

ΣΥΝΕΔΡΙΑ ΤΗΣ 5ΗΣ ΑΠΡΙΛΙΟΥ 1979

ΠΡΟΕΔΡΙΑ ΚΑΙΣΑΡΟΣ ΑΛΕΞΟΠΟΥΛΟΥ

ΑΣΤΡΟΝΟΜΙΑ.—1. **The Physical Parameters of the Venus Atmosphere Computed for Different Chemical Compositions Containing SO₂**, by *Constantin J. Macris and Basil C. Petropoulos**.

Ἀνεκοινώθη ὑπὸ τοῦ Ἀκαδημαϊκοῦ κ. Ι. Ξανθάκη.

A B S T R A C T

We propose a standard model for the Venus atmosphere from 0 to 200 km, based on Venera 9 and 10 measurements. The physical parameters have been computed for different quantities of SO₂. A comparison is given of the computed and measured by Venera 9, and 10 values. From this comparison we obtained the probable quantity of SO₂, between 40-50 km altitude.

In a previous paper (Macris, Petropoulos, 1978) we have computed for different chemical compositions, the pressure and the number density of the Venus atmosphere. The computed values of the pressures and the number densities have been compared to these measured by Venera 9 and 10 at the altitude range from 40 to 90 km.

In this work we give a standard model of the Venus atmosphere. The measurements of Venera 9 and 10 (Yakoblev, 1976) and of Mariner 10 (Dunne, 1978) have been used for this computation, at altitudes from 0 to 200 km. In a previous work Marov (1973) has proposed a standard model, adopted from COSPAR, from the Venus atmosphere, which was based on the measurements of Venera 8.

For the computation of the different physical parameters of the Venus atmosphere we have used the following data:

- 1) The absolute mass of Venus, $M = (4,869 \pm 0,010) \times 10^{27}$ gr measured by Mariner 10 (Dunne, 1978).

* ΚΩΝΣΤ. Ι. ΜΑΚΡΗ - ΒΑΣΙΛ. Χ. ΠΕΤΡΟΠΟΥΛΟΥ, Αἱ φυσικαὶ παράμετροι τῆς ἀτμοσφαιράς τῆς Ἀφροδίτης ὑπολογισθεῖσαι διὰ διαφόρους χημικὰς συνθέσεις αἱ ὁποῖα περιέχουν SO₂.

- 2) The radius of Venus, $R = 6050$ km measured by Mariner 5, (Marov, 1973).
- 3) The temperature near the surface, $T_s = 758^\circ\text{K}$ (Venera, 9) and $T_s = 738^\circ\text{K}$ (Venera, 10) (Keldysh, 1977).
- 4) The pressure near the Venus surface, $P_s = 90,19 \times 10^3$ mb (Venera 9 and 10) (Kolosov et al, 1977, Keldysh, 1977).
- 5) The temperature distribution a) between 0-40 km altitude measured by Venera (4 to 10), (Keldysh, 1977), b) from 40-90 km, measured by Venera 9 and 10 (Kolosov et al, 1977), c) from 90-200 fitted by measurements of Mariner 5 (Fjeldbo et al, 1971). The measurements of Mariner 10 and of Mariner 5 are similar. The Mariner 5 and 10 temperatures profiles indicate that the systematic error of real spatial temperature variations in the atmosphere of Venus amounts to about up 15°K (Nicholson et al, 1978).
- 6) The chemical compositions shown in table 1.

T A B L E 1

1	97% CO ₂	2% N ₂	1% H ₂ O	
2	97% CO ₂	1% N ₂	1% H ₂ O	1% SO ₂
3	95% CO ₂	1% H ₂ O	4% SO ₂	

Marov (1973) has used the Venera's 4, 5, 6 measurements of the chemical compositions in the Venus atmosphere, to compute the standard COSPAR model. The above measurements can be given by the chemical composition (1) of Table 1. The chemical compositions seen in Table 1, show the percentage of CO₂ more than 95%, so the Venus atmosphere is homogenous and the hydrostatic assumption can be used successfully.

The Pitts (1968) programme has been used for this computation, which is based on the hydrostatic assumption.

The molecular distribution of the Venusian atmosphere as a function of altitude (0-200 km) has been calculated in this work for the chemical compositions (1), (2) and (3), and has been used as data in our computation.

The computed physical parameters are given in tables 2, 3 and 4

T A B L E 2

Model of the venus atmosphere based of the data of Venera measurements
construction parameters.

SURFACE PRESSURE = 90196.00 MB SURFACE TEMPERATURE = 758.00 K SURFACE DENSITY = 0.6222F-01 GM/CC
 BASE OF EXOSPHERE = 4600.00(KM) MOLECULAR WEIGHT = 43.431 SURFACE GRAVITY = 887.600 GM/SEC/SEC
 RADIUS OF VENUS = 6053.00(KM) PERCENT ARGON = 0.0 HYDROGEN = 0.0 PERCENT CO2 = 97.000
 PERCENT OXYGEN = 0.0 PERCENT HELIUM = 0.0 PERCENT NEON = 0.0
 PERCENT NITROGEN = 2.000 PERCENT SODIUM = 0.0 PERCENT WATER = 1.000

