22	2.53		July 10
10063	2427	5.13	10				
7351	2427	8.78	10				
10063	7351	13.91*	10*	37.22	2.67		
			20			2.60	
10063	7351	14.84	10	37.22	2.51		July 20
10063	2427	4.95	10				
7351	2427	9.55	10				
10063	7351	14.50*	10*	37.22	2.57		
			20			2.54	
10063	7351	14.66	10	37.22	2.54		August 11
10063	2427	4.85	10				
7351	2427	9.62	10				
10063	7351	14.47*	10*	37.22	2.57		
			20			2.55	

* See Text

TABLE 2: RECORDER SCALE FACTORS

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8
Standard Tank No.	Compared Tank No.	Observed Scale Diff.	No. of Comparisons	Index Diff.	Recorder Single Set	Scale Factor Wgted. Avg.	Date of Analysis
10063	7351	15.00	10	37.22	2.48		August 11, 1962
10063	2426	1.13	10				
7351	2426	13.68	10				
10063	7351	14.81*	10*	37.22	2.51		
			20			2.49	
10063	7351	14.93	10	37.22	2.49		August 21
10063	3756	- 0.20	10				
7351	3756	15.14	10				
10063	7351	14.91*	10*	37.22	2.50		
			20			2.49	
10063	7351	14.90	10	37.22	2.50		September 7
10063	3756	0.15	10				
7351	3756	14.71	10				
10063	7351	14.86*	10*	37.22	2.50		
			20			2.50	
10063	7351	14.95	10	37.22	2.49		October 4
10063	7351	14.72	10	37.22	2.53		9
10063	7351	14.62	10	37.22	2.55		17
10063	7351	14.53	10	37.22	2.56		19
10063	7351	14.99	10	37.22	2.48		November 13
10063	7351	14.98	10	37.22	2.49		28
10063	7351	15.02	10	37.22	2.48		December 7

* See Text

TABLE 2: RECORDER SCALE FACTORS

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8
Standard Tank No.	Compared Tank No.	Observed Scale Diff.	No. of Comparisons	Index Diff.	Recorder Single Set	Scale Factor Wgted. Avg.	Date of Analysis
10063	7351	15.04	10	37.22	2.47		January 12, 1963
10063	10072	- 1.90	10				
7351	10072	17.06	10				
10063	7351	15.36*	10*	37.22	2.46		
			20			2.46	
10063	7351	15.37	10	37.22	2.42		February 1
10063	4278	- 1.61	6				
7351	4278	16.78	6				
10063	7351	15.17*	6*	37.22	2.45		
			16			2.43	
10063	7351	14.51	10	37.22	2.56		March 16
10063	4286	- 1.48	10				
7351	4286	16.41	9				
10063	7351	14.93*	9*	37.22	2.49		
			19			2.53	
10063	7351	15.00	10	37.22	2.48		April 1
10063	4286	- 1.54	10				
7351	4286	16.46	10				
10063	7351	14.92*	10*	37.22	2.49		
			20			2.49	
10063	7351	15.04	10	37.22	2.47		April 20
10063	7362	- 2.14	10				
7351	7362	17.24	10				
10063	7351	15.10*	10*	37.22	2.46		
			20			2.47	

* See Text

TABLE 2: RECORDER SCALE FACTORS

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8
Standard Tank No.	Compared Tank No.	Observed Scale Diff.	No. of Comparisons	Index Diff.	Recorder Single Set	Scale Factor Wgted. Avg.	Date of Analysis
10063	7351	14.97	10	37.22	2.48		May 6, 1963
10063	7362	- 2.11	10				
7351	7362	17.00	10				
10063	7351	14.89*	10*	37.22	2.50		
			20			2.49	
10063	7351	15.03	10	37.22	2.48		May 18
10063	7362	- 2.09	10				
7351	7362	17.32	10				
10063	7351	15.23*	10*	37.22	2.44		
			20			2.46	
10063	4283	13.78	10	32.58	2.36		May 19
10063	4284	4.75	10				
4283	4284	8.99	10				
10063	4283	13.74*	10*	32.58	2.37		
			20			2.37	
10063	4283	13.92	10	32.58	2.34		June 18
10063	4284	4.90	10				
4283	4284	9.13	10				
10063	4283	14.03*	10*	32.58	2.32		
			20			2.33	
10063	4283	14.10	10	32.84	2.33		June 19
10063	4284	5.01	10				
4283	4284	9.06	10				
10063	4283	14.07*	10*	32.84	2.33		
			20			2.33	

* See Text

TABLE 2: RECORDER SCALE FACTORS

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8
Standard Tank No.	Compared Tank No.	Observed Scale Diff.	No. of Compar-isons	Index Diff.	Recorder Single Set	Scale Factor Wgted. Avg.	Date of Analysis
10063	7351	15.29	10	37.22	2.43		July 5, 1963
10063	4272	- 0.81	8				
7351	4272	16.07	10				
10063	7351	15.26*	10*	37.22	2.44		
			20			2.44	
10063	7351	15.29	10	37.22	2.43		July 6
10063	3757	- 0.84	10				
7351	3757	16.11	10				
10063	7351	15.27*	10*	37.22	2.44		
			20			2.43	
10063	7351	15.36	9	37.22	2.42		July 29
10063	18204	- 1.70	10				
7351	18204	17.08	10				
10063	7351	15.33*	10*	37.22	2.43		
			19			2.43	
10063	7351	15.41	9	37.22	2.42		August 10
10063	18204	- 1.73	10				
7351	18204	17.20	9				
10063	7351	15.47*	10*	37.22	2.41		
			19			2.41	
10063	7351	15.48	10	37.22	2.40		August 21
10063	18204	- 1.70	9				
7351	18204	17.27	10				
10063	7351	15.57*	9*	37.22	2.39		
			19			2.40	

* See Text

TABLE 3: SUMMARY OF RECORDER SCALE FACTORS

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col:	1	2	3	4	5	6	7	8
	Standard Tank No.	Compared Tank No.	Observed Scale Diff.	No. of Compar-isons	Recorder Scale Factor: Single Set	Recorder Scale Factor: Bar. Press. (inches)	Adjusted Recorder Scale Factor	Date of Analysis
Period 1	148	10072	15.69	30	2.56	29.89	2.57	July 10, 1961
			15.72	39	2.56	29.88	2.57	12
			15.91	45	2.52	30.12	2.51	13
			15.74	6	2.55	30.23	2.53	14
					Weighted Average R. S. F. (Adjusted) for Period 1 = 2.55			
Period 2	10070	10064	15.35	20	4.27	29.77	4.30	July 15
			15.64	44	4.19	29.77	4.22	16
			15.54	27	4.21	29.72	4.25	17
			15.60	4	4.20	29.70	4.24	19
			15.56	9	4.21	29.58	4.27	20
			15.63	8	4.19	29.62	4.24	21
			15.67	14	4.18	29.96	4.19	23
			15.43	2	4.23	29.94	4.24	24
			15.68	2	4.18	30.20	4.15	26
			15.71	11	4.17	30.16	4.15	27
					Weighted Average R. S. F. (Adjusted) for Period 2 = 4.23			
Period 3	10070	10065	15.35	2	4.40	30.02	4.40	July 28
			15.35	3	4.40	29.94	4.41	29
			15.28	2	4.29	29.63	4.34	30
			15.57	27	4.21	29.33	4.31	31
					Weighted Average R. S. F. (Adjusted) for Period 3 = 4.33			

TABLE 3: SUMMARY OF RECORDER SCALE FACTORS

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col:	1	2	3	4	5	6	7	8
	Standard Tank No.	Compared Tank No.	Observed Scale Diff.	No. of Compar-isons	Recorder Scale Factor		Adjusted Recorder Scale Factor	Date of Analysis
					Single Set	Bar. Press. (inches)		
Period 4	10069	10065	6.11	34	2.48	29.73	2.50	August 2, 1961
			6.12	21	2.47	29.75	2.49	3
			6.20	2	2.44	29.84	2.45	4
			5.75	13	2.63	29.96	2.63	5
		10077	12.36	4	2.65	30.10	2.64	6
			11.87	10	2.76	30.07	2.75	7
					Weighted Average R. S. F. (Adjusted) for Period 4 = 2.55			
Period 5	10069	10077	9.75	2	3.36	30.07	3.35	August 7
			9.70	1	3.38	30.06	3.37	8
			9.53	6	3.44	29.91	3.45	9
			9.56	5	3.43	29.33	3.45	11
			9.70	3	3.38	29.90	3.39	13
			9.87	21	3.32	29.97	3.32	14
			9.80	17	3.34	29.73	3.37	15
			9.75	12	3.36	29.75	3.39	16
			9.80	1	3.34	29.90	3.35	17
					Weighted Average R. S. F. (Adjusted) for Period 5 = 3.37			
Period 6	10069	6074	5.84	11	2.26	29.90	2.29	August 17
			6.23	6	2.14	29.86	2.15	18
			6.13	7	2.17	29.69	2.19	19
					Weighted Average R. S. F. (Adjusted) for Period 6 = 2.23			

TABLE 3: SUMMARY OF RECORDER SCALE FACTORS

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col:	1	2	3	4	5	6	7	8
	Standard Tank No.	Compared Tank No.	Observed Scale Diff.	No. of Comparisons	Recorder Scale Factor: Single Set	Recorder Scale Factor: Bar. Press. (inches)	Adjusted Recorder Scale Factor	Date of Analysis
Period 7	10069	6074	5.00	5	2.66	29.74	2.69	August 22, 1961
			4.90	7	2.72	29.90	2.73	23
			4.91	7	2.71	30.02	2.71	24
			5.24	8	2.54	29.80	2.56	27
			5.05	10	2.64	29.89	2.65	28
			5.20	41	2.56	29.82	2.57	29
			5.05	2	2.64	29.72	2.66	30
			5.05	1	2.64	29.72	2.66	31
			5.04	9	2.64	29.80	2.66	September 1
			5.00	2	2.66	29.80	2.68	2
			5.14	28	2.59	29.47	2.64	5
			5.00	32	2.66	29.44	2.71	6
			5.00	7	2.66	29.44	2.71	7
			5.01	8	2.66	29.50	2.70	9
			5.00	7	2.66	29.84	2.67	13
			5.21	7	2.55	29.76	2.57	16
			5.00	4	2.66	29.89	2.67	18

Weighted Average P. S. F. (Adjusted) for Period 7 = 2.65

TABLE 3: SUMMARY OF RECORDER SCALE FACTORS

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col:	1	2	3	4	5	6	7	8
	Standard Tank No.	Compared Tank No.	Observed Scale Diff.	No. of Comparisons	Recorder Scale Factor: Single Set	Recorder Scale Factor: Bar. Press. (inches)	Adjusted Recorder Scale Factor	Date of Analysis
Period 8	6074	3755	3.81	5	1.45	29.89	1.45	September 22, 1961
			3.95	1	1.40	29.43	1.43	23
			3.60	2	1.53	29.60	1.55	24
			4.00	5	1.38	30.00	1.38	25
			4.15	1	1.33	30.05	1.33	26
			3.98	5	1.39	29.80	1.40	27
			3.85	1	1.43	29.80	1.44	28
			3.80	4	1.42	30.04	1.42	29
			3.89	7	1.42	30.14	1.41	October 1
			3.79	11	1.46	29.76	1.47	2
			3.79	13	1.46	29.61	1.48	3
			3.82	8	1.44	29.79	1.45	4
			4.00	3	1.38	30.19	1.37	8
			4.00	2	1.38	30.33	1.36	9
			3.84	4	1.44	30.16	1.43	10
			3.86	8	1.43	30.08	1.43	11
			4.00	1	1.38	30.07	1.38	12
			4.17	2	1.32	29.94	1.32	13
			3.90	2	1.41	29.90	1.41	14
			3.90	1	1.41	29.91	1.41	15
			3.90	2	1.41	29.61	1.43	16
			3.90	2	1.41	29.65	1.43	17
			3.90	1	1.41	30.00	1.41	18
			3.90	2	1.41	29.55	1.43	19
			3.85	3	1.43	29.57	1.45	20
			3.90	2	1.41	29.32	1.44	21
			3.86	2	1.43	29.36	1.46	22

TABLE 3: SUMMARY OF RECORDER SCALE FACTORS

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col:	1	2	3	4	5	6	7	8
	Standard Tank No.	Compared Tank No.	Observed Scale Diff.	No. of Comparisons	Recorder Scale Factor: Single Set	Recorder Scale Factor: Bar. Press. (inches)	Adjusted Recorder Scale Factor	Date of Analysis
Period 8	6074	3755	3.84	7	1.44	29.67	1.46	October 24, 1961
			3.85	1	1.43	29.54	1.45	25
			4.00	2	1.38	29.65	1.40	26
			3.93	2	1.40	29.76	1.41	27
			3.90	2	1.41	29.75	1.42	28
			3.93	2	1.40	29.85	1.41	29
			4.00	2	1.38	30.18	1.37	30
			3.93	2	1.40	29.96	1.40	31
			3.95	1	1.40	29.83	1.41	November 1
			3.97	2	1.39	29.91	1.39	2
			3.90	2	1.41	29.85	1.42	3
			3.97	2	1.39	29.82	1.40	4
			3.93	2	1.40	30.05	1.40	5
			3.90	2	1.41	30.20	1.40	6
					Weighted Average R. S. F. (Adjusted) for Period 8 = 1.43			
Period 9	6074	3756	1.10	3	1.57	29.96	1.57	November 8
			1.10	3	1.57	29.66	1.59	9
			1.10	2	1.57	29.44	1.60	10
			1.10	1	1.57	29.43	1.60	11
			1.10	3	1.57	29.34	1.60	13
					Weighted Average R. S. F. (Adjusted) for Period 9 = 1.59			

TABLE 3: SUMMARY OF RECORDER SCALE FACTORS

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col:	1	2	3	4	5	6	7	8
	Standard Tank No.	Compared Tank No.	Observed Scale Diff.	No. of Compar-isons	Recorder Scale Factor: Single Set	Recorder Scale Factor: Bar. Press. (inches)	Adjusted Recorder Scale Factor	Date of Analysis
Period 10	6074	3756	1.32	16	1.31	29.45	1.33	November 14, 1961
			1.35	20	1.28	30.11	1.27	25
					Weighted Average R. S. F. (Adjusted) for Period 10 = 1.29			
Period 11	6074	3756	1.17	5	1.48	29.93	1.48	November 27
			1.17	7	1.48	29.60	1.50	28
			1.18	2	1.47	29.78	1.48	29
			1.20	4	1.44	29.62	1.46	December 1
			1.14	5	1.52	29.68	1.54	2
			1.22	10	1.42	29.82	1.43	4
			1.20	2	1.44	30.01	1.44	5
			1.20	4	1.44	30.43	1.42	7
			1.25	4	1.38	30.46	1.36	8
			1.20	3	1.44	30.00	1.44	9
			1.20	1	1.44	29.81	1.45	10
			1.15	3	1.50	29.87	1.51	12
			1.15	2	1.50	30.23	1.49	13
			1.15	1	1.50	30.44	1.48	16
					Weighted Average R. S. F. (Adjusted) for Period 11 = 1.46			

TABLE 4: SUMMARY OF RECORDER SCALE FACTORS - MUTUAL COMPARISON METHOD

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col:	1	2	3	4	5	6	7
	Standard Tank No.	Compared Tank No.	No. of Comparisons	Scale Factor Weighted Average	Barometric Pressure (inches)	Adjusted Recorder Scale Factor	Date of Analysis
Period 12	10063	3756	18	1.62	30.29	1.55	January 6, 1962
			17	1.61	30.51	1.58	7
						Weighted Average = 1.56	
Period 13	10063	10071	34	2.44	30.59	2.39	January 17
		10073	10	2.49	30.13	2.48	March 24
		10071	15	2.49	29.90	2.50	26
		10068	16	2.53	29.70	2.55	28
		10068	20	2.51	30.25	2.49	April 29
		6078	19	2.53	30.25	2.51	29
		6078	19	2.51	29.84	2.52	May 19
		6078	20	2.51	29.94	2.51	26
		10068	19	2.47	30.18	2.45	28
		3757	20	2.57	29.61	2.60	June 5
		3757	20	2.54	30.00	2.54	23
		3757	20	2.50	29.87	2.51	July 7
		2427	20	2.60	29.74	2.62	10
		2427	20	2.50	29.89	2.51	20
		2427	20	2.55	29.96	2.55	August 11
		2426	20	2.49	29.98	2.49	11
		3756	20	2.49	30.01	2.49	21
		3756	20	2.50	30.01	2.50	Sept. 7
		7351	10	2.49	29.98	2.49	October 4
		7351	10	2.53	30.01	2.53	9
		7351	10	2.55	29.97	2.55	17
		7351	10	2.56	29.96	2.56	19
						Weighted Average = 2.51	

TABLE 4: SUMMARY OF RECORDER SCALE FACTORS - MUTUAL COMPARISON METHOD

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col:	1	2	3	4	5	6	7
	Standard Tank No.	Compared Tank No.	No. of Compar-isons	Scale Factor Weighted Average	Barometric Pressure (inches)	Adjusted Recorder Scale Factor	Date of Analysis
Period 14	10063	7351	10	2.48	30.01	2.48	November 13, 1962
		7351	10	2.49	29.99	2.49	28
		7351	10	2.46	30.05	2.46	December 7
						Weighted Average = 2.48	
Period 15	10063	10072	20	2.46	30.04	2.46	January 12, 1963
		4278	16	2.43	30.06	2.42	February 1
		4286	19	2.53	29.77	2.55	March 16
		4286	20	2.49	30.33	2.46	April 1
		7362	20	2.47	30.34	2.44	20
		7362	20	2.49	29.51	2.53	May 6
		7362	20	2.46	29.99	2.46	18
		4284	20	2.37	29.99	2.37	19
		4284	20	2.33	30.06	2.32	June 18
		4284	20	2.33	29.93	2.33	29
		4272	20	2.44	29.96	2.44	July 5
		3757	20	2.43	30.00	2.43	6
		18204	20	2.43	30.03	2.43	29
		13204	19	2.41	30.10	2.40	August 10
		18204	19	2.40	29.97	2.40	21
						Weighted Average = 2.43	

Note: For the period November 1-December 31, 1962, a sliding scale factor is used to compute daily air index values at Barrow, Alaska. The sliding recorder scale factors are tabulated in Table 5.