TEMPERATURE AND MOLECULAR WEIGHT DISTRIBUTION

AT 5.00	GEOM KM	716.90 K	AND MOLECULAR	WEIGHT=	43.45999
AT 10.00	GEOM KM	676.40 K	AND MOLECULAR	WEIGHT=	43.45999
AT 15.00	GEOM KM	635.10 K	AND MOLECULAR	WEIGHT=	43.45999
AT 20.00	GEOM KM	593.20 K	AND MOLECULAR	WEIGHT=	43.45999
AT 25.00	GEOM KM	550.20 K	AND MOLECULAR	WEIGHT=	43.45999
AT 30.00	GEOM KM	507.00 K	AND MOLECULAR	WEIGHT=	43.45999
AT 35.00	GEOM KM	462.40 K	AND MOLECULAR	WEIGHT=	43.45999
AT 40.00	GEOM KM	436.50 K	AND MOLECULAR	WEIGHT=	43.45999
AT 44.00	GEOM KM	406.00 K	AND MOLECULAR	WEIGHT=	43.45999
AT 48.00	GEOM KM	378.00 K	AND MOLECULAR	WEIGHT=	43.45999
AT 52.00	GEOM KM	335.00 K	AND MOLECULAR	WEIGHT=	43.45999
AT 56.00	GEOM KM	301.00 K	AND MOLECULAR	WEIGHT=	43.45999
AT 60.00	GEOM KM	267.00 K	AND MOLECULAR	WEIGHT=	43.45999
AT 64.00	GEOM KM	234.00 K	AND MOLECULAR	WEIGHT=	43.45999
AT 68.00	GEOM KM	247.00 K	AND MOLECULAR	WEIGHT=	43.45999
AT 72.00	GEOM KM	241.00 K	AND MOLECULAR	WEIGHT=	43.45999
AT 76.00	GEOM KM	237.00 K	AND MOLECULAR	WEIGHT=	43.45999
AT 80.00	GEOM KM	211.00 K	AND MOLECULAR	WEIGHT=	43.45999
AT 84.00	GEOM KM	175.00 K	AND MOLECULAR	WEIGHT=	43.45999
AT 88.00	GEOM KM	150.00 K	AND MOLECULAR	WEIGHT=	43.45999
AT 90.00	GEOM KM	140.00 K	AND MOLECULAR	WEIGHT=	43.45999
AT 100.00	GEOM KM	171.40 K	AND MOLECULAR	WEIGHT=	43.45999
AT 110.00	GEOM KM	204.80 K	AND MOLECULAR	WEIGHT=	43.45999
AT 120.00	GEOM KM	262.80 K	AND MOLECULAR	WEIGHT=	43.45999
AT 130.00	GEOM KM	340.30 K	AND MOLECULAR	WEIGHT=	43.45999
AT 140.00	GEOM KM	426.80 K	AND MOLECULAR	WEIGHT=	43.45999
AT 150.00	GEOM KM	510.30 K	AND MOLECULAR	WEIGHT=	42.00000
AT 170.00	GEOM KM	625.10 K	AND MOLECULAR	WEIGHT=	39.39999
AT 180.00	GEOM KM	646.30 K	AND MOLECULAR	WEIGHT=	37.70000
AT 200.00	GEOM KM	650.00 K	AND MOLECULAR	WEIGHT=	33.59999