TABLE 5: SUMMARY OF RECORDER SCALE FACTORS - SLIDING RECORDER SCALE FACTORS
BARROW, ALASKA CARBON DIOXIDE PROJECT

Date	Recorder Scale Factor
December 1, 1962	2.47
2	2.46
3	2.46
4	2.46
5	2.46
6	2.45
7	2.46
8	2.46
9	2.46
10	2.46
11	2.45
12	2.45
13	2.45
14	2.45
15	2.45
16	2.45
17	2.45
18	2.44
19	2.44
20	2.44
21	2.44
22	2.44
23	2.44
24	2.44
25	2.43
26	2.43
27	2.43
28	2.43
29	2.43
30	2.43
31	2.43

TABLE 5: SUMMARY OF RECORDER SCALE FACTORS - SLIDING RECORDER SCALE FACTORS
BARROW, ALASKA CARBON DIOXIDE PROJECT

Date	Recorder Scale Factor
November 1, 1962	2.51
2	2.51
3	2.50
4	2.50
5	2.50
6	2.50
7	2.50
8	2.50
9	2.49
10	2.49
11	2.49
12	2.49
13	2.49
14	2.49
15	2.49
16	2.49
17	2.48
18	2.48
19	2.48
20	2.48
21	2.48
22	2.48
23	2.48
24	2.48
25	2.47
26	2.47
27	2.47
28	2.47
29	2.47
30	2.47

TABLE 6: INDEX VALUES OF WORKING REFERENCE GASES

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8	9
		Single Set		Weighted Average		Compared Tank		
Standard Tank No.	Compared Tank No.	Number of Comparisons	Index	Number of Comparisons	Index	No.	Pressure (PSI)	Date of Analysis
10063	3755	5	304.82	5	304.82	3755	1875	September 26, 1961
10063	3756	16	297.12				1600	November 27
10063	3756	9	297.32				440	January 6, 1962
10063	3756	9	297.44	34	297.25	3756	410	7
10063	10071	17	319.08				1750	17
10063	10071	10	319.25	27	319.14	10071	450	March 26
10063	10073	10	298.91	10	298.91	10073	420	24
10063	10068	10	309.05				2000	28
10063	10068	10	309.09				500	April 29
10063	10068	9	309.35	29	309.16	10068	470	May 28
10063	6078	9	303.33				2000	April 29
10063	6078	10	303.56				1120	May 19
10063	6078	10	303.24	29	303.38	6078	740	May 26
10063	3757	10	299.26				2000	June 5
10063	3757	10	299.37				1110	23
10063	3757	10	299.22	30	299.28	3757	470	July 7
10063	2427	10	297.10				1950	10
10063	2427	10	298.00				1500	20
10063	2427	10	298.07	30	297.72	2427	610	August 11
10063	2426	10	307.63				2100	11
7351	2426	10	307.41	20	307.52	2426	400	October 4
10063	3756	10	309.94				1900	August 21
10063	3756	10	310.06	20	310.00	3756	1070	September 7
7351	2400	10	311.37	10	311.37	2400	860	October 9
7351	10071	10	301.84				2180	October 19

TABLE 6: INDEX VALUES OF WORKING REFERENCE GASES

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8	9
		Single Set		Weighted Average		Compared Tank		
Standard Tank No.	Compared Tank No.	Number of Comparisons	Index	Number of Comparisons	Index	No.	Pressure (PSI)	Date of Analysis
7351	10071	10	301.29				1095	November 13, 1962
7351	10071	10	301.28	30	301.47	10071	500	28
7351	10072	10	314.35				2160	December 7
10063	10072	10	315.11	10	315.38	10072	500	January 12, 1963
10063	4278	10	314.35	10	314.35	4278	1340	February 1
10063	4286	10	314.18				1170	March 16
10063	4286	10	314.28	20	314.23	4286	460	April 1
10063	7362	10	315.73				1800	20
10063	7362	10	315.69				1100	May 6
10063	7362	10	315.58	30	315.67	7362	540	18
10063	4284	10	321.70				2130	19
10063	4284	10	321.86				970	June 18
10063	4284	10	322.11	30	321.89	4284	510	29
10063	4272	10	312.42	10	312.42	4272	1980	July 5
10063	3757	10	312.48	10	312.48	3757	1920	6
10063	18204	10	314.54				1680	29
10063	18204	10	314.61				1080	August 10
10063	18204	9	314.52	29	314.56	18204	550	21

TABLE 7: COMBINED SCRIPPS AND BARROW INDEX VALUES OF WORKING REFERENCE GASES

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8	9	10
Tank No.	At Scripps Prior To Use		At Scripps After Use		Pressure	Weighted Average		Tank No.	Date Use Began
	No. of Compar.	Index	No. of Compar.	Index		No. of Compar.	Index		
I_o Tank 148 in use:									
10072	55	299.35	10	299.30	40	65	299.34	10072	July 10, 1961
10064	12	298.68	10	298.03	100	22	298.38	10064	15
10065	10	297.24	10	297.06	250	20	297.15	10065	28
10077	51	279.35	20	280.02	---	71	279.53	10077	August 6
6074	10	299.04	10	298.94	600	20	298.99	6074	17
148	13	339.32	10	339.79	148	23	339.52	148	July 10
10070	11	364.75	--	------	---	11	364.74	10070	15
10069	52	312.27	55	312.33	390	107	312.30	10069	August 1

TABLE 7: COMBINED SCRIPPS AND BARROW INDEX VALUES OF WORKING REFERENCE GASES

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8	9	10	11	12
Tank No.	At Scripps Prior To Use		At Barrow		At Scripps After Use		Pressure	Weighted Average		Tank No.	Date Use Began
	No. of Compar.	Index	No. of Compar.	Index	No. of Compar.	Index		No. of Compar.	Index		
I_o Tank 10063 in use:											
3755	12	304.38	5	304.82	10	306.13*	130	17	304.51	3755	September 21, 1961
3756	13	297.15	34	297.25	10	297.43	390	57	297.26	3756	November 8
I_{LS} Tank 7351 in use:											
10071	10	319.12	27	319.14	10	319.29	400	47	319.17	10071	January 10
10073	30	298.77	10	299.91	10	298.73	400	50	298.99	10073	February 16
10068	21	308.80	29	309.16	12	309.05	450	62	309.02	10068	March 27
6078	20	302.73	29	303.38	10	302.96	420	59	303.09	6078	April 30
3757	21	298.38	30	299.28	10	299.33	340	61	298.98	3757	June 1
2427	26	297.36	30	297.72	10	297.92	280	66	297.61	2427	July 9
2426	20	307.51	20	307.52	10	307.68	280	50	307.55	2426	August 15
3756	10	310.32	20	310.00	9	310.07	320	39	310.10	3756	17
2400	113	310.94	10	311.37	64	311.02	510	187	310.99	2400	October 5
10071	21	301.68	30	301.47	--	------	---	51	301.56	10071	18

* Not used in computation of weighted average

TABLE 7: COMBINED SCRIPPS AND BARROW INDEX VALUES OF WORKING REFERENCE GASES

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8	9	10	11	12	13
Tank No.	At Scripps Prior to Use		At Barrow		At Scripps After Use		Pressure PSI	Weighted Average		Tank No.	Date Use Began	Scripps Report No.
	No. of Compar.	Index	No. of Compar.	Index	No. of Compar.	Index		No. of Compar.	Index			
I_o Tank 10063 in use:												
10072	20	314.75	10	315.11	11	314.80	400	41	314.85	10072	Dec. 6, 1962	5,6
4278	20	314.24	10	314.35	6	314.24	400	36	314.27	4278	Jan. 13,1963	5,6
*4286	20	314.74	20	314.23	--	------	---	40	314.48	4286	Feb. 28	5,-
*7362	19	315.39	30	315.67	--	------	---	49	315.56	7362	April 2	5,-
4284	20	321.72	30	321.89	11	322.33	220	61	321.91	4284	May 19	5,7
3757	21	312.25	10	312.48	10	312.21	490	41	312.30	3757	July 1	5,7
4272	24	312.26	10	312.42	10	312.18	900	44	312.28	4272	July 6	6,7
18204	21	314.39	29	314.56	10	314.50	330	60	314.49	18204	July 24	6,7

* Tank returned to S.I.O. empty

TABLE 8: COMPARISON OF SCRIPPS AND BARROW INDEX VALUES OF WORKING REFERENCE GASES
BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7
Tank No.	At Scripps Prior and After Use Combined		At Barrow		Index Difference	Date Use Began
	No. of Compar.	Index	No. of Compar.	Index	BRW - SIO	
3755	22	304.38	5	304.82	0.44	September 21, 1961
3756	23	297.27	34	297.25	-0.02	November 8
10071	20	319.20	27	319.14	0.06	January 10, 1962
10073	40	298.76	10	298.91	0.15	February 16
10068	33	308.89	29	309.16	0.27	March 27
6078	30	302.81	29	303.38	0.57	April 30
3757	31	298.69	30	299.28	0.59	June 1
2427	36	297.51	30	297.72	0.21	July 9
2426	30	307.57	20	307.52	-0.05	August 15
3756	19	310.20	20	310.00	-0.20	17
2400	177	310.97	10	311.37	0.40	October 5
10071	21	301.68	30	301.47	-0.21	18
10072	31	314.77	10	315.38	0.61	December 6
4278	26	314.24	10	314.35	0.11	January 13, 1963
4286	20	314.74	20	314.23	-0.51	February 28
7362	19	315.39	30	315.67	0.28	April 2
4284	31	321.94	30	321.89	-0.05	May 19
3757	31	312.24	10	312.48	0.24	July 1
4272	34	312.24	10	312.42	0.18	6
18204	31	314.42	10	314.56	0.14	24

TABLE 9: SCRIPPS INDEX VALUES OF PRINCIPAL REFERENCE GASES

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8	9	10	11	12	13
		At Scripps Prior To Use				At Scripps After Use				Weighted Average		
Tank Rank	Tank No.	No. of Compar.	Index	Date of Last Run	Report No.	No. of Compar.	Index	Date of Last Run	Report No.	No. of Compar.	Index	Date
		1961 Thru 1963										
I	10063	50	310.57	4/13/61	IV	52	310.31	3/13/64	VII	102	310.44	9/26/61 to 10/3I/63
I_{HS}	148	13	339.32	4/19/61	IV	10	339.79	9/14/61	IV	23	339.52	7/10/61 to 7/15/61
I_{HS}	10070	11	364.75	11/19/60	III	--	------	-------	IV	11	364.74	7/15/61 to 7/31/61
II	10069	52	312.27	4/19/61	IV	55	312.33	4/11/62	V	107	312.30	8/ 2/61 to 9/18/61
II	6074	10	299.04	4/13/60	IV	10	298.94	4/12/62	V	20	298.99	8/17/61 to 1/ 5/62
I_{HS}	4291	133	335.19	4/61	IV	31	335.28	10/16/62	V	164	335.21	1/ 6/62 to 6/ 1/63
I_{LS}	7351	124	273.35	4/61	IV	52	272.92	3/19/64	VII	176	273.22	6/ 1/62 to 5/18/63
I_{HS}	4283	115	343.07	1/62	VI	50	342.92	3/17/64	VII	165	343.02	5/19/63 to 7/ 1/63

TABLE 10: INDICES OF AIR WITH CONTINUOUS ANALYZER

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8	9	10	11
Day of Month	Observed Scale Difference	Number of Comparisons	Barometric Pressure (inches)	Adjusted Scale Difference	Recorder Scale Factor	Computed Index Difference	Reference Tank No.	Reference Tank Index	Air Index	Manometric Conc. (ppm)
1961										
July 10	-10.29	29	29.90	-10.32	2.55	-26.32	148	339.52	313.20	313.57
11	- 9.86	32	29.72	- 9.95		-25.37			314.15	314.73
12	-10.87	38	29.85	-10.92		-27.85			312.67	312.92
13	-10.26	43	30.17	-10.20		-26.01			313.51	313.95
14	-10.24	7	30.11	-10.20		-26.01			313.51	313.95
15	-12.57	20	29.73	-12.68	4.23	-53.64	10070	364.74	311.10	311.01
16	-12.52	44	29.79	-12.61		-53.34			311.40	311.38
17	-12.46	29	29.72	-12.57		-53.17			311.57	
17	2.67	14	29.72	2.69		11.38	10064	298.38	309.76	
				July 17 Average					310.66	310.47
19	3.15	42	29.70	3.18		13.45			311.83	311.90
20	3.08	37	29.58	3.12		13.20			311.58	
20	-12.45	8	29.58	-12.62		-53.38	10070	364.74	311.36	
				July 20 Average					311.47	311.46
21	-12.49	6	29.65	-12.63		-53.42			311.32	
21	3.20	42	29.65	3.23		13.66	10064	298.38	312.04	
				July 21 Average					311.68	311.72
22	3.24	46	29.88	3.25		13.75			312.13	312.27
23	2.36	4	29.99	2.36		9.98			308.36	
23	-13.13	13	29.99	-13.13		-55.54	10070	364.74	309.20	
				July 23 Average					308.78	308.18
24	-13.15	2	29.94	-13.18	4.23	-55.75	10070	364.74	308.99	
24	2.67	43	29.94	2.67		11.29	10064	298.38	309.67	
				July 24 Average					309.33	308.85
25	2.67	47	29.97	2.67		11.29			309.67	309.27
26	2.57	31	30.24	2.55		10.79			309.17	
26	-13.00	3	30.24	-12.90		-54.57	10070	364.74	310.17	
				July 26 Average					309.67	309.27

TABLE 10: INDICES OF AIR WITH CONTINUOUS ANALYZER

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8	9	10	11
Day of Month	Observed Scale Difference	Number of Comparisons	Barometric Pressure (inches)	Adjusted Scale Difference	Recorder Scale Factor	Computed Index Difference	Reference Tank No.	Reference Tank Index	Air Index	Manometric Conc. (ppm)
1961										
July 27	2.53	36	30.17	2.51		10.62	10064	298.38	309.00	
27	-12.96	10	30.17	-12.88		-54.48	10070	364.74	310.26	
				July 27 Average					309.63	309.22
28	2.78	31	30.02	2.78	4.33	12.04	10064	298.38	310.42	
28	2.46	13	30.02	2.46		10.65	10065	297.15	307.80	
				July 28 Average					309.11	308.59
29	2.39	45	29.93	2.39		10.35			307.50	306.62
30	2.22	46	29.66	2.24		9.70			306.85	305.83
31	3.09	17	29.29	3.16		13.68			310.83	
31	-13.26	26	29.29	-13.58		-58.80	10070	364.74	305.94	
				July 31 Average					308.38	307.70
Aug. 1	2.72	30	29.58	2.76	2.55	7.04	10065	297.15	304.19	302.59
2	5.00	9	29.74	5.04	2.55	12.85	10065	297.15	310.00	
2	- 1.05	33	29.74	- 1.06		- 2.70	10069	312.30	309.60	
				Aug. 2 Average					309.80	309.43
3	- 0.80	12	29.71	- 0.81		- 3.15			309.15	
3	5.05	23	29.71	5.10		13.00	10065	297.15	310.15	
				Aug. 3 Average					309.65	309.24
4	5.51	22	29.84	5.54		14.13			311.28	311.23
5	- 1.37	11	29.96	- 1.37		- 3.49	10069	312.30	308.81	
5	4.43	20	29.96	4.43		11.30	10065	297.15	308.45	
				Aug. 5 Average					308.63	308.00
6	- 1.46	4	30.08	- 1.45		- 3.70	10069	312.30	308.60	
6	11.06	10	30.08	11.03		28.13	10077	279.53	307.66	
				Aug. 6 Average					308.13	307.39

TABLE 10: INDICES OF AIR WITH CONTINUOUS ANALYZER

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8	9	10	11
Day of Month	Observed Scale Difference	Number of Comparisons	Barometric Pressure (inches)	Adjusted Scale Difference	Recorder Scale Factor	Computed Index Difference	Reference Tank No.	Reference Tank Index	Air Index	Manometric Conc. (ppm)
1961										
Aug. 7	11.17	25	30.08	11.14		28.41			307.94	
7	- 1.36	11	30.08	- 1.35	3.37	- 4.55	10069	312.30	307.75	
				Aug. 7 Average					307.84	307.04
8	8.47	47	30.06	8.45		28.48	10077	279.53	308.01	307.24
11	8.51	4	29.82	8.56		28.85			308.38	
11	- 1.17	5	29.82	- 1.18		- 3.98	10069	312.30	308.32	
				Aug. 11 Average					308.35	307.66
14	- 1.22	20	29.98	- 1.22	3.37	- 4.11	10069	312.30	308.19	
14	8.37	15	29.98	8.37		28.21	10077	279.53	307.74	
				Aug. 14 Average					307.96	307.18
15	- 1.71	16	29.76	- 1.72		- 5.80	10069	312.30	306.50	305.40
16	- 2.28	13	29.73	- 2.30		- 7.75			304.55	
16	8.29	31	29.73	8.36		28.17	10077	279.53	307.70	
				Aug. 16 Average					306.12	304.94
17	8.78	29	29.89	8.81		29.69			309.22	308.72
18	3.71	37	29.91	3.72	2.23	8.29	6074	298.99	307.28	
18	- 3.53	6	29.91	- 3.54		- 7.89	10069	312.30	304.41	
				Aug. 18 Average					305.84	304.60
19	- 2.82	7	29.65	- 2.85		- 6.35			305.95	
19	5.86	20	29.65	5.92		13.20	6074	298.99	312.19	
				Aug. 19 Average					309.07	308.54
21	- 2.11	14	29.63	- 2.13	2.65	- 5.64	10069	312.30	306.66	305.60
22	- 1.83	5	29.72	- 1.85		- 4.90			307.40	
22	3.11	43	29.72	3.14		8.32	6074	298.99	307.31	
				Aug. 22 Average					307.35	306.44

TABLE 10: INDICES OF AIR WITH CONTINUOUS ANALYZER

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8	9	10	11
Day of Month	Observed Scale Difference	Number of Comparisons	Barometric Pressure (inches)	Adjusted Scale Difference	Recorder Scale Factor	Computed Index Difference	Reference Tank No.	Reference Tank Index	Air Index	Manometric Conc. (ppm)
1961										
Aug. 23	3.39	41	29.90	3.40	2.65	9.01	6074	298.99	308.00	
23	-1.71	6	29.90	-1.71		- 4.53	10069	312.30	307.77	
				Aug. 23 Average					307.88	307.09
24	3.67	23	30.02	3.67		9.72	6074	298.99	308.71	
24	-1.68	6	30.02	-1.68		-1.45	10069	312.30	310.85	
				Aug. 24 Average					309.78	309.40
27	-1.71	7	29.81	-1.72		-4.56			307.74	306.92
28	-1.80	10	29.88	-1.81		-4.80			307.50	306.62
29	-1.84	40	29.84	-1.85		-4.90			307.40	306.50
30	3.35	46	29.71	3.38		8.96	6074	298.99	307.95	307.17
31	3.54	38	29.70	3.58		9.49			308.48	307.82
Sept. 1	3.57	4	29.82	3.59		9.51			308.50	
1	-1.60	9	29.82	-1.61		-4.27	10069	312.30	308.03	
				Sept. 1 Average					308.26	307.55
2	3.90	21	29.74	3.93		10.41	6074	298.99	309.40	308.94
5	4.59	44	29.45	4.67		12.37			311.36	311.33
6	6.28	32	29.45	6.39		16.93			315.92	316.88
7	3.72	18	29.45	3.79		10.04			309.03	
7	-1.39	8	29.45	-1.41		-3.74	10069	312.30	308.56	
				Sept. 7 Average					308.79	308.20
9	-1.45	8	30.08	-1.44	2.65	-3.82	10069	312.30	308.48	
9	3.56	37	30.08	3.55		9.41	6074	298.99	308.40	
				Sept. 9 Average					308.44	307.77
10	3.54	27	30.04	3.53		9.35			308.34	307.65
13	3.76	14	29.82	3.78		10.02			309.01	
13	-1.40	10	29.82	-1.41		-3.74	10069	312.30	308.56	
				Sept. 13 Average					308.78	308.18

TABLE 10: INDICES OF AIR WITH CONTINUOUS ANALYZER

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8	9	10	11
Day of Month	Observed Scale Difference	Number of Comparisons	Barometric Pressure (inches)	Adjusted Scale Difference	Recorder Scale Factor	Computed Index Difference	Reference Tank No.	Reference Tank Index	Air Index	Manometric Conc. (ppm)
1961										
Sept. 14	-1.53	30	29.78	-1.54		-4.08			308.22	307.50
15	-1.25	42	29.67	-1.26		-3.34			308.96	308.40
16	-1.25	44	29.75	-1.26		-3.34			308.96	308.40
17	-1.16	17	29.91	-1.16		-3.07			309.23	308.73
18	-1.52	18	29.73	-1.53		-4.05			308.25	307.54
21	4.20	15	29.78	4.23	1.43	6.05	3755	304.51	310.56	310.35
22	4.63	39	29.83	4.65		6.65			310.56	310.35
23	4.97	38	29.44	5.06		7.23			311.74	311.79
24	4.30	48	29.66	4.35		6.22			310.73	310.56
25	3.80	48	29.98	3.80		5.43			309.94	309.60
26	5.67	42	30.07	5.65		8.08			312.59	312.83
27	7.31	47	29.88	7.34		10.50			315.01	315.78
28	5.60	47	29.81	5.63		8.05			312.56	312.79
29	5.22	46	29.98	5.22		7.46			311.97	312.07
30	4.15	23	30.19	4.12	1.43	5.89	3755	304.51	310.40	310.16
Oct. 1	4.17	18	30.15	4.15		5.93			310.44	310.21
2	4.25	47	29.90	4.26		6.09			310.60	310.40
3	4.24	48	29.64	4.29		6.13			310.64	310.45
4	4.52	47	29.76	4.56		6.52			311.03	310.93
8	5.30	47	30.18	5.27		7.54			312.05	312.17
9	5.61	48	30.31	5.55		7.94			312.45	312.66
10	5.78	46	30.18	5.74		8.21			312.72	312.98
11	5.51	46	30.09	5.49		7.85			312.36	312.55
12	4.87	46	30.06	4.86		6.95			311.46	311.45
13	5.46	28	29.95	5.46		7.81			312.32	312.50
14	7.20	24	29.89	7.22		10.32			314.83	315.56

TABLE 10: INDICES OF AIR WITH CONTINUOUS ANALYZER

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8	9	10	11
Day of Month	Observed Scale Difference	Number of Comparisons	Barometric Pressure (inches)	Adjusted Scale Difference	Recorder Scale Factor	Computed Index Difference	Reference Tank No.	Reference Tank Index	Air Index	Manometric Conc. (ppm)
1961										
Oct. 15	6.28	17	29.80	6.32	1.43	9.04	3755	304.51	313.55	314.00
16	7.30	45	29.62	7.39		10.57			315.08	315.86
17	6.28	39	29.66	6.35		9.08			313.59	314.04
18	7.29	43	29.94	7.30		10.44			314.95	315.70
19	8.06	48	29.55	8.18		11.70			316.21	317.24
20	7.36	44	29.55	7.47		10.68			315.19	315.99
21	9.15	47	29.35	9.35		13.37			317.88	319.27
22	9.91	45	29.36	10.12		14.47			318.98	320.61
23	9.16	23	29.56	9.29		13.28			317.79	319.16
24	9.80	40	29.65	9.91		14.17			318.68	320.25
25	9.10	36	29.55	9.24		13.21			317.72	319.08
26	7.06	47	29.66	7.14		10.21			314.72	315.42
27	7.37	46	29.78	7.42		10.61			315.12	315.91
28	8.06	44	29.73	8.13		11.62			316.13	317.14
29	7.76	44	29.88	7.79		11.14			315.65	316.56
30	8.24	47	30.14	8.20		11.73			316.24	317.27
31	8.23	47	29.96	8.24		11.78			316.29	317.33
Nov. 1	8.09	45	29.85	8.13		11.62			316.13	317.14
2	8.41	48	29.90	8.43		12.05			316.56	317.66
3	9.15	47	29.85	9.19		13.14			317.65	318.99
4	8.08	38	29.82	8.13		11.62			316.13	317.14
5	6.62	19	30.02	6.61		9.45			313.96	314.50
6	6.81	44	30.22	6.75		9.65			314.16	314.74
7	7.08	42	30.05	7.06		10.09			314.60	315.28
8	7.04	21	29.94	7.05	1.59	11.21	3756	297.26	308.47	
8	10.81	11	29.94	10.83		17.22			314.48	
				Nov. 8 Average					311.47	311.46

TABLE 10: INDICES OF AIR WITH CONTINUOUS ANALYZER

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col. 1	2	3	4	5	6	7	8	9	10	11
Day of Month	Observed Scale Difference	Number of Comparisons	Barometric Pressure (inches)	Adjusted Scale Difference	Recorder Scale Factor	Computed Index Difference	Reference Tank No.	Reference Tank Index	Air Index	Manometric Conc. (ppm)
1961										
Nov. 9	10.89	48	29.64	11.02	1.59	17.52	3756	297.26	314.78	315.49
10	11.54	46	29.44	11.76		18.70			315.96	316.93
11	11.39	43	29.42	11.61		18.46			315.72	316.64
12	11.50	21	29.36	11.74		18.67			315.93	316.90
13	11.10	42	29.37	11.33		18.01			315.27	316.09
14	11.21	20	29.49	11.40	1.29	14.71			311.97	
14	12.94	13	29.49	13.16		16.98			314.24	
				Nov. 14 Average					313.10	313.45
25	14.33	29	30.11	14.07		18.15			315.41	316.26
27	12.91	35	29.89	12.95	1.46	18.91			316.17	317.19
28	12.72	38	29.62	12.87		18.79			316.05	317.04
29	13.10	46	29.77	13.19		19.26			316.52	317.62
Dec. 1	12.42	25	29.60	12.58		18.37			315.63	316.53
2	12.52	42	29.68	12.64		18.45			315.71	316.63
3	12.61	42	29.75	12.71		18.56			315.82	316.76
4	12.60	44	29.83	12.66		18.48			315.74	316.66
5	13.11	36	30.02	13.10		19.13			316.39	317.46
6	13.17	17	30.22	13.06		19.07			316.33	317.38
7	13.34	42	30.40	13.15		19.20			316.46	317.54
8	13.10	29	30.51	12.88		18.80			316.06	317.05
9	12.71	21	30.05	12.68		18.51			315.77	316.70
10	12.68	19	29.81	12.76		18.63			315.89	316.85
12	12.95	43	29.84	13.01		18.99			316.25	317.29
13	13.29	14	30.20	13.20		19.27			316.53	317.63
14	13.56	23	30.33	13.41		19.58			316.84	318.01
16	13.28	8	30.47	13.07		19.08			316.34	317.40

TABLE 10: INDICES OF AIR WITH CONTINUOUS ANALYZER

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col. 1	2	3	4	5	6	7	8	9	10	11
Day of Month	Observed Scale Difference	Number of Comparisons	Barometric Pressure (inches)	Adjusted Scale Difference	Recorder Scale Factor	Computed Index Difference	Reference Tank No.	Reference Tank Index	Air Index	Manometric Conc. (ppm)
1962										
Jan. 3	12.72	14	29.75	12.82	1.56	20.00	3756	297.26	317.26	318.52
4	13.52	48	29.93	13.55		21.14			318.40	319.91
5	14.38	29	30.22	14.26		22.24			319.50	321.25
7	11.37	24	30.43	11.20		17.47			314.73	315.43
10	0.99	23	29.80	0.99	2.51	2.48	10071	319.17	321.65	323.87
11	0.98	41	30.26	0.97		2.43			321.60	323.81
12	1.03	42	30.05	1.03		2.58			321.75	323.99
13	1.00	46	29.80	1.01		2.53			321.70	323.93
14	0.95	47	29.87	0.95		2.38			321.55	323.74
15	0.82	43	30.12	0.82		2.06			321.23	323.35
16	1.00	44	30.41	0.99		2.48			321.65	323.87
17	0.89	30	30.49	0.87		2.18			321.35	323.64
18	1.11	43	30.33	1.10		2.76			321.93	324.21
19	1.17	47	30.17	1.16		2.91			322.08	324.39
20	0.81	46	30.26	0.80		2.01			321.18	323.29
21	0.63	46	29.81	0.63		1.58			320.75	322.77
22	0.15	40	29.93	0.15		0.38			319.55	321.31
23	0.59	47	29.96	0.59		1.48			320.65	322.65
24	0.15	44	30.31	0.15		0.38			319.55	321.31
25	0.20	46	30.66	0.20		0.50			319.67	321.45
26	0.29	34	30.61	0.28		0.70			319.87	321.70
27	0.41	48	30.56	0.40		1.00			320.17	322.06
28	0.03	39	30.52	0.03		0.07			319.24	320.93
29	0.31	36	30.46	0.30		0.75			319.92	321.76
30	0.59	45	29.86	0.59		1.48			320.65	322.65
31	0.68	47	29.61	0.69		1.73			320.90	322.95

TABLE 10: INDICES OF AIR WITH CONTINUOUS ANALYZER

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col. 1	2	3	4	5	6	7	8	9	10	11
Day of Month	Observed Scale Difference	Number of Comparisons	Barometric Pressure (inches)	Adjusted Scale Difference	Recorder Scale Factor	Computed Index Difference	Reference Tank No.	Reference Tank Index	Air Index	Manometric Conc. (ppm)
1962										
Feb. 1	0.55	28	29.73	0.55	2.51	1.38	10071	319.17	320.55	322.53
2	0.40	40	30.01	0.40		1.00			320.17	322.06
3	0.54	44	30.39	0.53		1.33			320.50	322.47
4	0.58	45	30.34	0.57		1.43			320.60	322.59
5	0.74	41	29.95	0.74		1.86			321.03	323.11
6	0.76	45	29.77	0.76		1.91			321.08	323.17
7	0.71	44	29.65	0.72		1.81			320.98	323.05
8	0.49	44	29.66	0.49		1.23			320.40	322.34
9	0.51	43	29.86	0.51		1.28			320.45	322.40
10	0.60	31	29.95	0.60		1.51			320.68	322.68
11	0.95	19	30.04	0.95		2.38			321.55	323.74
12	0.82	44	30.22	0.81		2.03			321.20	323.32
13	0.56	46	30.29	0.55		1.38			320.55	322.53
14	0.43	42	30.28	0.42		1.05			320.22	322.12
15	0.39	43	30.37	0.38		0.95			320.12	322.00
16	0.56	34	30.46	0.55		1.38			320.55	
16	7.50	10	30.46	7.38		18.52	10073	298.99	317.51	
				Feb. 16 Average					319.03	320.67
17	7.63	47	30.32	7.55		18.95			317.94	319.35
18	7.75	48	30.18	7.70		19.33			318.32	319.81
19	7.68	45	29.93	7.69		19.30			318.29	319.77
20	7.61	44	29.60	7.71		19.35			318.34	319.83
21	7.68	47	30.09	7.66		19.23			318.22	319.67
22	7.74	47	30.48	7.62		19.13			318.12	319.55
23	7.57	47	30.43	7.46		18.72			317.71	319.07
24	7.49	46	30.24	7.43		18.65			317.64	318.98

TABLE 10: INDICES OF AIR WITH CONTINUOUS ANALYZER

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col. 1	2	3	4	5	6	7	8	9	10	11
Day of Month	Observed Scale Difference	Number of Comparisons	Barometric Pressure (inches)	Adjusted Scale Difference	Recorder Scale Factor	Computed Index Difference	Reference Tank No.	Reference Tank Index	Air Index	Manometric Conc. (ppm)
1962										
Feb. 25	7.54	47	30.07	7.52	2.51	18.87	10073	298.99	317.86	319.25
26	7.67	46	30.38	7.57		19.00			317.99	319.41
27	7.36	47	30.38	7.26		18.22			317.21	318.46
28	7.44	43	30.27	7.37		18.50			317.49	318.80
March 1	7.41	42	30.07	7.39		18.55			317.54	318.86
2	7.49	46	29.93	7.50		18.82			317.81	319.19
3	7.53	47	30.19	7.48		18.77			317.76	319.11
4	7.46	47	30.18	7.41		18.60			317.59	318.92
5	7.72	47	29.95	7.73		19.40			318.39	319.89
6	7.55	47	29.99	7.55		18.95			317.94	319.35
7	7.59	33	30.11	7.56		18.97			317.96	319.37
8	7.50	6	30.11	7.47		18.75			317.74	319.10
9	7.34	9	30.38	7.24		18.17			317.16	318.40
10	7.83	26	30.89	7.60		19.08			318.07	319.50
11	7.72	47	30.86	7.50		18.82			317.81	319.19
12	7.27	19	30.49	7.15		17.95			316.94	318.13
13	7.20	45	30.22	7.14		17.92			316.91	318.09
14	7.42	47	30.32	7.34		18.42			317.41	318.70
15	7.48	48	30.62	7.32		18.37			317.36	318.64
16	7.50	33	30.64	7.34		18.42			317.41	318.70
17	7.52	12	30.35	7.43		18.65			317.64	318.98
18	7.50	48	30.29	7.42		18.62			317.61	318.94
19	7.59	48	30.52	7.45		18.70			317.69	319.04
20	7.61	47	30.46	7.49		18.80			317.79	319.16
21	7.54	45	30.53	7.40		18.57			317.56	318.88

TABLE 10: INDICES OF AIR WITH CONTINUOUS ANALYZER

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col. 1	2	3	4	5	6	7	8	9	10	11
Day of Month	Observed Scale Difference	Number of Comparisons	Barometric Pressure (inches)	Adjusted Scale Difference	Recorder Scale Factor	Computed Index Difference	Reference Tank No.	Reference Tank Index	Air Index	Manometric Conc. (ppm)
1962										
March 22	7.65	48	30.40	7.54	2.51	18.92	10073	298.99	317.91	319.31
23	7.61	46	30.30	7.53		18.90			317.89	319.28
24	7.57	30	30.13	7.53		18.90			317.89	319.28
27	3.43	12	29.67	3.47		8.71	10068	309.02	317.73	319.09
28	3.27	23	29.69	3.30		8.28			317.30	318.57
29	3.34	40	29.88	3.35		8.41			317.43	318.72
30	3.42	39	30.21	3.40		8.53			317.55	318.87
31	3.38	46	30.17	3.36		8.43			317.45	318.75
April 1	3.45	47	30.39	3.40		8.53			317.55	318.87
2	3.32	45	30.40	3.27		8.21			317.23	318.48
3	3.45	42	30.39	3.40		8.53			317.55	318.87
4	3.16	47	30.55	3.10		7.78			316.80	317.96
5	3.45	45	30.33	3.41		8.56			317.58	318.91
6	3.49	45	29.64	3.53		8.86			317.88	319.27
7	3.52	46	29.72	3.55		8.91			317.93	319.33
8	3.56	43	29.91	3.57		8.96			317.98	319.39
9	3.89	43	29.84	3.91		9.81			318.83	320.43
10	3.54	48	29.78	3.56		8.93			317.95	319.36
11	3.39	37	30.16	3.37		8.46			317.48	318.79
12	3.60	48	30.35	3.56		8.93			317.95	319.36
13	3.48	48	30.12	3.47		8.71			317.73	319.09
14	3.51	32	29.90	3.52		8.83			317.85	319.24
15	3.57	44	30.03	3.57		8.96			317.98	319.39
16	3.62	45	30.41	3.57		8.96			317.98	319.39
17	3.56	45	30.42	3.51		8.81			317.83	319.21

TABLE 10: INDICES OF AIR WITH CONTINUOUS ANALYZER

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col. 1	2	3	4	5	6	7	8	9	10	11
Day of Month	Observed Scale Difference	Number of Comparisons	Barometric Pressure (inches)	Adjusted Scale Difference	Recorder Scale Factor	Computed Index Difference	Reference Tank No.	Reference Tank Index	Air Index	Manometric Conc. (ppm)
1962										
April 18	3.70	48	30.16	3.68	2.51	9.24	10068	309.02	318.26	319.74
19	3.65	33	30.02	3.65		9.16			318.18	319.64
20	3.53	40	30.08	3.52		8.83			317.85	319.24
21	3.56	45	30.26	3.53		8.86			317.88	319.27
22	3.71	46	30.09	3.70		9.29			318.31	319.80
23	3.64	33	29.91	3.65		9.16			318.18	319.64
24	3.76	41	29.84	3.78		9.49			318.51	320.04
25	3.80	43	29.70	3.84		9.64			318.66	320.22
26	3.72	43	29.83	3.74		9.39			318.41	319.92
27	3.84	44	29.76	3.87		9.71			318.73	320.31
28	3.53	4	30.04	3.52		8.83			317.85	319.24
29	3.91	27	30.24	3.88		9.74			318.76	320.34
30	6.14	28	30.30	6.08		15.26	6078	303.09	318.35	319.85
May 1	6.34	37	30.26	6.28		15.76			318.85	320.45
2	6.12	20	30.16	6.08		15.26			318.35	319.85
3	6.10	43	30.30	6.04		15.16			318.25	319.72
4	6.22	46	30.35	6.14		15.41			318.50	320.03
5	6.46	45	30.26	6.40		16.06			319.15	321.82
6	6.26	47	30.24	6.21		15.59			318.68	320.25
7	6.38	44	30.10	6.35		15.94			319.03	320.67
8	6.26	46	30.09	6.24		15.66			318.75	320.33
9	6.26	44	30.19	6.22		15.61			318.70	320.27
10	6.33	45	30.23	6.28		15.76			318.85	320.45
11	6.35	44	30.12	6.32		15.86			318.95	320.58
12	6.32	45	30.06	6.31		15.84			318.93	320.55
13	6.31	47	30.01	6.30		15.81			318.90	320.52

TABLE 10: INDICES OF AIR WITH CONTINUOUS ANALYZER

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col. 1	2	3	4	5	6	7	8	9	10	11
Day of Month	Observed Scale Difference	Number of Comparisons	Barometric Pressure (inches)	Adjusted Scale Difference	Recorder Scale Factor	Computed Index Difference	Reference Tank No.	Reference Tank Index	Air Index	Manometric Conc. (ppm)
1962										
May 14	6.17	25	29.94	6.18	2.51	15.51	6078	303.09	318.60	320.15
15	6.29	45	29.59	6.37		15.99			319.08	320.73
16	6.26	35	29.59	6.34		15.91			319.00	320.64
17	6.27	34	29.93	6.28		15.76			318.85	320.45
18	6.01	11	29.87	6.03		15.13			318.22	319.69
19	6.19	26	29.82	6.23		15.64			318.73	320.31
20	6.17	48	29.95	6.18		15.51			318.60	320.15
21	6.37	42	29.94	6.38		16.01			319.10	320.76
22	6.18	44	30.00	6.18		15.51			318.60	320.15
23	6.19	45	30.13	6.16		15.46			318.55	320.09
24	6.37	46	30.12	6.34		15.91			319.00	320.64
25	6.29	47	30.01	6.28		15.76			318.85	320.45
26	6.26	37	29.95	6.27		15.74			318.83	320.43
27	6.40	47	30.04	6.39		16.04			319.13	320.80
28	6.38	36	30.16	6.34		15.91			319.00	320.64
29	6.23	43	30.13	6.20		15.56			318.65	320.21
30	6.24	46	30.17	6.20		15.56			318.65	320.21
31	6.57	22	30.06	6.56		16.46			319.55	321.31
June 1	6.12	9	29.86	6.14		15.41			318.50	
1	7.74	12	29.86	7.77		19.50	3757	298.98	318.48	
				June 1 Average					318.49	320.02
2	7.69	34	29.80	7.74		19.43			318.41	319.92
3	7.78	47	29.77	7.83		19.65			318.63	320.19
4	7.79	45	29.83	7.83		19.65			318.63	320.19
5	7.84	19	29.64	7.93		19.90			318.88	320.49

TABLE 10: INDICES OF AIR WITH CONTINUOUS ANALYZER

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8	9	10	11
Day of Month	Observed Scale Difference	Number of Comparisons	Barometric Pressure (inches)	Adjusted Scale Difference	Recorder Scale Factor	Computed Index Difference	Reference Tank No.	Reference Tank Index	Air Index	Manometric Conc. (ppm)
1962										
June 6	7.54	27	29.59	7.64	2.51	19.18	3757	298.98	318.16	319.61
7	7.66	44	29.53	7.77		19.50			318.48	320.00
8	7.93	48	29.77	7.98		20.03			319.01	320.65
9	8.29	46	29.92	8.31		20.86			319.84	321.66
10	7.99	22	30.01	7.98		20.03			319.01	320.65
11	8.43	26	30.16	8.38		21.03			320.01	320.66
12	7.54	48	30.03	7.53		18.90			317.88	319.27
13	6.82	46	29.85	6.85		17.19			316.17	317.19
14	6.79	47	29.96	6.80		17.07			316.05	317.04
15	7.05	47	30.02	7.04		17.67			316.65	317.77
16	6.96	48	30.15	6.92		17.37			316.35	317.41
17	7.51	40	30.17	7.46		18.72			317.70	319.05
18	7.65	42	30.17	7.60		19.08			318.06	319.49
19	6.50	43	30.11	6.47		16.24			315.22	316.03
20	6.27	46	30.05	6.26		15.71			314.69	315.39
21	7.14	45	30.00	7.14		17.92			316.90	318.08
22	7.32	25	30.14	7.28		18.27			317.25	318.50
23	7.35	35	30.02	7.34		18.42			317.40	318.69
24	7.14	48	29.88	7.17		18.00			316.98	318.18
25	6.98	45	29.87	7.01		17.59			316.57	317.68
26	7.05	45	29.95	7.06		17.72			316.70	317.83
27	7.03	45	29.99	7.03		17.64			316.62	317.74
28	7.02	48	30.09	7.00		17.57			316.55	317.65
29	7.00	48	30.13	6.96		17.47			316.45	317.53
30	6.52	45	30.00	6.52		16.36			315.34	316.18