Table 2 (continued)
CALCULATES QUANTITIES

HEIGHT (KM)	TEMP (K)	PRESSURE (MB)	DENSITY (GM/CC)	SPEED OF SOUND (M/SEC)	MOLECULAR WEIGHT	DENS SCALE KM	NUMBER DENSITY (PER CC)	MEAN FREE PATH (M)	VIS- COSITY (E+5)	PRES SCALE (KM)	MEAN PARTICLE VELOCITY (M/SEC)	COLL FREQ (PER SEC)	COLUMBAR MASS
0	758.0	9.02E 04	6.27E-02	416.	43.8	19.68	8.62E 20	1.68E-09	3.18	16.21	605.	3.60E 11	0.07
1	749.8	8.48E 04	5.95E-02	414.	43.8	19.47	8.19E 20	1.77E-09	3.16	16.04	602.	3.41E 11	6.109E 03
2	741.6	7.96E 04	5.65E-02	412.	43.8	19.26	7.78E 20	1.86E-09	3.14	15.87	599.	3.22E 11	1.191E 04
3	733.3	7.47E 04	5.37E-02	409.	43.8	19.05	7.38E 20	1.96E-09	3.12	15.70	595.	3.04E 11	1.782E 04
4	725.1	7.01E 04	5.09E-02	407.	43.8	18.85	7.00E 20	2.07E-09	3.11	15.53	592.	2.86E 11	2.265E 04
5	716.9	6.57E 04	4.83E-02	405.	43.8	18.64	6.64E 20	2.18E-09	3.09	15.36	589.	2.70E 11	2.761E 04
6	708.8	6.15E 04	4.57E-02	402.	43.8	18.39	6.29E 20	2.30E-09	3.07	15.19	585.	2.54E 11	3.230E 04
7	700.7	5.76E 04	4.33E-02	400.	43.8	18.18	5.95E 20	2.43E-09	3.05	15.02	582.	2.39E 11	3.675E 04
8	692.6	5.39E 04	4.10E-02	398.	43.8	17.98	5.63E 20	2.57E-09	3.02	14.85	579.	2.25E 11	4.097E 04
9	684.5	5.03E 04	3.87E-02	396.	43.8	17.77	5.33E 20	2.72E-09	3.00	14.69	575.	2.12E 11	4.495E 04
10	676.4	4.70E 04	3.66E-02	393.	43.8	17.57	5.03E 20	2.88E-09	2.97	14.52	572.	1.99E 11	4.871E 04
11	668.1	4.39E 04	3.46E-02	391.	43.8	17.44	4.76E 20	3.04E-09	2.94	14.34	568.	1.87E 11	5.227E 04
12	659.9	4.09E 04	3.26E-02	389.	43.8	17.23	4.49E 20	3.23E-09	2.91	14.17	565.	1.75E 11	5.563E 04
13	651.6	3.81E 04	3.08E-02	387.	43.8	17.02	4.23E 20	3.42E-09	2.88	14.00	561.	1.64E 11	5.880E 04
14	643.4	3.54E 04	2.90E-02	384.	43.8	16.81	3.99E 20	3.63E-09	2.85	13.83	558.	1.54E 11	6.179E 04
15	635.1	3.30E 04	2.73E-02	382.	43.8	16.60	3.76E 20	3.85E-09	2.82	13.65	554.	1.44E 11	6.461E 04
16	626.7	3.06E 04	2.57E-02	380.	43.8	16.44	3.54E 20	4.09E-09	2.79	13.48	550.	1.35E 11	6.726E 04
17	618.3	2.84E 04	2.42E-02	377.	43.8	16.23	3.33E 20	4.35E-09	2.76	13.30	547.	1.26E 11	6.975E 04
18	610.0	2.63E 04	2.27E-02	375.	43.8	16.01	3.13E 20	4.63E-09	2.74	13.13	543.	1.17E 11	7.210E 04
19	601.6	2.44E 04	2.14E-02	372.	43.8	15.80	2.94E 20	4.93E-09	2.71	12.95	539.	1.09E 11	7.430E 04
20	593.2	2.26E 04	2.00E-02	370.	43.8	15.58	2.76E 20	5.25E-09	2.68	12.77	536.	1.02E 11	7.637E 04
21	584.7	2.09E 04	1.88E-02	368.	43.8	15.43	2.58E 20	5.60E-09	2.65	12.59	532.	9.49E 10	7.831E 04
22	576.1	1.93E 04	1.76E-02	365.	43.8	15.21	2.42E 20	5.98E-09	2.62	12.41	528.	8.83E 10	8.013E 04
23	567.6	1.78E 04	1.65E-02	362.	43.8	14.99	2.27E 20	6.39E-09	2.59	12.23	524.	8.20E 10	8.184E 04
24	559.0	1.64E 04	1.54E-02	360.	43.8	14.77	2.12E 20	6.83E-09	2.56	12.05	520.	7.61E 10	8.343E 04
25	550.5	1.50E 04	1.44E-02	357.	43.8	14.55	1.98E 20	7.32E-09	2.53	11.87	516.	7.05E 10	8.492E 04
26	541.8	1.38E 04	1.34E-02	355.	43.8	14.39	1.85E 20	7.84E-09	2.50	11.69	512.	6.55E 10	8.631E 04
27	533.1	1.27E 04	1.25E-02	352.	43.8	14.17	1.72E 20	8.41E-09	2.47	11.51	508.	6.04E 10	8.761E 04
28	524.4	1.16E 04	1.17E-02	349.	43.8	13.94	1.60E 20	9.03E-09	2.44	11.32	504.	5.58E 10	8.881E 04
29	515.7	1.06E 04	1.08E-02	347.	43.8	13.71	1.49E 20	9.70E-09	2.41	11.14	499.	5.15E 10	8.994E 04
30	507.0	9.70E 03	1.01E-02	344.	43.8	13.49	1.39E 20	1.04E-08	2.38	10.95	495.	4.74E 10	9.098E 04
31	498.1	8.85E 03	9.36E-03	341.	43.8	13.34	1.29E 20	1.12E-08	2.35	10.76	491.	4.35E 10	9.196E 04
32	489.2	8.06E 03	8.68E-03	338.	43.8	13.10	1.19E 20	1.21E-08	2.31	10.57	486.	4.01E 10	9.286E 04
33	480.2	7.32E 03	8.03E-03	335.	43.8	12.87	1.10E 20	1.31E-08	2.28	10.39	482.	3.68E 10	9.369E 04
34	471.3	6.65E 03	7.43E-03	333.	43.8	12.63	1.02E 20	1.42E-08	2.24	10.20	477.	3.37E 10	9.446E 04
35	462.4	6.02E 03	6.86E-03	330.	43.8	12.40	9.43E 19	1.54E-08	2.20	10.01	473.	3.08E 10	9.518E 04
36	452.7	5.44E 03	6.27E-03	328.	43.8	12.15	8.63E 19	1.68E-08	2.18	9.90	470.	2.80E 10	9.583E 04
37	442.0	4.92E 03	5.73E-03	326.	43.8	11.90	7.88E 19	1.84E-08	2.14	9.79	468.	2.54E 10	9.643E 04
38	446.9	4.46E 03	5.23E-03	325.	43.8	11.63	7.19E 19	2.01E-08	2.12	9.68	465.	2.31E 10	9.698E 04
39	441.7	4.00E 03	4.77E-03	323.	43.8	11.37	6.56E 19	2.21E-08	2.10	9.57	462.	2.09E 10	9.748E 04
40	436.9	3.60E 03	4.35E-03	321.	43.8	11.14	5.98E 19	2.42E-08	2.07	9.46	459.	1.90E 10	9.794E 04
41	428.5	3.24E 03	3.98E-03	319.	43.8	10.95	5.47E 19	2.65E-08	2.06	9.30	455.	1.72E 10	9.835E 04
42	421.2	2.90E 03	3.63E-03	316.	43.8	10.75	4.99E 19	2.90E-08	2.03	9.14	451.	1.56E 10	9.873E 04
43	413.6	2.60E 03	3.31E-03	313.	43.8	10.56	4.55E 19	3.18E-08	2.00	8.97	447.	1.41E 10	9.908E 04
44	406.0	2.32E 03	3.01E-03	311.	43.8	10.36	4.15E 19	3.49E-08	1.97	8.81	443.	1.27E 10	9.939E 04
45	399.0	2.07E 03	2.74E-03	308.	43.8	10.22	3.76E 19	3.85E-08	1.95	8.66	439.	1.14E 10	9.968E 04

Table 2 (continued)

46	392.0	1.90E 03	2.53E-03	307.	43.5	10.13	3.51E 19	4.14E-08	1.91	8.58	437.	1.06F 10	9.98E 04
47	385.0	1.69E 03	2.29E-03	305.	43.5	9.95	3.18E 19	4.57E-08	1.88	8.43	433.	9.48F 09	1.00E 05
48	378.0	1.50E 03	2.07E-03	302.	43.5	9.77	2.87E 19	5.04E-08	1.84	8.28	429.	8.49F 09	1.00E 05
49	357.2	1.33E 03	1.89E-03	298.	43.5	10.52	2.37E 19	5.55E-08	1.79	8.04	423.	7.62F 09	1.00E 05
50	356.5	1.17E 03	1.71E-03	294.	43.5	10.22	2.61F 19	6.12E-08	1.74	7.81	417.	6.81F 09	1.00E 05
51	345.7	1.03E 03	1.55E-03	290.	43.5	9.91	2.15E 19	6.75E-08	1.69	7.58	410.	6.08F 09	1.00E 05
52	335.0	8.97E 02	1.40E-03	286.	43.5	9.61	1.94E 19	7.48E-08	1.64	7.35	404.	5.40F 09	1.01E 05
53	326.5	7.82E 02	1.25E-03	283.	43.5	8.80	1.73E 19	8.37E-08	1.60	7.16	399.	4.76F 09	1.01E 05
54	318.0	6.79E 02	1.12E-03	279.	43.5	8.58	1.55E 19	9.39E-08	1.56	6.98	394.	4.19F 09	1.01E 05
55	309.5	5.87E 02	9.91E-04	276.	43.5	8.35	1.37E 19	1.06E-07	1.53	6.79	388.	3.67F 09	1.01E 05
56	301.0	5.06E 02	8.78E-04	272.	43.5	8.12	1.22E 19	1.19E-07	1.49	6.61	383.	3.21F 09	1.01E 05
57	281.5	3.70E 02	6.87E-04	264.	43.5	7.87	9.52E 18	1.35E-07	1.46	6.40	377.	2.80F 09	1.01E 05
58	271.7	3.14E 02	6.03E-04	260.	43.5	7.50	8.36E 18	1.53E-07	1.39	6.18	370.	2.43F 09	1.01E 05
59	252.0	2.63E 02	5.28E-04	256.	43.5	7.33	7.31E 18	1.74E-07	1.34	5.97	354.	2.09F 09	1.01E 05
60	255.0	2.22E 02	4.55E-04	253.	43.5	7.33	6.30E 18	1.98E-07	1.30	5.76	357.	1.80F 09	1.01E 05
61	248.0	1.85E 02	3.90E-04	250.	43.5	6.63	5.41E 18	2.69E-07	1.26	5.46	352.	1.53F 09	1.01E 05
62	248.0	1.54E 02	3.33E-04	247.	43.5	6.45	5.41E 18	2.69E-07	1.23	5.46	348.	1.29F 09	1.01E 05
63	234.0	1.27E 02	2.86E-04	244.	43.5	6.27	4.62E 18	3.14E-07	1.20	5.30	343.	1.09F 09	1.01E 05
64	237.3	1.05E 02	2.31E-04	245.	43.5	6.09	3.93E 18	3.70E-07	1.17	5.15	346.	0.93F 09	1.01E 05
65	243.5	8.86E 01	1.88E-04	247.	43.5	4.88	3.20E 18	4.54E-07	1.18	5.22	340.	9.14F 08	1.01E 05
66	243.8	7.18E 01	1.54E-04	248.	43.5	4.94	2.61E 18	5.57E-07	1.18	5.22	340.	7.48F 08	1.01E 05
67	247.0	5.97E 01	1.26E-04	249.	43.5	5.01	2.13E 18	6.81E-07	1.20	5.30	342.	6.15F 08	1.02E 05
68	245.5	4.96E 01	1.06E-04	249.	43.5	5.08	1.75E 18	8.30E-07	1.21	5.37	345.	5.06F 08	1.02E 05
69	244.0	4.12E 01	8.83E-05	248.	43.5	5.50	1.46E 18	9.92E-07	1.22	5.44	347.	4.18F 08	1.02E 05
70	242.5	3.42E 01	7.38E-05	247.	43.5	5.57	1.22E 18	1.19E-06	1.21	5.41	346.	3.49F 08	1.02E 05
71	241.0	2.84E 01	6.15E-05	247.	43.5	5.53	1.02E 18	1.42E-06	1.20	5.35	344.	2.91F 08	1.02E 05
72	240.0	2.35E 01	5.12E-05	246.	43.5	5.53	8.53E 17	1.70E-06	1.20	5.32	343.	2.42F 08	1.02E 05
73	239.0	1.95E 01	4.25E-05	246.	43.5	5.42	7.09E 17	2.09E-06	1.20	5.32	343.	2.01F 08	1.02E 05
74	238.0	1.61E 01	3.53E-05	245.	43.5	5.38	4.90E 17	2.48E-06	1.19	5.28	341.	1.67E 08	1.02E 05
75	237.0	1.33E 01	2.93E-05	245.	43.5	5.36	4.90E 17	2.91E-06	1.19	5.26	341.	1.39F 08	1.02E 05
76	230.5	1.10E 01	2.48E-05	242.	43.5	5.36	4.08E 17	3.52E-06	1.19	5.24	340.	1.15F 08	1.02E 05
77	228.0	6.98E 00	2.10E-05	239.	43.5	5.95	3.44E 17	4.22E-06	1.15	5.10	335.	9.51F 07	1.02E 05
78	217.5	7.32E 00	1.76E-05	236.	43.5	5.78	2.90E 17	5.09E-06	1.13	4.95	330.	7.95F 07	1.02E 05
79	211.0	5.92E 00	1.47E-05	232.	43.5	5.52	2.44E 17	5.98E-06	1.10	4.81	326.	6.60F 07	1.02E 05
80	202.0	4.76E 00	1.23E-05	228.	43.5	5.45	2.03E 17	7.15E-06	1.07	4.67	321.	5.46F 07	1.02E 05
81	193.0	3.79E 00	1.03E-05	223.	43.5	5.38	1.71E 17	8.51E-06	1.04	4.47	316.	4.49F 07	1.02E 05
82	138.0	2.98E 00	6.47E-06	218.	43.5	5.34	1.42E 17	1.09E-05	0.97	4.27	314.	3.69F 07	1.02E 05
83	175.0	2.32E 00	6.92E-06	213.	43.5	5.09	1.17E 17	1.24E-05	0.91	4.08	299.	3.00F 07	1.02E 05
84	158.7	1.78E 00	5.52E-06	210.	43.5	4.84	9.59E 16	1.51E-05	0.85	3.88	292.	2.42F 07	1.02E 05
85	162.5	1.36E 00	4.37E-06	206.	43.5	4.34	7.65E 16	1.90E-05	0.81	3.74	287.	1.93F 07	1.02E 05
86	156.2	1.02E 00	3.42E-06	202.	43.5	4.18	6.05E 16	2.40E-05	0.78	3.60	281.	1.51F 07	1.02E 05
87	153.0	7.62E-01	2.65E-06	198.	43.5	4.02	4.74E 16	3.03E-05	0.74	3.47	276.	1.17F 07	1.02E 05
88	145.0	5.61E-01	2.02E-06	195.	43.5	3.86	3.80E 16	3.98E-05	0.71	3.33	270.	9.01F 06	1.02E 05
89	143.0	4.03E-01	1.53E-06	192.	43.5	3.62	2.80E 16	5.14E-05	0.68	3.22	266.	6.85F 06	1.02E 05
90	143.1	2.96E-01	1.09E-06	194.	43.5	3.50	2.12E 16	6.85E-05	0.66	3.11	261.	5.13F 06	1.02E 05
91	146.3	2.18E-01	7.79E-07	196.	43.5	2.97	1.51E 16	9.68E-05	0.67	3.18	264.	3.81F 06	1.02E 05
92	149.4	1.61E-01	5.63E-07	198.	43.5	3.04	1.00E 16	1.35E-04	0.69	3.25	267.	2.76F 06	1.02E 05
93	152.6	1.19E-01	4.09E-07	200.	43.5	3.10	7.80E 15	1.86E-04	0.71	3.32	270.	1.98F 06	1.02E 05
94	155.7	8.92E-02	2.99E-07	202.	43.5	3.17	5.67E 15	2.56E-04	0.72	3.39	273.	1.45E 06	1.02E 05
95	158.9	6.70E-02	2.20E-07	204.	43.5	3.24	4.15E 15	3.50E-04	0.74	3.46	275.	1.06F 06	1.02E 05
96	152.0	5.06E-02	1.63E-07	206.	43.5	3.30	3.05E 15	4.75E-04	0.76	3.53	278.	7.87E 05	1.02E 05
97	152.0	5.06E-02	1.63E-07	206.	43.5	3.37	2.26E 15	6.43E-04	0.77	3.60	281.	5.85F 05	1.02E 05
												4.38F 05	1.02E 05