TABLE 10: INDICES OF AIR WITH CONTINUOUS ANALYZER

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8	9	10	11
Day of Month	Observed Scale Difference	Number of Comparisons	Barometric Pressure (inches)	Adjusted Scale Difference	Recorder Scale Factor	Computed Index Difference	Reference Tank No.	Reference Tank Index	Air Index	Manometric Conc. (ppm)
1962										
July 1	5.83	47	29.86	5.85	2.51	14.68	3757	298.98	313.66	314.13
2	6.73	44	29.91	6.75		16.94			315.92	316.88
3	6.82	48	30.07	6.80		17.07			316.05	317.04
4	6.51	43	30.07	6.49		16.29			315.27	316.09
5	6.52	44	30.03	6.51		16.34			315.32	316.15
6	5.62	44	29.94	5.63		14.13			313.11	313.46
7	6.22	31	29.88	6.24		15.66			314.64	315.32
8	5.37	46	29.65	5.43		13.63			312.61	312.85
9	5.98	18	29.78	6.02		15.11			314.09	
9	6.59	28	29.78	6.64		16.67	2427	297.61	314.28	
				July 9 Average					314.18	314.76
10	6.55	33	29.75	6.60		16.57			314.18	314.76
11	6.38	45	29.77	6.42		16.11			313.72	314.20
12	6.21	48	29.92	6.22		15.61			313.22	313.59
13	5.93	45	29.91	5.95		14.93			312.54	312.77
14	5.44	48	29.93	5.45		13.68			311.29	311.24
15	5.82	47	30.03	5.81		14.58			312.19	312.34
16	4.81	45	30.10	4.79		12.02			309.63	309.22
17	3.86	43	30.11	3.84		9.64			307.25	306.32
18	3.97	48	30.08	3.96		9.94			307.55	306.68
19	4.44	47	29.94	4.45		11.17			308.78	308.18
20	4.26	33	29.88	4.28		10.74			308.35	307.66
21	6.25	48	30.09	6.23		15.64			313.25	313.63
22	6.07	48	30.14	6.04		15.16			312.77	313.05
23	5.81	42	29.99	5.81		14.58			312.19	312.34
24	5.39	24	29.78	5.43		13.63			311.24	311.18

TABLE 10: INDICES OF AIR WITH CONTINUOUS ANALYZER

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8	9	10	11
Day of Month	Observed Scale Difference	Number of Comparisons	Barometric Pressure (inches)	Adjusted Scale Difference	Recorder Scale Factor	Computed Index Difference	Reference Tank No.	Reference Tank Index	Air Index	Manometric Conc. (ppm)
1962										
July 25	5.76	31	30.21	5.72	2.51	14.36	2427	297.61	311.97	312.07
26	5.05	31	30.29	5.00		12.55			310.16	309.86
27	4.92	48	29.93	4.93		12.37			309.98	309.65
28	3.90	48	29.99	3.90		9.79			307.40	306.50
29	4.93	35	29.97	4.93		12.37			309.98	309.65
30	4.90	47	29.87	4.92		12.35			309.96	309.62
31	5.00	48	29.91	5.01		12.57			310.18	309.89
Aug. 1	4.96	47	29.82	4.99		12.52			310.13	309.83
2	4.18	47	29.72	4.22		10.59			308.20	307.48
3	3.76	42	29.56	3.81		9.56			307.17	306.22
4	3.69	47	29.65	3.73		9.36			306.97	305.97
5	4.18	48	29.81	4.20		10.54			308.15	307.42
6	3.85	47	29.70	3.89		9.76			307.37	306.45
7	3.57	47	29.51	3.63		9.11			306.72	305.67
8	3.90	48	29.67	3.94		9.89			307.50	305.72
9	3.68	47	29.78	3.70		9.29			306.90	305.89
11	3.05	22	29.92	3.06		7.68			305.29	303.93
12	4.50	47	29.84	4.52		11.34			308.95	308.39
13	3.76	37	30.01	3.76		9.44			307.05	306.08
14	2.55	34	29.97	2.55		6.40			304.01	302.37
15	-0.36	19	29.92	-0.36		- 0.90	2426	307.55	306.65	305.59
16	-0.77	43	29.82	-0.77		- 1.93			305.62	304.33
17	-0.29	27	29.81	-0.29		- 0.73			306.82	
17	-1.11	6	29.81	-1.12		- 2.81	3756	310.10	307.29	
				Aug. 17 Average					307.05	306.08
18	-0.76	45	29.77	-0.76		- 1.91			308.19	307.46
19	-0.60	46	29.75	-0.60		- 1.51			308.59	307.95

TABLE 10: INDICES OF AIR WITH CONTINUOUS ANALYZER

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col. 1	2	3	4	5	6	7	8	9	10	11
Day of Month	Observed Scale Difference	Number of Comparisons	Barometric Pressure (inches)	Adjusted Scale Difference	Recorder Scale Factor	Computed Index Difference	Reference Tank No.	Reference Tank Index	Air Index	Manometric Conc. (ppm)
1962										
Aug. 20	-0.41	48	29.86	-0.41	2.51	-1.03	3756	310.10	309.07	308.54
21	-0.55	33	29.96	-0.55		-1.38			308.72	308.11
22	-0.59	48	29.91	-0.59		-1.48			308.62	307.99
23	-0.40	48	29.78	-0.40		-1.00			309.10	308.57
24	-0.50	47	29.80	-0.50		-1.25			308.85	308.27
25	-0.77	47	29.67	-0.78		-1.96			308.14	307.40
27	-1.11	45	29.73	-1.12		-2.81			307.29	306.37
28	-0.94	48	29.80	-0.94		-2.36			307.74	306.92
29	-0.69	43	29.54	-0.70		-1.76			308.34	307.65
30	-1.03	15	29.56	-1.04		-2.61			307.49	306.61
31	-0.98	44	30.06	-0.98		-2.46			307.64	306.79
Sept. 1	-0.78	48	30.02	-0.78		-1.96			308.14	307.40
2	-0.94	48	29.58	-0.95		-2.38			307.72	306.89
3	-0.95	48	29.66	-0.96		-2.41			307.69	306.85
4	-0.40	33	29.85	-0.40		-1.00			309.10	308.57
6	-0.66	21	30.14	-0.66		-1.66			308.44	307.77
7	-0.57	7	30.15	-0.57		-1.43			308.67	308.05
8	-0.41	47	29.89	-0.41		-1.03			309.07	308.54
9	0.88	47	29.66	0.89		2.23			307.87	307.07
10	0.44	22	29.41	0.45		1.13			311.23	311.17
11	-0.48	48	29.45	-0.49		-1.23			308.87	308.29
12	-0.16	48	29.54	-0.16		-0.40			309.70	309.30
13	-0.11	48	29.68	-0.11		-0.28			309.82	309.45
14	0.17	47	29.80	0.17		0.43			310.53	310.32
15	0.18	40	29.80	0.18		0.45			310.55	310.34
16	0.36	44	29.82	0.36		0.90			311.00	310.89

TABLE 10: INDICES OF AIR WITH CONTINUOUS ANALYZER

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8	9	10	11
Day of Month	Observed Scale Difference	Number of Comparisons	Barometric Pressure (inches)	Adjusted Scale Difference	Recorder Scale Factor	Computed Index Difference	Reference Tank No.	Reference Tank Index	Air Index	Manometric Conc. (ppm)
1962										
Sept. 17	-0.44	47	29.80	-0.44	2.51	-1.10	3756	310.10	309.00	308.45
18	0.73	43	30.02	0.73		1.83			311.93	311.99
19	-0.24	43	29.93	-0.24		-0.60			309.50	309.06
20	-0.31	25	29.58	-0.31		-0.78			309.32	308.64
21	-0.40	18	29.62	-0.40		-1.00			309.10	308.57
23	-0.14	48	29.88	-0.14		-0.35			309.75	309.37
24	0.05	36	29.79	0.05		0.12			310.22	309.94
25	0.03	29	29.70	0.03		0.07			310.17	
25	1.19	19	29.70	1.20		3.01	2426	307.55	310.56	
				Sept. 25 Average					310.36	310.11
26	1.15	44	29.60	1.16		2.91			310.46	310.22
27	1.23	46	29.66	1.24		3.11			310.66	310.47
28	1.32	35	29.88	1.32		3.31			310.86	310.72
29	1.23	26	30.09	1.23		3.09			310.64	310.45
30	1.21	36	29.94	1.21		3.04			310.59	310.39
Oct. 1	1.57	37	29.80	1.58		3.96			311.51	311.51
2	1.66	48	29.77	1.67		4.19			311.74	311.79
3	1.58	38	29.76	1.59		3.99			311.54	311.55
4	1.64	34	29.84	1.65		4.14			311.69	311.73
5	2.27	21	29.86	2.28		5.72			313.54	
5	0.23	11	29.86	0.23		0.58	2400	310.99	311.57	
				Oct. 5 Average					312.55	312.78
6	0.11	44	29.73	0.11		0.28			311.27	311.14
7	0.02	44	29.75	0.02		0.05			311.04	310.94
8	0.00	25	29.98	0.00		0.00			310.99	310.88
9	-0.34	8	30.13	-0.34		-0.85			310.14	309.84

TABLE 10: INDICES OF AIR WITH CONTINUOUS ANALYZER

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8	9	10	11
Day of Month	Observed Scale Difference	Number of Comparisons	Barometric Pressure (inches)	Adjusted Scale Difference	Recorder Scale Factor	Computed Index Difference	Reference Tank No.	Reference Tank Index	Air Index	Manometric Conc. (ppm)
1962										
Oct. 10	-0.11	46	30.14	-0.11	2.51	-0.28	2400	310.99	310.71	310.54
11	0.16	45	30.36	0.16		0.40			311.39	311.36
12	0.15	47	30.46	0.15		0.38			311.37	311.34
13	0.24	48	30.06	0.24		0.60			311.59	311.61
14	0.16	44	29.64	0.16		0.40			311.39	311.36
15	0.32	47	29.59	0.32		0.80			311.79	311.85
16	0.21	21	29.70	0.21		0.53			311.52	311.52
18	4.12	19	29.64	4.17		10.47	10071	301.56	312.03	312.14
19	4.25	40	29.64	4.30		10.79			312.35	312.53
20	4.55	44	29.74	4.59		11.52			313.08	313.42
21	4.88	48	29.84	4.90		12.30			313.86	314.37
22	4.74	24	30.07	4.72		11.85			313.41	313.83
23	4.92	48	30.14	4.89		12.27			313.83	314.34
24	4.86	36	29.78	4.89		12.27			313.83	314.34
25	4.96	17	29.19	5.09		12.77			314.33	314.95
26	5.09	48	29.26	5.22		13.10			314.66	315.35
27	5.86	48	29.41	5.98		15.01			316.57	317.80
28	4.98	48	29.70	5.03		12.62			314.18	314.76
29	5.97	48	30.16	5.93		14.88			316.44	317.52
30	6.14	47	30.37	6.06		15.21			316.77	317.92
31	5.74	48	30.27	5.69		14.28			315.84	316.79
Nov. 1	5.71	32	30.19	5.67		14.23			315.79	316.73
2	5.68	48	29.91	5.70		14.31			315.87	316.82
3	5.72	48	29.50	5.81	2.50	14.52			316.08	317.08
4	5.73	48	29.50	5.82		14.55			316.11	317.12

TABLE 10: INDICES OF AIR WITH CONTINUOUS ANALYZER

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8	9	10	11
Day of Month	Observed Scale Difference	Number of Comparisons	Barometric Pressure (inches)	Adjusted Scale Difference	Recorder Scale Factor	Computed Index Difference	Reference Tank No.	Reference Tank Index	Air Index	Manometric Conc. (ppm)
1962										
Nov. 5	5.58	48	29.65	5.64	2.50	14.10	10071	301.56	315.66	316.57
6	5.61	47	29.72	5.66		14.15			315.71	316.63
7	5.43	48	29.68	5.48		13.70			315.26	316.08
8	5.18	34	29.64	5.24		13.10			314.66	315.35
9	5.08	28	29.67	5.13	2.49	12.77			314.33	314.95
10	5.47	24	29.91	5.49		13.67			315.23	316.04
11	5.63	48	30.24	5.58		13.89			315.45	316.31
12	5.58	39	30.27	5.53		13.77			315.33	316.17
13	5.52	38	30.10	5.50		13.69			315.25	316.07
14	5.98	47	30.10	5.96		14.84			316.40	317.47
15	6.26	48	30.22	6.21		15.46			317.02	318.22
16	5.94	44	30.11	5.92		14.74			316.30	317.35
17	5.64	25	29.77	5.68	2.48	14.09			315.65	316.56
18	5.59	48	29.26	5.73		14.21			315.77	316.70
19	5.39	45	29.26	5.52		13.69			315.25	316.07
20	5.36	48	29.43	5.46	2.47	13.49			315.05	315.82
21	5.55	30	29.80	5.58		13.78			315.34	316.18
22	5.63	20	30.06	5.62		13.88			315.44	316.30
23	5.56	39	29.83	5.59		13.81			315.37	316.21
24	5.83	30	29.41	5.95		14.70			316.26	317.30
25	6.05	48	29.35	6.18		15.26			316.82	317.98
26	6.55	46	29.57	6.64		16.40			317.96	319.37
27	6.58	48	29.75	6.63		16.38			317.94	319.35
28	6.32	41	29.86	6.34		15.66			317.22	318.47
29	6.17	48	29.98	6.17		15.24			316.80	317.96
30	6.10	48	30.01	6.09		15.04			316.60	317.71

TABLE 10: INDICES OF AIR WITH CONTINUOUS ANALYZER

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col. 1	2	3	4	5	6	7	8	9	10	11
Day of Month	Observed Scale Difference	Number of Comparisons	Barometric Pressure (inches)	Adjusted Scale Difference	Recorder Scale Factor	Computed Index Difference	Reference Tank No.	Reference Tank Index	Air Index	Manometric Conc. (ppm)
1962										
Dec. 1	6.07	48	29.89	6.09	2.47	15.04	10071	301.56	316.60	317.71
2	5.79	48	29.88	5.81		14.35			315.91	316.87
3	6.23	43	29.98	6.23		15.39			316.95	318.14
4	6.78	46	29.96	6.79		16.77			318.33	319.82
5	6.93	44	29.96	6.94		17.14			318.70	320.27
6	1.32	14	30.21	1.31	2.46	3.22	10072	314.85	318.07	319.50
7	1.70	42	30.50	1.67		4.11			318.96	320.60
8	1.33	45	30.46	1.31		3.22			318.07	319.50
9	1.13	47	30.30	1.12		2.75			317.60	318.93
10	1.10	48	30.16	1.09		2.68			317.53	318.85
11	1.03	48	30.00	1.03	2.45	2.52			317.37	318.65
12	0.88	48	29.89	0.88		2.16			317.01	318.21
13	0.93	48	29.73	0.94		2.30			317.15	318.38
14	0.83	44	29.96	0.83		2.03			316.88	318.05
15	0.79	45	29.98	0.79		1.93			316.78	317.93
16	0.77	48	29.92	0.77		1.89			316.74	317.88
17	0.77	42	29.76	0.78		1.91			316.76	317.91
18	0.70	38	29.75	0.70	2.44	1.71			316.56	317.66
19	0.85	24	30.03	0.85		2.07			316.92	318.10
20	0.81	46	30.45	0.80		1.95			316.80	317.96
21	0.90	48	30.67	0.88		2.15			317.00	318.20
22	0.70	48	30.27	0.69		1.68			316.53	317.63
23	0.72	47	29.86	0.72		1.76			316.61	317.72
24	0.98	46	30.12	0.98		2.39			317.24	318.49
25	0.99	43	30.06	0.99	2.43	2.40			317.25	318.50
26	0.79	46	30.59	0.77		1.87			316.72	317.86

TABLE 10: INDICES OF AIR WITH CONTINUOUS ANALYZER

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col. 1	2	3	4	5	6	7	8	9	10	11
Day of Month	Observed Scale Difference	Number of Comparisons	Barometric Pressure (inches)	Adjusted Scale Difference	Recorder Scale Factor	Computed Index Difference	Reference Tank No.	Reference Tank Index	Air Index	Manometric Conc. (ppm)
1962										
Dec. 27	0.82	46	30.79	0.80	2.43	1.94	10072	314.85	316.79	317.94
28	1.09	48	30.79	1.06		2.57			317.42	318.71
29	1.01	45	30.36	1.00		2.43			317.28	318.54
30	0.79	48	30.16	0.78		1.89			316.74	317.88
31	0.91	48	30.11	0.91		2.21			317.06	318.27
1963										
Jan. 1	1.03	46	30.02	1.03		2.50			317.35	318.63
3	0.87	24	30.45	0.86		2.09			316.94	318.13
4	1.07	46	30.32	1.06		2.57			317.42	318.71
5	1.04	23	30.10	1.03		2.50			317.35	318.63
7	1.55	15	30.45	1.53		3.72			318.57	320.11
8	1.42	48	30.49	1.39		3.38			318.23	319.70
9	1.16	42	30.36	1.15		2.79			317.64	318.98
10	1.10	48	30.26	1.09		2.65			317.50	318.81
11	1.40	48	30.60	1.37		3.33			318.18	319.64
12	1.38	32	30.43	1.36		3.30			318.15	319.60
13	1.32	23	30.36	1.30		3.16			318.01	
13	1.17	9	30.36	1.15		2.79	4278	314.27	317.06	
				Jan. 13 Average					317.53	318.85
14	1.34	47	30.34	1.32		3.21			317.48	318.79
15	1.40	48	30.28	1.39		3.38			317.65	318.99
16	1.69	48	30.38	1.67		4.06			318.33	319.82
17	1.26	46	30.10	1.25		3.04			317.31	318.58
18	1.39	48	30.00	1.39		3.38			317.65	318.99
19	1.48	48	30.09	1.47		3.57			317.84	319.22
20	1.58	48	30.55	1.55		3.77			318.04	319.47

TABLE 10: INDICES OF AIR WITH CONTINUOUS ANALYZER

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8	9	10	11
Day of Month	Observed Scale Difference	Number of Comparisons	Barometric Pressure (inches)	Adjusted Scale Difference	Recorder Scale Factor	Computed Index Difference	Reference Tank No.	Reference Tank Index	Air Index	Manometric Conc. (ppm)
1963										
Jan. 21	1.87	42	30.68	1.83	2.43	4.45	4278	314.27	318.72	320.30
22	1.35	47	30.26	1.34		3.26			317.53	318.85
25	1.27	29	30.18	1.26		3.06			317.33	318.60
26	1.36	8	30.51	1.34		3.26			317.53	318.85
27	1.08	24	30.28	1.07		2.60			316.87	318.04
28	1.01	48	30.31	1.00		2.43			316.70	317.83
29	0.98	48	30.17	0.97		2.38			316.63	317.75
30	2.13	47	30.40	2.10		5.10			319.37	321.09
31	1.90	48	30.23	1.88		4.57			318.84	320.44
Feb. 1	2.07	39	30.59	2.03		4.93	4278	314.27	319.20	320.88
2	1.93	47	30.26	1.91		4.64			318.91	320.53
3	1.87	48	30.07	1.86		4.52			318.79	320.38
4	2.23	48	29.94	2.23		5.42			319.69	321.48
5	2.54	48	29.79	2.56		6.22			320.49	322.45
6	2.47	48	29.95	2.47		6.00			320.27	322.18
7	2.43	47	30.08	2.42		5.88			320.15	322.04
8	2.27	48	30.14	2.26		5.49			319.76	321.56
9	1.89	48	30.30	1.87		4.54			318.81	320.41
10	2.21	48	30.61	2.16		5.25			319.52	321.27
11	2.09	48	30.67	2.04		4.96			319.23	320.92
12	1.79	46	30.55	1.75		4.25			318.52	320.05
13	1.73	45	30.71	1.69		4.11			318.38	319.88
14	1.65	46	30.76	1.61		3.91			318.18	319.64
15	1.57	47	30.59	1.54		3.74			318.01	319.43
16	1.90	48	30.14	1.89		4.59			318.86	320.47
17	1.69	48	29.87	1.70		4.13			318.40	319.91

TABLE 10: INDICES OF AIR WITH CONTINUOUS ANALYZER

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col. 1	2	3	4	5	6	7	8	9	10	11
Day of Month	Observed Scale Difference	Number of Comparisons	Barometric Pressure (inches)	Adjusted Scale Difference	Recorder Scale Factor	Computed Index Difference	Reference Tank No.	Reference Tank Index	Air Index	Manometric Conc. (ppm)
1963										
Feb. 18	1.45	47	29.87	1.45	2.43	3.52	4278	314.27	317.79	319.16
19	1.46	48	29.94	1.46		3.55			317.82	319.20
20	1.70	45	29.91	1.70		4.13			318.40	319.91
21	1.97	18	29.99	1.97		4.79			319.06	
21	2.27	29	29.99	2.27		5.52	4286	314.48	320.00	
				Feb. 21 Average					319.82	321.64
22	1.92	47	30.09	1.91		4.64			319.12	320.78
23	1.73	48	30.20	1.72		4.18			318.66	320.22
24	1.74	46	30.19	1.73		4.20			318.68	320.25
25	1.61	48	29.88	1.62		3.94			318.42	319.93
26	1.44	46	29.76	1.45		3.52			318.00	319.42
27	1.50	48	29.79	1.51		3.67			318.15	319.60
28	1.54	40	29.70	1.55		3.77			318.25	319.72
March 1	1.50	22	29.98	1.50		3.64			318.12	319.56
2	1.87	48	30.11	1.86		4.52			319.00	320.64
3	1.86	44	30.01	1.86		4.52			319.00	320.64
4	2.06	48	29.99	2.06		5.00			319.48	321.22
5	2.13	45	30.03	2.13		5.17			319.65	321.43
6	2.09	47	30.06	2.08		5.05			319.53	321.28
7	1.98	47	29.99	1.98		4.81			319.29	320.99
8	1.92	48	29.79	1.93		4.69			319.17	320.84
9	1.97	48	29.98	1.97		4.79			319.27	320.97
10	1.97	48	30.32	1.95		4.74			319.22	320.91
11	1.96	48	30.59	1.92		4.66			319.14	320.81
12	1.93	48	30.34	1.91		4.64			319.12	320.78
13	2.54	47	30.35	2.51		6.10			320.58	322.56

TABLE 10: INDICES OF AIR WITH CONTINUOUS ANALYZER

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8	9	10	11
Day of Month	Observed Scale Difference	Number of Comparisons	Barometric Pressure (inches)	Adjusted Scale Difference	Recorder Scale Factor	Computed Index Difference	Reference Tank No.	Reference Tank Index	Air Index	Manometric Conc. (ppm)
1963										
March 14	2.54	48	30.04	2.53	2.43	6.15	4286	314.48	320.63	322.62
15	2.44	48	30.07	2.43		5.90			320.38	322.32
16	2.61	31	29.81	2.62		6.37			320.85	322.89
17	2.29	48	29.93	2.29		5.56			320.04	321.90
18	2.50	29	29.95	2.50		6.07			320.55	322.53
19	2.25	29	30.12	2.24		5.44			319.92	321.76
20	2.35	36	30.09	2.34		5.69			320.17	322.06
21	1.84	6	29.65	1.86		4.52			319.00	320.64
22	2.07	48	29.85	2.08		5.05			319.53	321.28
23	2.07	47	29.75	2.09		5.08			319.56	321.32
24	2.02	48	30.09	2.01		4.88			319.36	321.08
25	1.83	22	29.44	1.86		4.52			319.00	320.64
26	1.76	39	29.81	1.77		4.30			318.78	320.37
28	1.85	47	30.49	1.82		4.42			318.90	320.52
29	1.98	47	30.42	1.95		4.74			319.22	320.91
30	1.77	47	30.00	1.77		4.30			318.78	320.37
31	1.89	47	30.05	1.89		4.59			319.07	320.72
April 1	1.94	16	30.38	1.91		4.64			319.12	320.78
2	1.21	45	30.07	1.21		2.94	7362	315.56	318.50	320.03
3	1.26	26	29.89	1.26		3.06			318.62	320.17
19	1.31	13	30.35	1.29		3.13			318.69	320.26
20	1.40	32	30.36	1.38		3.35			318.91	320.53
21	1.43	47	30.03	1.43		3.47			319.03	320.67
22	1.36	48	29.73	1.37		3.33			318.89	320.50
23	1.35	46	29.92	1.35		3.28			318.84	320.44
24	1.38	47	30.12	1.37		3.33			318.89	320.50

TABLE 10: INDICES OF AIR WITH CONTINUOUS ANALYZER

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8	9	10	11
Day of Month	Observed Scale Difference	Number of Comparisons	Barometric Pressure (inches)	Adjusted Scale Difference	Recorder Scale Factor	Computed Index Difference	Reference Tank No.	Reference Tank Index	Air Index	Manometric Conc. (ppm)
1963										
April 25	1.38	45	30.11	1.37	2.43	3.33	7362	315.56	318.89	320.50
26	1.20	33	30.17	1.19		2.89			318.45	319.97
27	1.38	48	30.03	1.38		3.35			318.91	320.53
28	1.52	46	29.89	1.52		3.69			319.25	320.94
29	1.59	47	29.91	1.59		3.86			319.42	321.15
30	1.55	48	29.92	1.55		3.77			319.33	321.04
May 1	1.52	46	29.99	1.52		3.69			319.25	320.94
2	1.51	42	30.21	1.50		3.64			319.20	320.88
3	1.68	46	30.42	1.66		4.03			319.59	321.36
4	1.57	46	30.29	1.55		3.77			319.33	321.04
5	1.68	47	30.06	1.68		4.08			319.64	321.42
6	1.55	34	29.62	1.57		3.81			319.37	321.09
7	1.57	47	29.42	1.60		3.89			319.45	321.19
8	1.56	46	29.69	1.57		3.81			319.37	321.09
9	1.63	47	29.85	1.64		3.98			319.54	321.30
10	1.68	45	29.85	1.69		4.11			319.67	321.45
11	1.69	47	29.79	1.70		4.13			319.69	321.48
12	1.67	46	29.76	1.68		4.08			319.64	321.42
13	1.72	47	29.73	1.73		4.20			319.76	321.56
14	1.54	48	29.72	1.55		3.77			319.33	321.04
15	1.59	45	29.84	1.60		3.89			319.45	321.19
16	1.82	46	29.82	1.83		4.45			320.01	321.87
17	1.60	48	30.10	1.59		3.86			319.42	321.15
18	1.71	40	30.19	1.70		4.13			319.69	321.48
19	-0.81	25	29.89	-0.81		-1.97	4284	321.91	319.94	321.78
20	-0.91	47	29.89	-0.91		-2.21			319.70	321.49

TABLE 10: INDICES OF AIR WITH CONTINUOUS ANALYZER

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8	9	10	11
Day of Month	Observed Scale Difference	Number of Comparisons	Barometric Pressure (inches)	Adjusted Scale Difference	Recorder Scale Factor	Computed Index Difference	Reference Tank No.	Reference Tank Index	Air Index	Manometric Conc. (ppm)
1963										
May 21	-1.23	46	30.26	-1.22	2.43	-2.96	4284	321.91	318.95	320.58
22	-1.21	48	30.44	-1.19		-2.89			319.02	320.66
23	-1.22	47	30.44	-1.20		-2.92			318.99	320.63
24	-1.12	47	30.22	-1.11		-2.70			319.21	320.89
25	-1.07	47	30.21	-1.06		-2.57			319.34	321.05
26	-1.14	48	30.38	-1.12		-2.72			319.19	320.87
27	-1.11	46	30.30	-1.10		-2.67			319.24	320.93
28	-1.13	48	30.25	-1.12		-2.72			319.19	320.87
29	-1.10	46	30.10	-1.09		-2.65			319.26	320.95
30	-1.43	47	30.00	-1.43		-3.47			318.44	319.95
31	-1.66	46	29.78	-1.67		-4.06			317.85	319.24
June 1	-1.48	47	29.71	-1.49		-3.62			318.29	319.77
2	-1.57	46	29.76	-1.58		-3.84			318.07	319.50
3	-1.60	47	29.73	-1.61		-3.91			318.00	319.42
4	-1.61	41	29.65	-1.63		-3.96			317.95	319.36
5	-1.57	47	29.74	-1.58		-3.84			318.07	319.50
6	-1.55	47	29.87	-1.56		-3.79			318.12	319.56
7	-1.68	17	29.85	-1.69		-4.11			317.80	319.17
12	-1.67	16	29.86	-1.68		-4.08			317.83	319.21
13	-1.67	46	29.88	-1.68		-4.08			317.83	319.21
14	-1.74	47	30.00	-1.74		-4.23			317.68	319.03
15	-1.84	45	30.07	-1.83		-4.45			317.46	318.76
16	-1.80	47	30.06	-1.80		-4.37			317.54	318.86
17	-1.95	46	30.08	-1.94		-4.71			317.20	318.44
18	-2.04	19	30.05	-2.03		-4.93			316.98	318.18
19	-1.81	13	30.02	-1.81		-4.40			317.51	318.82

TABLE 10: INDICES OF AIR WITH CONTINUOUS ANALYZER

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8	9	10	11
Day of Month	Observed Scale Difference	Number of Comparisons	Barometric Pressure (inches)	Adjusted Scale Difference	Recorder Scale Factor	Computed Index Difference	Reference Tank No.	Reference Tank Index	Air Index	Manometric Conc. (ppm)
1963										
June 20	-1.70	47	29.97	-1.70	2.43	-4.13	4284	321.91	317.78	319.15
21	-1.69	47	29.82	-1.70		-4.13			317.78	319.15
22	-1.77	46	29.43	-1.80		-4.37			317.54	318.86
23	-2.01	45	29.35	-2.05		-4.98			316.93	318.11
24	-2.10	45	29.53	-2.13		-5.17			316.74	317.88
25	-1.99	47	29.76	-2.00		-4.86			317.05	318.26
26	-1.79	48	29.81	-1.80		-4.37			317.54	318.86
27	-1.87	46	29.60	-1.89		-4.59			317.32	318.59
28	-2.03	46	29.76	-2.05		-4.98			316.93	318.11
29	-2.01	23	29.93	-2.01		-4.88			317.03	318.24
30	-2.33	47	29.77	-2.35		-5.71			316.20	317.23
July 1	1.52	46	29.68	1.53		3.72	3757	312.30	316.22	317.25
2	1.72	48	29.75	1.73		4.20			316.70	317.83
3	1.56	45	29.66	1.58		3.84			316.34	317.38
4	1.57	47	29.52	1.59		3.86			316.36	317.42
5	1.58	38	29.89	1.58		3.84			316.34	317.40
6	1.35	30	29.98	1.35		3.28	4272	312.28	315.62	316.52
7	1.01	47	29.95	1.01		2.45			314.79	315.51
8	1.24	46	30.05	1.24		3.01			315.35	316.19
9	1.17	47	30.08	1.17		2.84			315.18	315.98
10	1.36	46	30.01	1.36		3.30			315.64	316.54
11	1.08	45	29.90	1.08		2.62			314.96	315.71
12	1.25	46	30.01	1.25		3.04			315.38	316.23
13	1.42	46	30.15	1.41		3.43			314.77	315.48
14	1.50	48	30.05	1.50		3.64			315.98	316.96
15	1.43	48	29.78	1.44		3.50			315.84	316.79

TABLE 10: INDICES OF AIR WITH CONTINUOUS ANALYZER

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8	9	10	11
Day of Month	Observed Scale Difference	Number of Comparisons	Barometric Pressure (inches)	Adjusted Scale Difference	Recorder Scale Factor	Computed Index Difference	Reference Tank No.	Reference Tank Index	Air Index	Manometric Conc. (ppm)
1963										
July 16	1.05	46	29.57	1.06	2.43	2.57	4272	312.28	314.85	315.58
17	0.59	47	29.53	0.60		1.46			313.74	314.23
18	0.40	43	29.76	0.40		0.97			313.25	313.63
19	0.57	47	29.96	0.57		1.38			313.66	314.13
20	0.03	46	29.96	0.03		0.07			312.35	312.53
21	0.03	48	29.79	0.03		0.07			312.35	312.53
22	0.03	47	29.65	0.03		0.07			312.35	312.53
23	-0.69	41	29.45	-0.70		-1.70			310.58	310.38
24	-1.56	44	29.53	-1.58		-3.84	18204	314.49	310.65	310.46
25	-2.36	48	29.69	-2.38		-5.78			308.71	308.10
26	-2.18	46	29.65	-2.20		-5.35			309.14	308.62
27	-1.51	48	29.82	-1.52		-3.69			310.80	310.64
28	-2.25	46	29.75	-2.27		-5.52			308.97	308.41
29	-1.02	34	30.01	-1.02		-2.48			312.01	312.12
30	-0.88	41	29.82	-0.88		-2.14			312.35	312.53
31	-1.27	20	29.70	-1.28		-3.11			311.38	311.35
Aug. 1	-1.26	46	29.59	-1.28		-3.11			311.38	311.35
2	-1.37	48	29.62	-1.39		-3.38			311.11	311.02
3	-1.42	42	29.67	-1.43		-3.47			311.02	310.91
4	-1.10	48	29.83	-1.10		-2.67			311.82	311.89
5	-1.33	46	29.91	-1.33		-3.23			311.26	311.21
6	-1.79	47	29.69	-1.81		-4.40			310.09	309.78
7	-2.06	46	29.52	-2.09		-5.08			309.41	308.95
8	-2.24	48	29.49	-2.28		-5.54			308.95	308.39
9	-1.99	46	29.58	-2.02		-4.91			309.58	309.16
10	-1.84	36	30.07	-1.83		-4.45			310.04	309.72

TABLE 10: INDICES OF AIR WITH CONTINUOUS ANALYZER

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8	9	10	11
Day of Month	Observed Scale Difference	Number of Comparisons	Barometric Pressure (inches)	Adjusted Scale Difference	Recorder Scale Factor	Computed Index Difference	Reference Tank No.	Reference Tank Index	Air Index	Manometric Conc. (ppm)
1963										
Aug. 11	-2.06	34	30.11	-2.05	2.43	-4.98	18204	314.49	309.51	309.07
12	-2.34	28	30.08	-2.33		-5.66			308.83	308.37
13	-2.33	48	30.03	-2.33		-5.66			308.83	308.24
14	-2.41	46	29.82	-2.42		-5.88			308.61	307.98
15	-2.05	45	29.42	-2.09		-5.08			309.41	308.95
16	-2.05	47	29.71	-2.07		-5.03			309.46	309.01
17	-2.29	48	29.59	-2.32		-5.64			308.85	308.27
18	-1.89	46	29.58	-1.92		-4.66			309.83	309.46
19	-2.06	48	30.01	-2.06		-5.00			309.49	309.05
20	-2.22	47	30.00	-2.22		-5.39			309.10	308.57
21	-2.71	33	29.97	-2.71		-6.58			307.91	307.12
22	-2.91	48	29.62	-2.94		-7.14			307.35	306.44
23	-2.56	40	29.57	-2.59		-6.29			308.20	307.48
24	-1.22	47	29.80	-1.23		-2.99			311.50	311.50
25	-2.07	45	29.65	-2.09		-5.08			309.41	308.95
26	-2.16	48	29.70	-2.18		-5.30			309.19	308.68
27	-1.16	46	29.93	-1.16		-2.82			311.67	311.70
28	-1.35	48	30.03	-1.35		-3.28			311.21	311.14
29	-1.12	46	30.08	-1.12		-2.72			311.77	311.83
30	-1.70	48	29.97	-1.70		-4.13			310.36	310.11
31	-1.78	48	30.05	-1.78		-4.32			310.17	310.60
Sept. 1	-1.70	45	30.13	-1.69		-4.11			310.38	310.13
2	-1.72	37	30.09	-1.71		-4.15			310.34	310.08
6	-1.52	20	30.11	-1.51		-3.67	3757	312.30	308.63	308.00
7	-1.47	46	30.15	-1.46		-3.55			308.75	308.15
8	-1.38	48	30.20	-1.37		-3.33			308.97	308.41

TABLE 10: INDICES OF AIR WITH CONTINUOUS ANALYZER

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8	9	10	11
Day of Month	Observed Scale Difference	Number of Comparisons	Barometric Pressure (inches)	Adjusted Scale Difference	Recorder Scale Factor	Computed Index Difference	Reference Tank No.	Reference Tank Index	Air Index	Manometric Conc. (ppm)
1963										
Sept. 9	-1.36	48	30.22	-1.35	2.43	-3.28	3757	312.30	309.02	308.48
10	-1.34	34	30.22	-1.33		-3.23			309.07	308.54
11	-1.07	8	30.20	-1.06		-2.57			309.73	309.34
12	-1.42	32	30.17	-1.41		-3.43			308.87	308.29
13	-1.21	48	30.09	-1.21		-2.94			309.36	308.89
14	-0.17	47	30.03	-0.17		-0.41			311.89	311.97
15	-0.82	48	29.94	-0.82		-1.99			310.31	310.05
16	-0.36	46	29.66	-0.36		-0.87			311.43	311.41
17	-0.74	32	29.75	-0.74		-1.80			310.50	310.28
18	-0.72	48	30.01	-0.72		-1.75			310.55	310.34
19	-0.71	46	30.07	-0.71		-1.72			310.58	310.38
20	-0.31	48	29.75	-0.31		-0.75			311.55	311.56
21	-0.89	47	29.79	-0.90		-2.19			310.11	309.80
22	-1.09	45	29.95	-1.09		-2.65			309.65	309.24
23	-1.07	9	29.95	-1.07		-2.60	4272	312.28	309.68	309.28
24	0.17	48	29.80	0.17		0.41			312.69	312.95
25	1.82	48	29.70	1.84		4.47			316.75	317.90
26	0.22	20	29.66	0.22		0.53			312.81	313.09
27	-0.06	16	29.46	-0.06		-0.14			312.14	312.28
28	0.94	46	29.34	0.96		2.33			314.61	315.29
29	0.40	48	29.40	0.41		1.00			313.28	313.67
30	-0.11	48	29.65	-0.11		-0.27			312.01	312.45
Oct. 1	-0.20	45	29.85	-0.20		-0.49			311.79	311.85
2	-0.27	47	29.91	-0.27		-0.66			311.62	311.64

TABLE 11: MONTHLY AVERAGE INDEX OF CARBON DIOXIDE (ppm) AT BARROW, ALASKA

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8	9
Month	Number of Days	Index	Month	Number of Days	Index	Month	Number of Days	Index
	1961			1962			1963	
Jan.	---	---	Jan.	26	320.33	Jan.	27	317.73
Feb.	---	---	Feb.	28	319.44	Feb.	28	318.87
Mar.	---	---	Mar.	29	317.63	Mar.	30	319.48
Apr.	---	---	Apr.	30	318.00	Apr.	15	318.92
May	---	---	May	31	318.80	May	31	319.34
June	---	---	June	30	317.44	June	26	317.51
July	21	310.77	July	31	311.89	July	31	313.63
Aug.	24	307.87	Aug.	29	307.64	Aug.	31	309.85
Sept.	23	310.39	Sept.	28	309.67	Sept.	27	310.88
Oct.	28	314.45	Oct.	30	312.78	Oct.	---	----
Nov.	18	315.31	Nov.	30	315.93	Nov.	---	----
Dec.	14	316.12	Dec.	31	317.17	Dec.	---	----

TABLE 12: MONTHLY AVERAGE INDEX OF CARBON DIOXIDE (ppm) AT BARROW, ALASKA

MANOMETRIC CONCENTRATION SCALE

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8	9
Month	Number of Days	Index	Month	Number of Days	Index	Month	Number of Days	Index
	1961			1962			1963	
Jan.	---	---	Jan.	26	322.26	Jan.	27	319.09
Feb.	---	---	Feb.	28	321.17	Feb.	28	320.47
Mar.	---	---	Mar.	29	318.96	Mar.	30	321.22
Apr.	---	---	Apr.	30	319.42	Apr.	15	320.53
May	---	---	May	31	320.43	May	31	321.06
June	---	---	June	30	318.69	June	26	318.82
July	21	310.61	July	31	311.97	July	31	314.09
Aug.	24	307.07	Aug.	29	306.76	Aug.	31	309.51
Sept.	23	310.15	Sept.	28	309.26	Sept.	27	310.75
Oct.	28	315.09	Oct.	30	313.06	Oct.	--	----
Nov.	18	316.14	Nov.	30	316.90	Nov.	--	----
Dec.	14	317.13	Dec.	31	318.41	Dec.	--	----
Average of Monthly Values		312.70			316.44			317.28