Table 2 (continued)

98	165.1	3.85E-02	1.22F-07	207.	43.5	3.44	1.69E 15	8.61E-04	0.79	3.68	28.6	3.29F 05	1.021E 05
99	168.3	2.94E-02	9.15E-08	209.	43.5	3.50	1.26E 15	1.15E-03	0.81	3.75	28.6	2.49F 05	1.021E 05
100	171.4	2.55E-02	5.88E-08	211.	43.5	3.57	9.59E 14	1.52E-03	0.83	3.82	28.9	1.90F 05	1.021E 05
101	174.7	1.74E-02	5.20E-08	213.	43.5	3.62	7.21E 14	2.01E-03	0.85	3.89	29.2	1.45E 05	1.021E 05
102	178.1	1.35E-02	3.96E-08	215.	43.5	3.69	5.29E 14	2.68E-03	0.87	3.97	29.5	1.11F 05	1.021E 05
103	181.4	1.05E-02	3.03E-08	217.	43.5	3.76	4.20E 14	3.40E-03	0.89	4.04	29.7	8.59F 04	1.021E 05
104	184.8	8.23E-03	2.33E-08	218.	43.5	3.83	3.23E 14	4.50E-03	0.91	4.12	30.0	6.66F 04	1.021E 05
105	188.1	6.47E-03	1.80F-08	221.	43.5	3.91	2.49E 14	5.84E-03	0.94	4.20	30.3	5.19F 04	1.021E 05
106	191.5	5.11E-03	1.39E-08	222.	43.5	3.98	1.93F 14	7.52E-03	0.96	4.27	30.5	4.06F 04	1.021E 05
107	194.6	4.05E-03	1.05E-08	224.	43.5	4.05	1.51E 14	9.68E-03	0.98	4.35	30.8	3.19F 04	1.021E 05
108	198.1	3.22E-03	6.51E-09	226.	43.5	4.12	1.18E 14	1.23E-02	1.01	4.42	31.1	2.52F 04	1.021E 05
109	201.5	2.58E-03	4.69E-09	228.	43.5	4.19	9.27E 13	1.57E-02	1.03	4.50	31.4	2.00F 04	1.021E 05
110	204.8	2.07E-03	5.26E-09	229.	43.5	4.26	7.31E 13	1.99E-02	1.04	4.58	31.6	1.59F 04	1.021E 05
111	210.6	1.67E-03	4.14E-09	232.	43.5	4.37	5.73F 13	2.53E-02	1.07	4.71	32.0	1.26F 04	1.021E 05
112	215.4	1.35E-03	3.26E-09	235.	43.5	4.48	4.52E 13	3.21E-02	1.09	4.84	32.5	1.01F 04	1.021E 05
113	222.2	1.10E-03	2.59E-09	238.	43.5	4.59	3.59E 13	4.08E-02	1.12	4.97	32.9	8.14F 03	1.021E 05
114	228.0	9.04E-04	2.07E-09	241.	43.5	4.52	2.87E 13	5.08E-02	1.14	5.10	33.3	6.59F 03	1.021E 05
115	233.8	7.65E-04	1.66E-09	243.	43.5	4.53	2.31E 13	6.30E-02	1.17	5.23	33.8	5.36F 03	1.021E 05
116	238.6	6.17E-04	1.35E-09	246.	43.5	4.75	1.86E 13	7.79F-02	1.19	5.36	34.2	4.39F 03	1.021E 05
117	245.4	5.13E-04	1.09E-09	249.	43.5	4.86	1.51E 13	9.59E-02	1.22	5.50	34.6	3.60F 03	1.021E 05
118	251.2	4.29E-04	8.92E-10	251.	43.5	4.98	1.24E 13	1.19E-01	1.25	5.63	35.0	2.98F 03	1.021E 05
119	257.0	3.60E-04	7.31E-10	254.	43.5	5.10	1.01E 13	1.43E-01	1.27	5.76	35.4	2.47F 03	1.021E 05
120	262.8	3.03E-04	6.02E-10	256.	43.5	5.21	8.35E 12	1.74E-01	1.30	5.89	35.8	2.06F 03	1.021E 05
121	270.6	2.56E-04	4.95E-10	260.	43.5	5.32	6.86F 12	2.12E-01	1.34	6.07	36.3	1.71F 03	1.021E 05
122	278.3	2.18E-04	4.09E-10	263.	43.5	5.47	5.67E 12	2.56E-01	1.38	6.24	36.8	1.44F 03	1.021E 05
123	286.1	1.86E-04	3.40E-10	266.	43.5	5.62	4.71E 12	3.09E-01	1.41	6.42	37.3	1.21F 03	1.021E 05