TABLE 13: VALUES OF TABLE 12 REFERRED TO A CONSTANT DATUM (JANUARY 1960)

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6
Month	Concentration of CO_2 (ppm)				Departure of Average from Annual Mean
	1961	1962	1963	Average 1961-1963	
January	--	320.82	316.93	318.87	-4.11
February	--	319.67	318.25	318.96	-4.20
March	--	317.40	318.94	318.17	-3.41
April	--	317.80	318.19	317.99	-3.23
May	--	318.75	318.66	318.70	-3.94
June	--	316.95	316.36	316.65	-1.89
July	309.53	310.17	311.57	310.42	4.34
August	305.93	304.90	306.93	305.92	8.84
September	308.95	307.34	308.11	308.13	6.63
October	313.83	311.08	--	312.45	2.31
November	314.82	314.86	--	314.84	-0.08
December	315.75	316.31	--	316.03	-1.27
Annual Mean				314.76	

TABLE 14: TWELVE MONTH RUNNING MEAN CONCENTRATION OF ATMOSPHERIC CARBON DIOXIDE AT BARROW, ALASKA

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col:	1	2	3
	Month	Concentration of CO_2 (ppm)	
		1962	1963
	January	316.43	316.46
	February	316.54	316.64
	March	316.51	316.87
	April	316.44	316.99
	May	316.27	
	June	316.33	
	July	316.44	
	August	316.18	
	September	316.12	
	October	316.31	
	November	316.40	
	December	316.45	

TABLE 15: DIURNAL COURSE OF CARBON DIOXIDE

BARROW, ALASKA CARBON DIOXIDE PROJECT

1961

Month:	July		August		September	
A.S.T.*	Index	Manometer (ppm)	Index	Manometer (ppm)	Index	Manometer (ppm)
00-01	310.80	310.64	307.75	306.93	310.44	310.21
01-02	310.82	310.67	307.93	307.15	310.58	310.38
02-03	311.15	311.07	307.93	307.15	310.60	310.40
03-04	310.91	310.78	308.67	308.05	310.72	310.55
04-05	311.42	311.40	308.83	308.24	310.87	310.73
05-06	311.24	311.18	308.88	308.31	310.78	310.62
06-07	311.15	311.07	308.73	308.12	310.78	310.62
07-08	311.35	311.32	309.34	308.87	310.74	310.57
08-09	311.13	311.05	308.79	308.20	310.82	310.67
09-10	310.86	310.72	308.23	307.51	311.08	310.99
10-11	310.54	310.33	308.09	307.34	310.65	310.46
11-12	310.59	310.39	307.92	307.14	310.69	310.51
12-13	310.83	310.68	307.49	306.61	310.36	310.11
13-14	310.81	310.66	307.36	306.45	310.49	310.27
14-15	310.66	310.47	307.46	306.57	310.43	310.19
15-16	310.53	310.32	307.46	306.57	310.59	310.39
16-17	310.85	310.71	307.73	306.90	310.43	310.19
17-18	309.88	309.52	307.55	306.68	310.62	310.43
18-19	309.99	309.66	307.62	306.77	310.54	310.33
19-20	309.94	309.60	307.61	306.76	310.31	310.05
20-21	310.28	310.01	307.85	307.05	310.01	309.68
21-22	310.71	310.54	307.48	306.60	310.07	309.76
22-23	310.33	310.07	307.26	306.33	310.58	310.38
23-24	310.15	309.85	307.38	306.48	310.86	310.72

* Alaska Standard Time

TABLE 15: DIURNAL COURSE OF CARBON DIOXIDE

BARROW, ALASKA CARBON DIOXIDE PROJECT

1961

Month:	October		November		December	
A.S.T.*	Index	Manometer (ppm)	Index	Manometer (ppm)	Index	Manometer (ppm)
00-01	314.44	315.08	315.25	316.07	316.04	317.03
01-02	314.32	314.93	315.30	316.13	316.01	316.99
02-03	314.48	315.13	315.29	316.12	316.05	317.04
03-04	314.41	315.04	315.32	316.15	316.03	317.02
04-05	314.45	315.09	315.37	316.21	315.99	316.97
05-06	314.41	315.04	315.37	316.21	316.02	317.01
06-07	314.57	315.24	315.37	316.21	316.21	317.24
07-08	314.42	315.06	315.23	316.04	316.27	317.31
08-09	314.61	315.29	315.34	316.18	316.28	317.32
09-10	314.35	314.97	315.36	316.20	316.38	317.44
10-11	314.55	315.21	315.58	316.47	316.50	317.59
11-12	314.51	315.17	315.77	316.70	316.37	317.43
12-13	314.34	314.96	315.44	316.30	316.07	317.07
13-14	314.33	314.95	315.71	316.63	316.06	317.05
14-15	314.38	315.01	315.56	316.45	316.04	317.03
15-16	314.48	315.13	315.54	316.42	316.02	317.01
16-17	314.42	315.06	315.42	316.27	315.89	316.85
17-18	314.27	314.87	315.58	316.47	315.95	316.92
18-19	314.33	314.95	315.60	316.49	316.03	317.02
19-20	314.44	315.08	315.56	316.45	316.05	317.04
20-21	314.37	315.00	315.45	316.31	316.09	317.09
21-22	314.53	315.19	315.39	316.24	316.28	317.32
22-23	314.38	315.01	315.30	316.13	316.08	317.08
23-24	314.37	315.00	315.56	316.45	316.10	317.10

* Alaska Standard Time

TABLE 15: DIURNAL COURSE OF CARBON DIOXIDE

BARROW, ALASKA CARBON DIOXIDE PROJECT

1962

Month:	January		February		March	
A.S.T.*	Index	Manometer (ppm)	Index	Manometer (ppm)	Index	Manometer (ppm)
00-01	317.65	318.99	317.78	319.15	317.83	319.21
01-02	317.68	319.03	317.82	319.20	317.77	319.14
02-03	317.58	318.91	317.85	319.24	317.87	319.26
03-04	317.58	318.91	317.88	319.27	317.88	319.27
04-05	317.58	318.91	317.84	319.22	317.97	319.38
05-06	317.79	319.16	317.86	319.25	317.99	319.41
06-07	318.01	319.43	317.85	319.24	317.96	319.37
07-08	317.52	318.83	317.86	319.25	317.96	319.37
08-09	318.00	319.42	317.95	319.36	317.94	319.35
09-10	317.72	319.08	317.95	319.36	317.94	319.35
10-11	317.55	318.87	317.73	319.09	317.83	319.21
11-12	317.46	318.76	317.79	319.16	317.90	319.30
12-13	317.45	318.75	317.75	319.11	317.83	319.21
13-14	317.22	318.47	317.82	319.20	317.81	319.19
14-15	317.52	318.83	317.96	319.37	317.89	319.28
15-16	317.46	318.76	317.91	319.31	317.83	319.21
16-17	317.38	318.66	317.78	319.15	317.87	319.26
17-18	317.27	318.53	317.76	319.13	317.87	319.26
18-19	317.32	318.59	317.62	318.96	317.64	318.98
19-20	317.58	318.91	317.80	319.17	317.83	319.21
20-21	317.10	318.32	317.90	319.30	317.75	319.11
21-22	317.64	318.98	317.91	319.31	317.77	319.14
22-23	317.63	318.97	317.95	319.36	317.81	319.19
23-24	317.72	319.08	317.98	319.39	317.82	319.20

* Alaska Standard Time

TABLE 15: DIURNAL COURSE OF CARBON DIOXIDE

BARROW, ALASKA CARBON DIOXIDE PROJECT

1962

Month:	April		May		June	
A.S.T.*	Index	Manometer (ppm)	Index	Manometer (ppm)	Index	Manometer (ppm)
00-01	317.97	319.38	318.95	320.58	317.23	318.48
01-02	317.97	319.38	318.95	320.58	317.55	318.87
02-03	318.03	319.46	319.04	320.69	317.53	318.85
03-04	318.06	319.49	319.09	320.75	317.44	318.74
04-05	318.08	319.52	319.05	320.70	317.52	318.83
05-06	318.15	319.60	319.08	320.73	317.24	318.49
06-07	318.18	319.64	319.03	320.67	317.59	318.92
07-08	318.24	319.71	319.05	320.70	317.50	318.81
08-09	318.03	319.46	319.01	320.65	317.35	318.63
09-10	317.94	319.35	318.89	320.50	317.31	318.58
10-11	318.07	319.50	318.91	320.53	317.31	318.58
11-12	318.04	319.47	318.81	320.41	317.51	318.82
12-13	318.01	319.43	318.68	320.25	317.34	318.61
13-14	317.95	319.36	318.64	320.20	317.37	318.65
14-15	317.90	319.30	318.65	320.21	317.54	318.86
15-16	317.96	319.37	318.63	320.19	317.35	318.63
16-17	317.80	319.17	318.57	320.11	317.21	318.46
17-18	317.73	319.09	318.45	319.97	317.00	318.20
18-19	317.72	319.08	318.43	319.94	317.07	318.29
19-20	317.94	319.35	318.58	320.13	317.05	318.26
20-21	318.09	319.53	318.76	320.34	317.10	318.32
21-22	318.12	319.56	318.70	320.27	317.02	318.22
22-23	318.19	319.65	318.90	320.52	316.96	318.15
23-24	318.08	319.52	318.96	320.59	316.88	318.05

* Alaska Standard Time

TABLE 15: DIURNAL COURSE OF CARBON DIOXIDE

BARROW, ALASKA CARBON DIOXIDE PROJECT

1962

Month:	July		August		September	
A.S.T. *	Index	Manometer (ppm)	Index	Manometer (ppm)	Index	Manometer (ppm)
00-01	312.26	312.42	307.75	306.93	309.83	309.46
01-02	312.39	312.58	307.68	306.84	309.96	309.62
02-03	313.01	313.34	307.70	306.87	309.96	309.62
03-04	312.54	312.77	307.88	307.09	310.02	309.69
04-05	312.60	312.84	308.07	307.32	310.00	309.67
05-06	312.33	312.51	307.70	306.87	310.10	309.79
06-07	312.38	312.57	307.77	306.95	310.02	309.69
07-08	312.30	312.47	307.52	306.65	309.80	309.43
08-09	312.09	312.22	307.41	306.51	310.05	309.73
09-10	311.90	311.99	307.44	306.55	309.99	309.66
10-11	312.14	312.28	306.90	305.89	309.85	309.49
11-12	312.05	312.17	307.07	306.10	309.66	309.26
12-13	311.43	311.41	307.26	306.33	309.49	309.05
13-14	311.69	311.73	307.43	306.54	309.56	309.13
14-15	311.29	311.24	307.24	306.31	309.33	308.85
15-16	311.31	311.27	307.00	306.01	309.68	309.28
16-17	311.37	311.34	307.44	306.55	309.65	309.24
17-18	311.44	311.42	307.18	306.23	309.73	309.34
18-19	311.58	311.60	307.23	306.29	309.93	309.58
19-20	311.72	311.77	307.64	306.79	310.09	309.78
20-21	311.70	311.74	308.32	307.62	310.20	309.91
21-22	311.72	311.77	308.28	307.57	310.28	310.01
22-23	311.73	311.78	307.92	307.14	310.21	309.93
23-24	311.98	312.08	307.88	307.09	310.12	309.82

* Alaska Standard Time

TABLE 15: DIURNAL COURSE OF CARBON DIOXIDE

BARROW, ALASKA CARBON DIOXIDE PROJECT

1962

Month:	October		November		December	
A.S.T. *	Index	Manometer (ppm)	Index	Manometer (ppm)	Index	Manometer (ppm)
00-01	312.76	313.03	315.92	316.88	317.22	318.47
01-02	312.80	313.08	315.91	316.87	317.18	318.42
02-03	312.76	313.03	315.98	316.96	317.12	318.35
03-04	312.79	313.07	316.00	316.98	317.24	318.49
04-05	312.92	313.23	316.02	317.01	317.32	318.59
05-06	312.97	313.29	316.01	316.99	317.26	318.52
06-07	312.89	313.19	316.01	316.99	317.20	318.44
07-08	312.69	312.95	315.95	316.92	317.20	318.44
08-09	312.82	313.11	316.01	316.99	317.21	318.46
09-10	312.74	313.01	315.96	316.93	317.13	318.36
10-11	312.95	313.26	315.93	316.90	317.08	318.30
11-12	312.95	313.26	315.81	316.75	316.96	318.15
12-13	312.62	312.86	315.65	316.56	317.06	318.27
13-14	313.18	313.55	315.80	316.74	317.21	318.46
14-15	313.20	313.57	315.66	316.57	317.13	318.36
15-16	313.24	313.62	315.63	316.53	316.91	318.09
16-17	313.17	313.53	315.73	316.65	316.88	318.05
17-18	312.90	313.20	315.84	316.79	317.03	318.24
18-19	312.81	313.09	315.87	316.82	316.94	318.13
19-20	312.95	313.26	315.94	316.91	317.12	318.35
20-21	312.92	313.23	316.00	316.98	317.18	318.42
21-22	313.01	313.34	316.07	317.07	317.23	318.60
22-23	313.06	313.40	315.90	316.86	317.29	318.55
23-24	312.98	313.30	315.85	316.80	317.21	318.46

* Alaska Standard Time

TABLE 15: DIURNAL COURSE OF CARBON DIOXIDE

BARROW, ALASKA CARBON DIOXIDE PROJECT

1963

Month:	January		February		March	
A.S.T. *	Index	Manometer (ppm)	Index	Manometer (ppm)	Index	Manometer (ppm)
00-01	317.70	319.05	318.93	320.55	319.46	321.20
01-02	317.79	319.16	319.00	320.64	319.59	321.36
02-03	317.82	319.20	319.00	320.64	319.65	321.43
03-04	317.83	319.21	318.98	320.61	319.58	321.34
04-05	317.90	319.30	318.87	320.48	319.55	321.31
05-06	317.88	319.27	318.90	320.52	319.48	321.22
06-07	317.87	319.26	318.86	320.47	319.55	321.31
07-08	317.82	319.20	318.90	320.52	319.62	321.39
08-09	317.86	319.25	318.96	320.59	319.57	321.33
09-10	317.78	319.15	318.90	320.52	319.57	321.33
10-11	317.63	318.97	318.90	320.52	319.61	321.38
11-12	317.62	318.96	318.89	320.50	319.52	321.27
12-13	317.82	319.20	318.78	320.37	319.37	321.09
13-14	317.85	319.24	318.80	320.39	319.50	321.25
14-15	317.72	319.08	318.96	320.59	319.39	321.11
15-16	317.73	319.09	318.79	320.38	319.39	321.11
16-17	317.70	319.05	318.76	320.34	319.70	321.49
17-18	317.72	319.08	318.76	320.34	319.39	321.11
18-19	317.72	319.08	318.82	320.42	319.19	320.87
19-20	317.71	319.07	319.01	320.65	319.38	321.10
20-21	317.75	319.11	318.98	320.61	319.40	321.12
21-22	317.80	319.17	318.91	320.53	319.49	321.23
22-23	317.85	319.24	318.88	320.49	319.54	321.30
23-24	317.87	319.26	318.87	320.48	319.53	321.28

* Alaska Standard Time

TABLE 15: DIURNAL COURSE OF CARBON DIOXIDE

BARROW, ALASKA CARBON DIOXIDE PROJECT

1963

Month:	April		May		June	
A.S.T. *	Index	Manometer (ppm)	Index	Manometer (ppm)	Index	Manometer (ppm)
00-01	318.81	320.41	319.18	320.86	317.45	318.75
01-02	318.88	320.49	319.22	320.91	317.44	318.74
02-03	318.96	320.59	319.26	320.95	317.46	318.76
03-04	318.95	320.58	319.28	320.98	317.40	318.69
04-05	319.00	320.64	319.30	321.00	317.46	318.76
05-06	319.03	320.67	319.28	320.98	317.46	318.76
06-07	319.06	320.71	319.26	320.95	317.52	318.83
07-08	319.00	320.64	319.32	321.03	317.60	318.93
08-09	319.05	320.70	319.39	321.11	317.62	318.96
09-10	319.15	320.82	319.44	321.17	317.79	319.16
10-11	319.00	320.64	319.46	321.20	317.63	318.97
11-12	318.83	320.43	319.41	321.14	317.72	319.08
12-13	318.89	320.50	319.42	321.15	317.61	318.94
13-14	319.14	320.81	319.45	321.19	317.68	319.03
14-15	319.11	320.77	319.46	321.20	317.68	319.03
15-16	319.00	320.64	319.29	320.99	317.62	318.96
16-17	319.04	320.69	319.26	320.95	317.59	318.92
17-18	318.86	320.47	319.28	320.98	317.53	318.85
18-19	318.76	320.34	319.31	321.02	317.51	318.82
19-20	318.97	320.60	319.32	321.03	317.57	318.89
20-21	318.84	320.44	319.33	321.04	317.48	318.79
21-22	318.82	320.42	319.28	320.98	317.38	318.66
22-23	318.89	320.50	319.21	320.89	317.39	318.68
23-24	318.77	320.36	319.17	320.84	317.39	318.68

* Alaska Standard Time

TABLE 15: DIURNAL COURSE OF CARBON DIOXIDE

BARROW, ALASKA CARBON DIOXIDE PROJECT

1963

Month:	July		August		September	
A.S.T.	Index	Manometer (ppm)	Index	Manometer (ppm)	Index	Manometer (ppm)
00-01	313.87	314.39	309.88	309.52	311.26	311.21
01-02	313.76	314.25	310.00	309.67	311.21	311.14
02-03	313.74	314.23	310.14	309.84	311.11	311.02
03-04	313.67	314.14	310.17	309.88	310.96	310.84
04-05	313.61	314.07	310.30	310.04	311.10	311.01
05-06	313.48	313.91	310.21	309.93	311.00	310.89
06-07	313.49	313.92	310.15	309.85	310.93	310.80
07-08	313.50	313.94	309.95	309.61	310.94	310.82
08-09	313.66	314.13	309.96	309.62	310.96	310.84
09-10	313.65	314.12	310.13	309.83	310.89	310.75
10-11	313.77	314.26	310.08	309.77	310.91	310.78
11-12	313.62	314.08	310.01	309.68	311.01	310.90
12-13	313.79	314.29	309.94	309.60	311.01	310.90
13-14	313.74	314.23	309.88	309.52	311.02	310.91
14-15	314.02	314.57	309.80	309.43	310.98	310.86
15-16	313.48	313.91	310.06	309.74	310.87	310.73
16-17	313.62	314.08	309.73	309.34	310.84	310.69
17-18	313.41	313.83	309.73	309.34	310.79	310.63
18-19	313.67	314.14	309.58	309.16	310.83	310.68
19-20	313.63	314.09	309.59	309.17	310.84	310.69
20-21	313.65	314.12	309.54	309.11	311.00	310.89
21-22	313.67	314.14	309.73	309.34	311.25	311.19
22-23	313.62	314.08	309.75	309.37	310.95	310.83
23-24	313.58	314.03	309.82	309.45	311.26	311.21

TABLE 16: INDICES AND MANOMETRIC CONCENTRATIONS OF FLASK SAMPLES AT BARROW, ALASKA

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col:	1	2	3	4	5	6	7	8	9
	Flask No.	Date	Local Time	Place and Observer	Index (ppm)	Average Index (ppm)	Manometric conc. (ppm)	Manometric Av. Conc. (ppm)	Sheet No.
		1961							
	i-3	Sept. 15	1030	PB-JK	309.22		308.70		230
	i-4	Sept. 15	1030	PB-JK	309.32	309.27	308.85	308.77	230
	i-7	Oct. 16	1600	PB-JK	313.22		313.61		230
	i-8	Oct. 16	1600	PB-JK	313.13	313.17	313.50	313.55	230
	i-9	Nov. 22	1500	PB-JK	314.86*		315.59		235
	i-10	Nov. 22	1500	PB-JK	315.23	314.86*	316.04	315.59	235
	i-11	Dec. 12	1415	PB-JK	320.62		--		235
	i-12	Dec. 12	1415	PB-JK	316.51*	316.51*	317.60	317.60	235
	I-129	Dec. 15	1400	PB-JK	317.89		319.28		248
	I-132	Dec. 15	1400	PB-JK	318.07	317.98	319.50	319.39	248

* Single Flask Values Only.