124	293.8	1.59E-04	2.84E-10	270.	43.5	5.77	3.93F 12	3.70E-01	1.45	6.60	37.8	1.02F 03	1.021E 05
125	301.6	1.37E-04	2.38E-10	273.	43.5	5.92	3.30E 12	4.43E-01	1.49	6.77	38.3	8.70F 02	1.021E 05
126	309.3	1.19E-04	2.01E-10	276.	43.5	6.17	2.78E 12	5.23E-01	1.53	6.95	38.8	7.43F 02	1.021E 05
127	317.1	1.03E-04	1.70E-10	279.	43.5	6.37	2.35E 12	6.19E-01	1.56	7.12	39.3	6.36F 02	1.021E 05
128	324.8	8.96E-05	1.44E-10	282.	43.5	6.52	2.00E 12	7.27E-01	1.59	7.30	39.8	5.47F 02	1.021E 05
129	332.6	7.83E-05	1.23E-10	285.	43.5	6.57	1.66E 12	8.52E-01	1.63	7.48	40.3	4.72F 02	1.021E 05
130	340.3	6.86E-05	1.05E-10	288.	43.5	6.57	1.46E 12	9.95E-01	1.66	7.65	40.7	4.09F 02	1.021E 05
131	349.0	6.03E-05	9.03E-11	291.	43.5	6.74	1.25E 12	1.15E 00	1.70	7.85	41.2	3.55F 02	1.021E 05
132	357.6	5.31E-05	7.77E-11	295.	43.5	6.90	1.08E 12	1.35E 00	1.74	8.05	41.7	3.09F 02	1.021E 05
133	365.3	4.70E-05	6.71E-11	298.	43.5	7.07	9.30E 11	1.55E 00	1.79	8.25	42.2	2.70F 02	1.021E 05
134	374.9	4.17E-05	5.81E-11	301.	43.5	7.23	8.06E 11	1.80F 00	1.83	8.44	42.7	2.37F 02	1.021E 05
135	383.6	3.71E-05	5.05E-11	304.	43.5	7.40	7.00E 11	2.07F 00	1.87	8.64	43.2	2.08F 02	1.021E 05
136	392.2	3.31E-05	4.41E-11	307.	43.5	7.56	6.11E 11	2.38F 00	1.91	8.84	43.7	1.84F 02	1.021E 05
137	400.9	2.96E-05	3.86E-11	310.	43.5	7.73	5.34E 11	2.72E 00	1.96	9.04	44.2	1.63F 02	1.021E 05
138	409.5	2.65E-05	3.38E-11	313.	43.5	7.89	4.69E 11	3.10E 00	1.99	9.23	44.7	1.44F 02	1.021E 05
139	418.2	2.38E-05	2.99E-11	316.	43.5	8.06	4.13E 11	3.52E 00	2.03	9.43	45.1	1.26F 02	1.021E 05
140	426.8	2.14E-05	2.65E-11	319.	43.5	8.26	3.64E 11	3.99E 00	2.05	9.63	45.6	1.14E 02	1.021E 05
141	435.2	1.94E-05	2.32E-11	323.	43.5	8.47	3.22E 11	4.51E 00	2.09	9.85	46.1	1.02F 02	1.021E 05
142	443.5	1.75E-05	2.05E-11	326.	43.5	8.74	2.86E 11	5.03E 00	2.13	10.08	46.6	9.18F 01	1.021E 05
143	451.9	1.59E-05	1.82E-11	329.	43.5	8.52	2.54E 11	5.57E 00	2.16	10.31	47.2	8.26F 01	1.021E 05
144	460.2	1.44E-05	1.62E-11	333.	43.5	8.59	2.27E 11	6.10E 00	2.20	10.54	47.7	7.45F 01	1.021E 05
145	468.6	1.31E-05	1.44E-11	336.	42.7	8.77	2.03E 11	6.75E 00	2.23	10.77	48.2	6.73F 01	1.021E 05
146	475.9	1.20E-05	1.29E-11	339.	42.6	8.95	1.82E 11	7.49E 00	2.27	11.00	48.7	6.10F 01	1.021E 05
147	483.3	1.09E-05	1.15E-11	343.	42.4	9.13	1.63E 11	8.34E 00	2.30	11.24	49.2	5.53F 01	1.021E 05
148	493.6	1.00E-05	1.03E-11	346.	42.3	9.31	1.47E 11	9.37E 00	2.34	11.47	49.7	5.03F 01	1.021E 05
149	502.0	9.19E-06	9.29E-12	349.	42.1	9.49	1.33E 11	1.07E 01	2.37	11.71	50.2	4.59F 01	1.021E 05

Table 2 (continued)