TABLE 16: INDICES AND MANOMETRIC CONCENTRATIONS OF FLASK SAMPLES AT BARROW, ALASKA

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8	9
Flask No.	Date	Local Time	Place and Observer	Index (ppm)	Average Index (ppm)	Manometric Conc. (ppm)	Manometric Av. Conc. (ppm)	Sheet No.
	1962							
I-128	Jan. 1	1545	PB-JK	317.76		319.13		246
I-131	Jan. 1	1545	PB-JK	317.10*	317.10*	318.32	318.32	246
I-127	Jan. 15	1545	PB-JK	317.42		318.71		248
I-130	Jan. 15	1545	PB-JK	317.33	317.37	318.60	318.65	248
I-124	Feb. 1	1530	PB-JK	317.94		319.35		245
I-125	Feb. 1	1530	PB-JK	317.98	317.96	319.39	319.37	248
I-121	Feb. 15	1530	PB-JK	318.89		320.50		245
I-122	Feb. 15	1530	PB-JK	318.70	318.79	320.27	320.38	245
I-123	Mar. 1	1445	PB-JK	317.57		318.89		245
I-126	Mar. 1	1445	PB-JK	317.76	317.66	319.13	319.01	246
L-91	Mar. 15	1845	PB-JK	317.28		318.55		245
L-92	Mar. 15	1845	PB-JK	317.28	317.28	318.55	318.55	245
L-9	Apr. 2	1550	PB-JK	317.18		318.42		251
L-10	Apr. 2	1550	PB-JK	317.37	317.27	318.65	318.53	251
I-137	Apr. 15	1430	PB-DB	318.03		319.46		254
I-138	Apr. 15	1430	PB-DB	318.03	318.03	319.46	319.46	254
I-135	May 1	1550	PB-DB	319.14		320.81		254
I-139	May 1	1550	PB-DB	319.14	319.14	320.81	320.81	254

* Single Flask Values Only.

TABLE 16: INDICES AND MANOMETRIC CONCENTRATIONS OF FLASK SAMPLES AT BARROW, ALASKA

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col:	1	2	3	4	5	6	7	8	9
	Flask No.	Date	Local Time	Place and Observer	Index (ppm)	Average Index (ppm)	Manometric Conc. (ppm)	Manometric Av. Conc. (ppm)	Sheet No.
		1962							
	I-140	May 15	1500	PB-DB	318.96		320.59		253
	I-141	May 15	1500	PB-DB	318.96	318.96	320.59	320.59	253
	I-142	June 1	1520	PB-DB	318.77		320.36		254
	L-60	June 1	1520	PB-PD	318.93	318.85	320.55	320.45	251
	I-143	June 15	1445	PB-JK	318.40		319.91		253
	I-144	June 15	1445	PB-JK	318.40	318.40	319.91	319.91	253
	I-2	July 1	1355	PB-DB	314.48		315.08		268
	I-1	July 1	1355	PB-DB	314.59	314.53	315.21	315.14	268
	I-3	July 15	1340	PB-JK	313.24		313.57		268
	I-4	July 15	1340	PB-JK	313.04	313.14	313.31	313.44	268
	I-6	Aug. 1	1300	PB-JK	310.35		310.05		268
	I-5	Aug. 1	1300	PB-JK	310.35	310.35	310.05	310.05	268
	I-7	Aug. 15	1045	PB-DB	307.45		306.56		268
	I-8	Aug. 15	1045	PB-DB	307.45	307.45	306.56	306.56	268
	I-9	Sept. 1	0900	PB-DB	308.28		307.54		266
	I-192	Sept. 1	0900	PB-DB	308.39	308.33	307.66	307.60	266
	I-10	Sept.15	1600	PB-JU	308.90		308.33		268
	I-11	Sept.15	1600	PB-JU	309.10	309.00	308.57	308.45	268

TABLE 16: INDICES AND MANOMETRIC CONCENTRATIONS OF FLASK SAMPLES AT BARROW, ALASKA

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col:	1	2	3	4	5	6	7	8	9
	Flask No.	Date	Local Time	Place and Observer	Index (ppm)	Average Index (ppm)	Manometric Conc. (ppm)	Manometric Av. Conc. (ppm)	Sheet No.
		1962							
	251	Oct. 1	1400	PB-JU	312.29		312.46		276
	252	Oct. 1	1400	PB-JU	312.29	312.29	312.46	312.46	276
	249	Oct. 15	1450	PB-DB	312.66		312.90		276
	250	Oct. 15	1450	PB-DB	312.47	312.56	312.67	312.78	276
	181	Nov. 1	1500	PB-JU	316.03		317.01		276
	182	Nov. 1	1500	PB-JU	316.03	316.03	317.01	317.01	276
	183	Nov. 15	1300	PB-JU	316.40		317.46		276
	184	Nov. 15	1300	PB-JU	316.50	316.45	317.57	317.51	276
	231	Dec. 15	1100	PB-JU	317.06		318.25		278
	232	Dec. 15	1100	PB-JU	316.96	317.01	318.14	318.19	278

TABLE 16: INDICES AND MANOMETRIC CONCENTRATIONS OF FLASK SAMPLES AT BARROW, ALASKA

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col:	1	2	3	4	5	6	7	8	9
	Flask No.	Date	Local Time	Place and Observer	Index (ppm)	Average Index (ppm)	Manometric Conc. (ppm)	Manometric Av. Conc. (ppm)	Sheet No.
		1963							
	i-3	Jan. 1	2230	PB-JK	317.95		319.35		277
	i-4	Jan. 1	2230	PB-JK	318.05	318.00	319.46	319.40	277
	I-1	Feb. 1	1200	PB-JK	320.94		323.00		301
	I-2	Feb. 1	1200	PB-JK	321.05	320.99	323.14	323.07	301
	I-3	Feb. 15	1300	PB-JU	320.07		321.94		302
	I-4	Feb. 15	1300	PB-JU	320.07	320.07	321.94	321.94	302
	I-5	Mar. 1	0900	PB-JU	319.53		321.28		302
	I-6	Mar. 1	0900	PB-JU	319.64	319.58	321.42	321.35	302
	I-8	Mar. 15	1445	PB-DB	320.73		322.75		302
	I-9	Mar. 15	1445	PB-DB	320.62	320.67	322.61	322.68	302
	I-7	Apr. 4	1330	PB-LS	319.77		321.58		340
	I-12	Apr. 4	1330	PB-LS	319.57	319.67	321.33	321.45	340
	I-73	Apr. 16	1600	PB-LS	321.57		323.77		344
	I-74	Apr. 16	1600	PB-LS	321.27	321.42	323.40	323.58	344
	I-181	May 2	1530	PB-LS	320.08		321.95		344
	I-182	May 2	1530	PB-LS	320.27	320.17	322.18	322.06	344
	I-183	May 16	1600	PB-LS	323.06		325.58		344
	I-184	May 16	1600	PB-LS	321.97*	321.97*	324.26	324.26	344
	I-185	June 1	2030	PB-LS	319.98		321.83		344
	I-186	June 1	2030	PB-LS	319.78	319.88	321.59	321.71	344
	I-187	June 17	0900	PB-LS	319.09		320.75		344
	I-188	June 17	0900	PB-LS	318.79	318.94	320.38	320.56	344

* Single Flask Values Only.

TABLE 16: INDICES AND MANOMETRIC CONCENTRATIONS OF FLASK SAMPLES AT BARROW, ALASKA

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col:	1	2	3	4	5	6	7	8	9
	Flask No.	Date	Local Time	Place and Observer	Index (ppm)	Average Index (ppm)	Manometric Conc. (ppm)	Manometric Av. Conc. (ppm)	Sheet No.
		1963							
	I-189	July 1	1600	PB-LS	316.50		317.59		344
	I-190	July 1	1600	PB-LS	316.31	316.40	317.36	317.47	344
	I-191	July 15	1200	PB-LS	316.65*	316.65*	317.77	317.77	346
	I-97	Aug. 1	1130	PB-LS	312.91		313.22		346
	I-98	Aug. 1	1130	PB-LS	312.52	312.71	312.74	312.98	346
	I-99	Aug. 16	1330	PB-LS	311.64		311.67		346
	I-100	Aug. 16	1330	PB-LS	311.34	311.49	311.30	311.48	346
	I-101	Sept. 3	1420	PB-LS	310.95		310.83		342
	I-221	Sept. 3	1420	PB-LS	310.55	310.75	310.34	310.58	346
	I-218	Sept.15	1430	PB-LS	314.29*		314.90		346
	I-222	Sept.15	1430	PB-LS	316.26	314.29*	--	314.90	346
	I-217	Oct. 1	1740	PB-LS	315.28		316.10		346
	I-220	Oct. 1	1740	PB-LS	314.98	315.13	315.74	315.92	346
	I-223	Oct. 15	1400	PB-LS	315.96		316.93		346
	I-226	Oct. 15	1400	PB-LS	315.37	315.66	315.92	316.42	346

* Single Flask Values Only.

TABLE 16: INDICES AND MANOMETRIC CONCENTRATIONS OF FLASK SAMPLES AT BARROW, ALASKA

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col:	1	2	3	4	5	6	7	8	9
	Flask No.	Date	Local Time	Place and Observer	Index	Average Index (ppm)	Manometric conc. (ppm)	Manometric Av. Conc. (ppm)	Sheet No.
		1964							
	UW-16	Mar. 2	1730	PB-LS	321.65		323.87		357
	UW-17	Mar. 2	1730	PB-LS	321.32	321.48	323.46	323.66	357
	UW-18	Apr. 1	1225	PB-BL	323.52*		326.15		357
	UW-19	Apr. 1	1225	PB-BL	336.14	323.52*	--	326.15	357
	UW-20	May 1	1650	PB-BL	322.20		324.54		357
	UW-21	May 1	1650	PB-BL	321.35	321.77	323.50	324.02	357
	UW-22	May 18	1213	PB-BL	322.54*		324.95		357
	UW-23	May 18	1213	PB-BL	324.90	322.54*	--	324.95	357

* Single Flask Values Only.

TABLE 16: INDICES AND MANOMETRIC CONCENTRATIONS OF FLASK SAMPLES AT BARROW, ALASKA

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col:	1	2	3	4	5	6	7	8	9
	Flask No.	Date	Local Time	Place and Observer	Index (ppm)	Average Index (ppm)	Manometric Conc. (ppm)	Manometric Av. Conc. (ppm)	Sheet
		1961							
	i-2	Aug. 19	1545	AR-HP	307.83	307.83	307.03	307.03	230
	i-5	Sept. 18	1645	AR-JK	310.06		309.74		230
	i-6	Sept. 18	1645	AR-JK	310.06	310.06	309.74	309.74	230
	L-45	Dec. 11	2010	AR-CC	316.49		317.58		228
	L-46	Dec. 11	2010	AR-CC	316.49	316.49	317.58	317.58	228
	L-23	Dec. 17	1645	AR-CC	317.59		318.92		228
	L-24	Dec. 17	1645	AR-CC	317.68	317.63	319.03	318.97	228

TABLE 16: INDICES AND MANOMETRIC CONCENTRATIONS OF FLASK SAMPLES AT BARROW, ALASKA

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col:	1	2	3	4	5	6	7	8	9
	Flask No.	Date	Local Time	Place and Observer	Index (ppm)	Average Index (ppm)	Manometric Conc. (ppm)	Manometric Av. Conc. (ppm)	Sheet No.
		1962							
	I-13	June 15	0225	T-3-RS	315.92		316.88		265
	I-16	June 15	0225	T-3-RS	315.61	315.76	316.51	316.69	265
	I-17	June 30	0126	T-3-RS	316.54		317.64		264
	I-19	June 30	0126	T-3-RS	316.54	316.54	317.64	317.64	264
	I-18	July 15	0150	T-3-RS	313.55		314.00		265
	I-22	July 15	0150	T-3-RS	313.86	313.70	314.37	314.18	265
	I-14	July 30	0244	T-3-RS	311.59		311.61		265
	I-15	July 30	0244	T-3-RS	312.00	311.79	312.11	311.86	265
	I-21	Aug. 15	0247	--	--	--	--	--	265
	I-24	Aug. 15	0247	T-3-RS	310.55	310.55	310.34	310.34	265
	I-20	Aug. 30	0600	T-3-RS	308.28		307.54		265
	I-23	Aug. 30	0600	T-3-RS	308.28	308.28	307.54	307.54	265

TABLE 16: INDICES AND MANOMETRIC CONCENTRATIONS OF FLASK SAMPLES AT BARROW, ALASKA

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col:	1	2	3	4	5	6	7	8	9
	Flask No.	Date	Local Time	Place and Observer	Index (ppm)	Average Index (ppm)	Manometric Conc. (ppm)	Manometric Av. Conc. (ppm)	Sheet No.
		1962							
	L-77	Jan. 3	1645	AR-CC	318.34		319.83		243
	L-78	Jan. 3	1645	AR-CC	318.15	318.24	319.60	319.71	243
	L-101	Jan. 16	2000	AR-CC	318.52		320.05		243
	L-102	Jan. 16	2000	AR-CC	318.88	318.70	320.49	320.27	243
	L-71	Feb. 2	1400	AR-AH	319.45		321.19		245
	L-72	Feb. 2	1400	AR-AH	319.45	319.45	321.19	321.19	245
	L-95	Feb. 15	1700	AR-AH	318.51	318.51	320.04	320.04	245
	L-96	Feb. 15	1700	AR-AH	--	--	--	--	245
	L-93	Mar. 1	1440	AR-AH	318.04		319.47		245
	L-94	Mar. 1	1440	AR-AH	318.04	318.04	319.47	319.47	245
	L-25	Mar. 16	0220	AR-CC	317.42		318.71		243
	L-26	Mar. 16	0220	AR-CC	317.60	317.51	318.93	318.82	243
	L-57	Apr. 1	1415	AR-RS	317.83		319.21		251
	L-58	Apr. 1	1415	AR-RS	317.83	317.83	319.21	319.21	251
	L-33	Apr. 16	1425	AR-RS	317.83		319.21		251
	L-34	Apr. 16	1425	AR-RS	318.01	317.92	319.43	319.32	251
	L-83	May 2	1615	AR-RS	318.93		320.55		251
	L-84	May 2	1615	AR-RS	318.84	318.88	320.44	320.49	251

TABLE 16: INDICES AND MANOMETRIC CONCENTRATIONS OF FLASK SAMPLES AT BARROW, ALASKA

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col:	1	2	3	4	5	6	7	8	9
	Flask No.	Date	Local Time	Place and Observer	Index (ppm)	Average Index (ppm)	Manometric Conc. (ppm)	Manometric Av. Conc. (ppm)	Sheet No.
		1962							
	L-47	May 16	1810	AR-RS	318.66		320.22		251
	L-48	May 16	1810	AR-RS	318.75	318.70	320.33	320.27	251
	L-99	June 2	1945	AR-RS	319.11		320.77		251
	L-100	June 2	1945	AR-RS	319.11	319.11	320.77	320.77	251
	L-103	June 16	1425	AR-PD	319.18		320.86		255
	L-104	June 16	1425	AR-PD	319.18	319.18	320.86	320.86	255
	L-3	July 2	1455	AR-PD	316.02		317.01		263
	L-4	July 2	1455	AR-PD	316.33	316.17	317.38	317.19	263
	L-53	July 16	1450	AR-PD	314.79		315.51		263
	L-54	July 16	1450	AR-PD	314.79	314.79	315.51	315.51	263
	L-45	Aug. 2	1425	AR-PD	310.14		309.84		263
	L-46	Aug. 2	1425	AR-PD	310.14	310.14	309.84	309.84	263
	L-25	Aug. 16	1410	AR-PD	308.49		307.83		263
	L-26	Aug. 16	1410	AR-PD	308.49	308.49	307.83	307.83	263
	L-97	Sept. 2	1435	AR-PD	307.87		307.07		263
	L-98	Sept. 2	1435	AR-PD	307.97	307.92	307.20	307.13	263
	L-101	Sept. 16	1440	AR-PD	308.28		307.57		263
	L-102	Sept. 16	1440	AR-PD	308.18	308.23	307.45	307.51	263

TABLE 16: INDICES AND MANOMETRIC CONCENTRATIONS OF FLASK SAMPLES AT BARROW, ALASKA

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col:	1	2	3	4	5	6	7	8	9
	Flask No.	Date	Local Time	Place and Observer	Index (ppm)	Average Index (ppm)	Manometric Conc. (ppm)	Manometric Av. Conc. (ppm)	Sheet No.
		1962							
	I-245	Oct. 2	1430	AR-PD	312.28	312.28	312.45	312.45	276
	I-246	Oct. 2	1430	AR-PD	--	--	--	--	276
	I-247	Oct. 15	1050	AR-AH	314.16		314.74		276
	I-248	Oct. 15	1050	AR-AH	314.34	314.25	314.96	314.85	276
	i-10	Nov. 2	1200	AR-AH	314.99		315.75		277
	i- 9	Nov. 2	1200	AR-AH	314.99	314.99	315.75	315.75	277
	i-11	Nov. 16	1040	AR-AH	316.96		318.15		278
	i-12	Nov. 16	1040	AR-AH	317.06	317.01	318.27	318.21	278
	i-6	Dec. 2	1100	AR-AH	317.28		318.54		277
	i-5	Dec. 2	1100	AR-AH	317.38	317.33	318.66	318.60	277
	i-8	Dec. 3	1040	AR-AH	316.42		317.49		277
	i-7	Dec. 3	1040	AR-AH	316.42	316.42	317.49	317.49	277

TABLE 16: INDICES AND MANOMETRIC CONCENTRATIONS OF FLASK SAMPLES AT BARROW, ALASKA

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col:	1	2	3	4	5	6	7	8	9
	Flask No.	Date	Local Time	Place and Observer	Index (ppm)	Average Index (ppm)	Manometric Conc. (ppm)	Manometric Av. Conc. (ppm)	Sheet No.
		1963							
	I-63	Jan. 2	1505	AR-AH	321.04		323.12		303
	I-64	Jan. 2	1505	AR-AH	321.26*	321.16*	323.39	323.39	303
	I-61	Jan. 16	1505	AR-RS	335.58		--	--	303
	I-158	Feb. 4	1440	AR-RS	320.71		322.72		303
	I-157	Feb. 4	1440	AR-RS	320.04	320.37	321.90	322.31	303
	I-161	Feb. 20	0025**	AR-RS	320.72		322.73		303
	I-162	Feb. 20	0025**	AR-RS	320.72	320.72	322.73	322.73	303
	I-159	Mar. 2	0130	AR-RS	--	--	--	--	303
	I-160	Mar. 2	0130	AR-RS	319.16*	319.16*	320.83	320.83	303
	I-11	Mar. 16	2250	AR-RS	319.47		321.21		340
	I-10	Mar. 16	2250	AR-RS	319.28	319.37	320.98	321.09	340
	I-76	Apr. 3	0530	AR-RS	320.06		321.93		340
	I-77	Apr. 3	0530	AR-RS	320.35	320.20	322.28	322.10	340
	I-75	Apr. 18	0145	AR-RS	319.86		321.69		340
	I-84	Apr. 18	0145	AR-RS	319.96	319.91	321.81	321.75	340
	I-78	May 2	0050	AR-RS	320.75		322.77		340
	I-81	May 2	0050	AR-RS	320.75	320.75	322.77	322.77	340

* Single Flask Values Only.

** GMT

TABLE 16: INDICES AND MANOMETRIC CONCENTRATIONS OF FLASK SAMPLES AT BARROW, ALASKA

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col:	1	2	3	4	5	6	7	8	9
	Flask No.	Date	Local Time	Place and Observer	Index (ppm)	Average Index (ppm)	Manometric Conc. (ppm)	Manometric Av. Conc. (ppm)	Sheet No.
		1963							
	I-83	May 17	1300**	AR-RS	320.55		322.53		340
	I-79	May 17	1300**	AR-RS	320.35	320.45	322.28	322.40	340
	I-108	June 16	1150	AR-AH	320.54		322.51		342
	I-105	June 16	1150	AR-AH	321.22	320.88	323.34	322.92	342
	I-107	July 2	1235	AR-AH	319.28		320.98		342
	I-106	July 2	1235	AR-AH	319.28	319.28	320.98	320.98	342
	I-104	July 16	1200	AR-AH	328.96		--	--	342
	I-103	July 16	1200	AR-AH	317.92*	317.92*	319.32	319.32	342
	I-171	Aug. 1	1145	AR-AH	--	--	--	--	342
	I-170	Aug. 1	1145	AR-AH	314.53	314.53	315.19	315.19	342
	I-174	Aug. 16	1145	AR-AH	312.50		312.72		342
	I-173	Aug. 16	1145	AR-AH	311.73	312.11	311.78	312.25	342
	I-175	Sept. 1	1800	AR-AH	310.57		310.36		342
	I-178	Sept. 1	1800	AR-AH	309.79	310.18	309.41	309.88	342
	I-172	Sept. 15	1420	AR-AH	311.53		311.53		342
	I-179	Sept. 15	1420	AR-AH	311.73	311.63	311.78	311.65	342

* Single Flask Values Only.

** GMT

TABLE 16: INDICES AND MANOMETRIC CONCENTRATIONS OF FLASK SAMPLES AT BARROW, ALASKA

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col:	1	2	3	4	5	6	7	8	9
	Flask No.	Date	Local Time	Place and Observer	Index (ppm)	Average Index (ppm)	Manometric Conc. (ppm)	Manometric Av. Conc. (ppm)	Sheet No.
		1963							
	I-176	Oct. 1	1525	AR-AH	311.92	311.92	312.01	312.01	342
	I-177	Oct. 1	1525	AR-AH	--	--	--	--	342
	I-169	Oct. 15	1930	AR-AH	312.89		313.19		343
	I-180	Oct. 15	1930	AR-AH	313.18	313.03	313.55	313.37	343
	I	Nov. 15	2130**	AR-PW	318.16		319.61		358
	II	Nov. 15	2130**	AR-PW	318.26	318.21	319.74	319.67	358
	I-228	Dec. 18	0040**	AR-PW	319.29		320.99		344
	I-225	Dec. 18	0040**	AR-PW	319.	319.48	321.47	321.23	344

** GMT

TABLE 16: INDICES AND MANOMETRIC CONCENTRATIONS OF FLASK SAMPLES AT BARROW, ALASKA

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col:	1	2	3	4	5	6	7	8	9
	Flask No.	Date	Local Time	Place and Observer	Index (ppm)	Average Index (ppm)	Manometric Conc. (ppm)	Manometric Av. Conc. (ppm)	Sheet No.
		1964							
	I-219	Jan. 1	2140**	AR-PW	321.57	321.57	323.77	323.77	344
	UW-7	Mar. 3	2120**	AR-RP	320.27		322.18		359
	UW-5	Mar. 3	2120**	AR-RP	320.53	320.40	322.50	322.34	359
	UW-6	Mar. 16	0130**	AR-RP	334.28	--	--	--	359
	UW-8	Mar. 16	0130**	AR-RP	319.95*	319.95*	321.79	321.79	359
	UW-2	Apr. 3	0800**	AR-RP	320.92		322.98		359
	UW-1	Apr. 3	0800**	AR-RP	320.92	320.92	322.98	322.98	359
	UW-3	Apr. 16	1800**	AR-RP	327.18	--	--	--	359
	UW-4	Apr. 16	1800**	AR-RP	--	--	--	--	359
	UW-10	May 16	1800**	AR-RP	321.89		324.16		359
	UW-9	May 16	1800**	AR-RP	321.76	321.82	324.00	324.08	359
	UW-15	June 3	1130**	AR-RP	321.82*		324.07		359
	UW-13	June 3	1130**	AR-RP	323.43	321.82	326.04	324.07	359
	UW-25	June 16	2310**	AR-BM	--	--	--	--	359
	UW-32	June 16	2310**	AR-BM	347.38	347.38	--	--	359
	UW-26	July 2	2055**	AR-RR	318.85		320.45		360
	UW-27	July 2	2055**	AR-RR	319.43	319.14	321.16	320.80	360
	UW-28	July 18	0538**	AR-BM	316.20	316.20	317.23	317.23	360
	UW-11	July 18	0538**	AR-BM	--	--	--	--	360
	UW-30	Aug. 2	0015**	AR-RR	--	--	--	--	360
	UW-31	Aug. 2	0015**	AR-RR	314.91	314.91	315.65	315.65	360
	UW-29	Aug. 24	0040**	AR-BM	--	--	--	--	360
	UW-12	Sept.15	0645**	AR-BM	312.33	312.33	312.51	312.51	360

* Single Flask Values Only.

** GMT

TABLE 17: MANOMETRIC CONCENTRATIONS OF FLASK SAMPLES AT VARIOUS ALASKAN LOCATIONS

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8
Flask No.	Flask Size	Date Exposed	Time L.S.T.	Conc. (ppm)	Avg. Conc. (ppm)	Range (ppm)	Sampling Location
		1962					
134	1.8 ℓ.	Apr. 15	1315	319.13*	319.13*	---	Umiat
23	1.8 ℓ.	July 1	0830	318.14			Umiat
24	1.8 ℓ.	July 1	0830	318.03	318.08	0.11	Umiat
51	1.8 ℓ.	Aug. 1	1600	302.88			Umiat
52	1.8 ℓ.	Aug. 1	1600	302.50	302.69	0.38	Umiat
187	5.0 ℓ.	Sept. 1	1210	307.95*	307.95*	---	Umiat
243	1.8 ℓ.	Sept. 16	1510	312.61			Umiat
244	1.8 ℓ.	Sept. 16	1510	312.86	312.73	0.25	Umiat
190	1.8 ℓ.	Dec. 31	0830	316.27*	316.27*	---	Umiat
133	1.8 ℓ.	Apr. 15	1415	319.69*	319.69*	---	Anaktuvuk
23	1.8 ℓ.	July 1	0900	311.94			Anaktuvuk
24	1.8 ℓ.	July 1	0900	311.94	311.94	0.00	Anaktuvuk
99	1.8 ℓ.	Aug. 1	1830				
100	1.8 ℓ.	Aug. 1	1830				
181	5.0 ℓ.	Aug. 15	2045	318.14*	318.14*	---	Anaktuvuk
185	5.0 ℓ.	Sept. 1	1330	307.33			Anaktuvuk
193	5.0 ℓ.	Sept. 1	1330	307.95	307.64	0.62	Anaktuvuk
241	1.8 ℓ.	Sept. 16	1630	314.50			Anaktuvuk
242	1.8 ℓ.	Sept. 16	1630	314.87	314.68	0.37	Anaktuvuk

* Single Flask Values Only.

TABLE 17: MANOMETRIC CONCENTRATIONS OF FLASK SAMPLES AT VARIOUS ALASKAN LOCATIONS
BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8
Flask No.	Flask Size	Date Exposed	Time L.S.T.	Conc. (ppm)	Avg. Conc. (ppm)	Range (ppm)	Sampling Location
		1962					
185	1.8 ℓ.	Oct. 15	1400	318.49			Anaktuvuk
186	1.8 ℓ.	Oct. 15	1400	318.49	318.49	0.00	Anaktuvuk
191	1.8 ℓ.	Dec. 31	0925	316.40			Anaktuvuk
192	1.8 ℓ.	Dec. 31	0925	316.90	316.65	0.50	Anaktuvuk
136	1.8 ℓ.	Apr. 15	1510	320.81*	320.81*	----	Bettles
85	1.8 ℓ.	July 1	1030	310.89			Bettles
86	1.8 ℓ.	July 1	1030	311.58	311.23	0.69	Bettles
9	1.8 ℓ.	Aug. 1	2100	315.65			Bettles
10	1.8 ℓ.	Aug. 1	2100	315.09	315.37	0.56	Bettles
86	5.0 ℓ.	Aug. 15	2005	309.22			Bettles
189	5.0 ℓ.	Aug. 15	2005	307.71	308.46	1.51	Bettles
184	5.0 ℓ.	Sept. 1	1600	305.70			Bettles
188	5.0 ℓ.	Sept. 1	1500	305.70	305.70	0.00	Bettles
228	1.8 ℓ.	Dec. 31	1045	317.52			Bettles
227	1.8 ℓ.	Dec. 31	1110	317.52	317.52	0.00	Bettles

* Single Flask Values Only.

TABLE 18: MANOMETRIC CONCENTRATIONS OF FLASK SAMPLES AT VARIOUS HEIGHTS OVER BARROW, ALASKA

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8	9
Flask No.	Flask Size	Date Exposed	Time L.S.T.	Altitude (m)	Conc. (ppm)	Avg Conc. (ppm)	Range (ppm)	Sampling Location
		1962						
222	1.8 ℓ.	Dec. 28	2220	4572	316.52			Barrow
221	1.8 ℓ.	Dec. 28	2305	4572	318.14	317.33	1.62	Barrow
223	1.8 ℓ.	Dec. 28	2335	2438	316.90*	316.90*	---	Barrow
226	1.8 ℓ.	Dec. 29	0020	610	317.52			Barrow
225	1.8 ℓ.	Dec. 29	0040	610	318.50	318.01	0.98	Barrow
190	1.8 ℓ.	Dec. 31	0830	610	316.29*	316.29*	---	Barrow
191	1.8 ℓ.	Dec. 31	0925	1525	316.41			Barrow
192	1.8 ℓ.	Dec. 31	0945	1525	316.91	316.66	0.50	Barrow
227	1.8 ℓ.	Dec. 31	1045	3050	317.53			Barrow
228	1.8 ℓ.	Dec. 31	1110	3050	317.53	317.53	0.00	Barrow
		1963						
50	1.8 ℓ.	Feb. 3	---	3355	316.82*	316.82*	---	Barrow
49	1.8 ℓ.	Mar. 2	---	1250	321.19*	321.19*	---	Barrow
71	1.8 ℓ.	June 27	1725	3050	317.09			Barrow
72	1.8 ℓ.	June 27	1732	3050	316.53	316.81	0.56	Barrow
83	1.8 ℓ.	June 11	0944	1525	321.60			Barrow
84	1.8 ℓ.	June 11	0950	1525	321.38	321.49	0.22	Barrow
106	1.8 ℓ.	June 11	1024	3050	321.53*	321.53*	---	Barrow

* Single Flask Values Only.

TABLE 19: MANOMETRIC CONCENTRATIONS OF FLASK SAMPLES TAKEN ON THE NATCHIK CRUISE - 1962

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8
Flask No.	Flask Size	Date Exposed	Time L.S.T.	Conc. (ppm)	Avg. Conc. (ppm)	Range (ppm)	Sampling Location
		1962					
171	1.8 ℓ.	Aug. 17	2330	308.95			Barrow
172	1.8 ℓ.	Aug. 17	2330	308.71	308.83	0.24	Barrow
175	1.8 ℓ.	Aug. 31	2030	314.63			Wainwright
176	1.8 ℓ.	Aug. 31	2030	315.01	314.82	0.38	Wainwright
180	1.8 ℓ.	Sept. 1	1730	308.33*	308.33*	--	Point Cay
67	1.8 ℓ.	Sept. 7	1630	310.34			Cape Thompson
68	1.8 ℓ.	Sept. 7	1630	310.22	310.28	0.12	Cape Thompson
71	1.8 ℓ.	Sept. 8	1930	310.10			Little Diomede Island
72	1.8 ℓ.	Sept. 8	1930	309.72	309.91	0.38	Little Diomede Island
63	1.8 ℓ.	Sept. 9	0830	309.08			Cape Prince of Wales
64	1.8 ℓ.	Sept. 9	0830	308.83	308.95	0.25	Cape Prince of Wales
163	1.8 ℓ.	Sept. 10	1000	308.20			Cape Douglas
164	1.8 ℓ.	Sept. 10	1000	308.20	308.20	0.00	Cape Douglas
157	1.8 ℓ.	Sept. 12	1000	308.57			Cape Nome
158	1.8 ℓ.	Sept. 12	1000	308.71	308.64	0.14	Cape Nome

* Single Flask Values Only

TABLE 20: INDICES AND MANOMETRIC CONCENTRATIONS OF AIR WITH CONTINUOUS ANALYZER FOR TIMES OF FLASK SAMPLING
BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8	9	10	11
Day of Month	Local Standard Time	Obs. Sc. Diff.	Barometric Pressure (inches)	Adjusted Scale Diff.	Recorder Scale Factor	Computed Index Diff.	Reference Tank No.	Reference Tank Index	Air Index	Manometric Conc.(ppm)
1961										
Sept. 15	1030	-1.15	29.66	-1.16	2.65	-3.07	10069	312.30	309.23	308.73
Oct. 16	1600	6.07	29.57	6.13	1.43	8.77	3755	304.51	313.28	313.67
Dec. 12	1415	12.83	29.93	12.86	1.46	18.78	3756	297.26	316.04	317.03
1962										
Jan. 15	1545	-0.73	30.19	-0.72	2.51	-1.81	10071	319.17	317.36	318.64
Feb. 1	1530	-0.65	29.75	-0.65	2.51	-1.63	10071		317.54	318.86
Feb. 15	1530	-0.28	30.40	-0.28	2.51	-0.70	10071		318.47	319.99
Mar. 1	1445	7.47	30.07	7.45	2.51	18.70	10073	298.99	317.69	319.04
Mar. 15	1845	7.47	30.69	7.30	2.51	18.32	10073		317.31	318.58
Apr. 2	1550	3.48	30.37	3.43	2.51	8.61	10068	309.02	317.63	318.97
May 1	1550	6.45	30.22	6.40	2.51	16.06	6078	303.09	319.15	320.82
May 15	1500	6.17	29.51	6.27	2.51	15.74	6078		318.83	320.43
June 1	1520	6.32	29.85	6.35	2.51	15.94	6078		319.03	320.67
June 15	1445	7.50	29.97	7.51	2.51	18.85	3757	298.98	317.83	319.21
July 1	1355	5.87	29.83	5.90	2.51	14.81	3757		313.79	314.29
July 15	1340	6.18	30.03	6.18	2.51	15.51	2427	297.61	313.12	313.47

TABLE 20: INDICES AND MANOMETRIC CONCENTRATIONS OF AIR WITH CONTINUOUS ANALYZER FOR TIMES OF FLASK SAMPLING
BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8	9	10	11
Day of Month	Local Standard Time	Obs. Sc. Diff.	Barometric Pressure (inches)	Adjusted Scale Diff.	Recorder Scale Factor	Computed Index Diff.	Reference Tank No.	Reference Tank Index	Air Index	Manometric Conc. (ppm)
1962										
Aug. 1	1300	4.74	29.82	4.79	2.51	12.02	2427	297.61	309.63	309.22
Sept. 1	0900	-0.97	30.11	-0.97	2.51	-2.43	3756	310.10	307.67	306.83
Oct. 15	1415	0.32	29.60	0.32	2.51	0.80	2400	310.99	311.79	311.85
Nov. 1	1500	5.68	30.19	5.64	2.51	14.16	10071	301.56	315.72	316.64
Nov. 15	1300	5.83	30.23	5.78	2.49	14.39	10071		315.95	316.92
Dec. 15	1100	0.82	29.97	0.82	2.45	2.09	10072	314.85	316.94	318.13
1963										
Jan. 1	2230	1.27	30.17	1.26	2.43	3.06	10072	314.85	317.91	319.31
Feb. 1	1200	2.30	30.65	2.25	2.43	5.47	10072		320.32	322.25
Feb. 15	1300	1.75	30.59	1.71	2.43	4.16	10072		319.01	320.65
Mar. 1	0900	1.32	29.95	1.32	2.43	3.21	4286	314.48	317.69	319.04
Mar. 15	1500	2.26	30.15	2.25	2.43	5.47	4286		319.95	321.79
May 2	1500	1.37	30.24	1.36	2.43	3.30	7362	315.56	318.86	320.47
June 1	2000	-1.49	29.69	-1.51	2.43	-3.67	4284	321.91	318.24	319.71
July 1	1600	1.22	29.68	1.23	2.43	2.99	3757	312.30	315.29	316.12
July 15	1200	1.63	29.77	1.65	2.43	4.01	4272	312.28	316.29	317.33
Aug. 1	1200	-1.50	29.57	-1.51	2.43	-3.67	18204	314.49	310.82	310.67
Aug. 1	1300	-1.20	29.56	-1.21	2.43	-2.94	18204		311.55	311.56

TABLE 21: COMPARISON OF CONTINUOUS ANALYZER AND FLASK SAMPLES AT BARROW, ALASKA

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5
Date	Time L.S.T.	CO_2 Concentration (ppm) Flask	Analyzer	Departure (ppm)
1961				
Sept. 15	1030	308.70	308.73	0.03
		308.85		-0.12
Oct. 16	1600	313.61	313.67	0.06
		313.50		0.17
Dec. 12	1415	317.60	317.03	-0.57
1962				
Jan. 15	1545	318.71	318.64	-0.07
		318.60		0.04
Feb. 1	1530	319.35	318.86	-0.49
		319.39		-0.53
Feb. 15	1530	320.50	319.99	-0.51
		320.27		-0.28
Mar. 1	1445	318.89	319.04	0.15
		319.13		-0.09
Mar. 15	1845	318.55	318.58	0.03
		318.55		0.03
Apr. 2	1550	318.42	318.97	0.55
		318.65		0.32
Apr. 15	1430	319.46	320.82	1.36
		319.46		1.36
May 1	1550	320.81	320.43	-0.38
		320.81		-0.38

TABLE 21: COMPARISON OF CONTINUOUS ANALYZER AND FLASK SAMPLES AT BARROW, ALASKA

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5
Date	Time L.S.T.	CO_2 Concentration (ppm) Flask	Analyzer	Departure (ppm)
1962				
June 1	1520	320.36	320.67	0.31
		320.55		0.12
June 15	1445	319.91	319.21	-0.70
		319.91		-0.70
July 1	1355	315.08	314.29	-0.79
		315.21		-0.92
July 15	1340	313.57	313.47	-0.10
		313.31		0.16
Aug. 1	1300	310.05	309.22	-0.83
		310.05		-0.83
Sept. 1	0900	307.54	306.83	-0.68
		307.66		-0.83
Oct. 15	1415	312.90	311.85	-1.05
		312.67		-0.82
Nov. 1	1500	317.01	316.64	-0.37
		317.01		-0.37
Nov. 15	1300	317.46	316.92	-0.54
		317.57		-0.65
Dec. 15	1100	318.25	318.13	-0.12
		318.14		-0.01

TABLE 21: COMPARISON OF CONTINUOUS ANALYZER AND FLASK SAMPLES AT BARROW, ALASKA

BARROW, ALASKA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5
Date	Time L.S.T.	CO_2 Concentration (ppm) Flask	Analyzer	Departure (ppm)
1963				
Jan. 1	2230	319.35	319.31	-0.04
		319.46		-0.15
Feb. 1	1200	323.00	322.25	-0.75
		323.14		-0.89
Feb. 15	1300	321.94	320.65	-1.29
		321.94		-1.29
Mar. 1	0900	321.28	319.04	-2.24
		321.42		-2.38
Mar. 15	1500	322.75	321.79	-0.96
		322.61		-0.82
May 2	1500	321.95	320.47	-1.48
		322.18		-1.71
June 1	2000	321.83	319.71	-2.12
		321.59		-1.88
July 1	1600	317.59	316.12	-1.47
		317.36		-1.24
July 15	1200	317.77	317.33	-0.44
Aug. 1	1200	313.22	310.67	-2.55
		312.74		-2.07
Aug. 16	1300	311.67	311.56	-0.11
		311.30		0.26

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13. ABSTRACT

The results of the measurements of carbon dioxide in air at Barrow, Alaska are presented. Reference gas comparison data are tabulated, and the methods of calculations are discussed. The average daily concentrations of atmospheric carbon dioxide are tabulated for the period 10 July 1961 to 2 October 1963. The diurnal variations of carbon dioxide during this period are also presented. Results of the analysis of carbon dioxide in air, collected in flasks from several locations in addition to Barrow, are given.

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