150	513.3	6.45E-06	8.36E-12	42.0	9.57	1.20E 11	1.21E 01	2.40	11.95	597.	4.15F 01	1.02E 05
151	516.1	7.87E-06	7.59E-12	41.9	10.34	1.09E 11	1.33E 01	2.42	12.13	511.	3.84F 01	1.02E 05
152	521.8	7.16E-06	6.89E-12	41.7	10.49	9.95E 10	1.45E 01	2.44	12.31	514.	3.52F 01	1.02E 05
153	527.6	6.61E-06	6.27E-12	41.6	10.65	9.07E 10	1.60E 01	2.46	12.49	518.	3.24F 01	1.02E 05
154	533.3	6.10E-06	5.71E-12	41.5	10.77	8.29E 10	1.75E 01	2.48	12.66	522.	2.98F 01	1.02E 05
155	539.1	5.54E-06	5.21E-12	41.3	10.91	7.58E 10	1.92E 01	2.50	12.83	525.	2.74F 01	1.02E 05
156	544.8	5.22E-06	4.75E-12	41.2	11.06	5.95E 10	2.09E 01	2.52	13.03	529.	2.53F 01	1.02E 05
157	550.6	4.84E-06	4.35E-12	41.1	11.20	5.37E 10	2.28E 01	2.54	13.21	533.	2.34F 01	1.02E 05
158	556.3	4.49E-06	3.98E-12	41.0	11.35	5.85E 10	2.48E 01	2.55	13.40	536.	2.16F 01	1.02E 05
159	562.1	4.17E-06	3.64E-12	40.8	11.50	5.37E 10	2.70E 01	2.57	13.58	540.	2.00F 01	1.02E 05
160	567.8	3.86E-06	3.34E-12	40.7	11.64	4.94E 10	2.94E 01	2.59	13.77	543.	1.85F 01	1.02E 05
161	573.5	3.61E-06	3.07E-12	40.6	11.79	4.55E 10	3.19E 01	2.61	13.96	547.	1.72F 01	1.02E 05
162	579.3	3.36E-06	2.82E-12	40.4	11.94	4.20E 10	3.46E 01	2.63	14.15	551.	1.59F 01	1.02E 05
163	585.0	3.13E-06	2.59E-12	40.3	12.09	3.88E 10	3.75E 01	2.65	14.34	554.	1.48F 01	1.02E 05
164	590.7	2.92E-06	2.39E-12	40.2	12.24	3.58E 10	4.06E 01	2.67	14.53	558.	1.38F 01	1.02E 05
165	596.5	2.73E-06	2.20E-12	40.0	12.39	3.31E 10	4.38E 01	2.69	14.72	562.	1.28F 01	1.02E 05
166	602.2	2.55E-06	2.03E-12	39.9	12.54	3.07E 10	4.74E 01	2.71	14.92	565.	1.19F 01	1.02E 05
167	607.9	2.39E-06	1.86E-12	39.8	12.69	2.84E 10	5.11E 01	2.73	15.11	569.	1.11F 01	1.02E 05
168	613.7	2.23E-06	1.74E-12	39.5	12.84	2.64E 10	5.51E 01	2.75	15.31	572.	1.04F 01	1.02E 05
169	619.4	2.09E-06	1.61E-12	39.3	12.99	2.45E 10	5.93E 01	2.77	15.51	576.	9.71F 00	1.02E 05
170	625.1	1.96E-06	1.49E-12	39.4	13.15	2.28E 10	6.38E 01	2.79	15.71	580.	9.08F 00	1.02E 05
171	627.2	1.84E-06	1.39E-12	39.2	13.32	2.13E 10	6.92E 01	2.80	15.84	582.	8.53F 00	1.02E 05
172	629.3	1.73E-06	1.29E-12	39.1	13.47	1.99E 10	7.29E 01	2.81	15.96	584.	8.01F 00	1.02E 05
173	631.5	1.63E-06	1.20E-12	38.9	13.62	1.86E 10	7.79E 01	2.82	16.09	586.	7.53F 00	1.02E 05
174	633.6	1.53E-06	1.12E-12	38.7	13.77	1.75E 10	8.31E 01	2.82	16.22	589.	7.08F 00	1.02E 05
175	635.7	1.44E-06	1.05E-12	38.5	13.92	1.64E 10	8.87E 01	2.83	16.35	591.	6.66F 00	1.02E 05
176	637.8	1.35E-06	9.79E-13	38.4	14.07	1.54E 10	9.45E 01	2.84	16.49	593.	6.27F 00	1.02E 05
177	639.9	1.27E-06	9.14E-13	38.2	14.23	1.44E 10	1.01E 02	2.84	16.62	595.	5.91F 00	1.02E 05
178	642.1	1.20E-06	8.54E-13	38.0	14.38	1.35E 10	1.07E 02	2.85	16.75	598.	5.57F 00	1.02E 05
179	644.2	1.13E-06	7.95E-13	37.9	14.54	1.27E 10	1.14E 02	2.86	16.89	600.	5.25F 00	1.02E 05
180	646.3	1.07E-06	7.47E-13	37.5	14.69	1.19E 10	1.22E 02	2.86	17.03	602.	4.95F 00	1.02E 05
181	648.4	1.00E-06	7.02E-13	37.5	14.84	1.13E 10	1.29E 02	2.87	17.17	604.	4.68F 00	1.02E 05
182	646.6	9.46E-07	6.59E-13	37.4	14.99	1.06E 10	1.37E 02	2.87	17.31	605.	4.42F 00	1.02E 05
183	648.7	8.94E-07	6.19E-13	37.2	15.14	1.00E 10	1.45E 02	2.87	17.45	606.	4.16F 00	1.02E 05
184	648.9	8.44E-07	5.82E-13	37.1	15.29	9.49E 09	1.54E 02	2.87	17.59	608.	3.95F 00	1.02E 05
185	647.0	7.97E-07	5.47E-13	36.9	15.44	8.92E 09	1.63E 02	2.87	17.73	609.	3.74F 00	1.02E 05
186	647.1	7.52E-07	5.14E-13	36.8	15.59	8.42E 09	1.72E 02	2.87	17.87	610.	3.54F 00	1.02E 05
187	647.3	7.11E-07	4.84E-13	36.6	15.74	7.95E 09	1.83E 02	2.87	18.01	612.	3.35F 00	1.02E 05
188	647.4	6.72E-07	4.55E-13	36.5	15.89	7.51E 09	1.93E 02	2.87	18.15	613.	3.17E 00	1.02E 05
189	647.5	6.35E-07	4.28E-13	36.3	16.04	7.10E 09	2.05E 02	2.87	18.29	614.	3.00F 00	1.02E 05
190	647.7	6.00E-07	4.03E-13	36.2	16.19	6.71E 09	2.16E 02	2.87	18.43	616.	2.85F 00	1.02E 05
191	647.8	5.67E-07	3.79E-13	36.0	16.34	6.34E 09	2.29E 02	2.87	18.57	617.	2.70F 00	1.02E 05
192	648.0	5.37E-07	3.57E-13	35.9	16.49	5.99E 09	2.42E 02	2.87	18.71	618.	2.56F 00	1.02E 05
193	648.1	5.08E-07	3.37E-13	35.7	16.64	5.66E 09	2.56E 02	2.87	18.85	619.	2.42F 00	1.02E 05
194	648.2	4.81E-07	3.17E-13	35.6	16.79	5.37E 09	2.70E 02	2.87	18.99	621.	2.30F 00	1.02E 05
195	648.4	4.55E-07	2.99E-13	35.4	16.94	5.08E 09	2.85E 02	2.87	19.13	623.	2.18F 00	1.02E 05
196	648.5	4.31E-07	2.82E-13	35.3	17.09	4.81E 09	3.02E 02	2.87	19.27	624.	2.07F 00	1.02E 05
197	648.6	4.08E-07	2.66E-13	35.1	17.24	4.56E 09	3.19E 02	2.87	19.41	626.	1.96F 00	1.02E 05
198	648.8	3.87E-07	2.50E-13	34.9	17.39	4.32E 09	3.37E 02	2.87	19.55	627.	1.86F 00	1.02E 05
199	648.9	3.66E-07	2.36E-13	34.8	17.54	4.09E 09	3.55F 02	2.87	19.69	628.	1.77F 00	1.02E 05
200	649.1	3.47E-07	2.23E-13	34.6	17.69	3.87E 09	3.75F 02	2.87	19.83	630.	1.68F 00	1.02E 05

T A B L E 3

Model of the venus atmosphere based on the data of Venera 9 measurements construction parameters.

SURFACE PRESSURE = 90190.00 MB SURFACE TEMPERATURE = 758.00 K SURFACE DENSITY = 0.627E-01 GM/CC
 BASE CF EXOSPHERE = 4000.00(KM) MOLECULAR WEIGHT = 43.791 SURFACE GRAVITY = 887.600 CM/SEC/SEC
 RADIUS OF VENUS = 6050.00(KM) PERCENT ARGON = 0.0 PERCENT HELIUM = 0.0 PERCENT NEON = 0.0 PERCENT CO2 = 97.000
 PERCENT OXYGEN = 0.0 PERCENT NITROGEN = 1.000 PERCENT SODIUM = 0.0 PERCENT WATER = 1.000
 PERCENT CARBON DIOXIDE = 0.0 PERCENT CHLORINE = 0.0 PERCENT FLUORINE = 0.0 PERCENT HYDROGEN = 0.0

TEMPERATURE AND MOLECULAR WEIGHT DISTRIBUTION

AT	5.00	GEOM KM	716.90 K	AND MOLECULAR	WEIGHT=	43.78999
AT	10.00	GEOM KM	676.40 K	AND MOLECULAR	WEIGHT=	43.78999
AT	15.00	GEOM KM	635.10 K	AND MOLECULAR	WEIGHT=	43.78999
AT	20.00	GEOM KM	593.20 K	AND MOLECULAR	WEIGHT=	43.78999
AT	25.00	GEOM KM	550.50 K	AND MOLECULAR	WEIGHT=	43.78999
AT	30.00	GEOM KM	507.00 K	AND MOLECULAR	WEIGHT=	43.78999
AT	35.00	GEOM KM	462.40 K	AND MOLECULAR	WEIGHT=	43.78999
AT	40.00	GEOM KM	436.50 K	AND MOLECULAR	WEIGHT=	43.78999
AT	44.00	GEOM KM	406.00 K	AND MOLECULAR	WEIGHT=	43.78999
AT	48.00	GEOM KM	378.00 K	AND MOLECULAR	WEIGHT=	43.78999
AT	52.00	GEOM KM	335.00 K	AND MOLECULAR	WEIGHT=	43.78999
AT	56.00	GEOM KM	301.00 K	AND MOLECULAR	WEIGHT=	43.78999
AT	60.00	GEOM KM	262.00 K	AND MOLECULAR	WEIGHT=	43.78999
AT	64.00	GEOM KM	234.00 K	AND MOLECULAR	WEIGHT=	43.78999
AT	68.00	GEOM KM	247.00 K	AND MOLECULAR	WEIGHT=	43.78999
AT	72.00	GEOM KM	241.00 K	AND MOLECULAR	WEIGHT=	43.78999
AT	76.00	GEOM KM	237.00 K	AND MOLECULAR	WEIGHT=	43.78999
AT	80.00	GEOM KM	211.00 K	AND MOLECULAR	WEIGHT=	43.78999
AT	84.00	GEOM KM	175.00 K	AND MOLECULAR	WEIGHT=	43.78999
AT	88.00	GEOM KM	150.00 K	AND MOLECULAR	WEIGHT=	43.78999
AT	90.00	GEOM KM	140.00 K	AND MOLECULAR	WEIGHT=	43.78999
AT	100.00	GEOM KM	171.40 K	AND MOLECULAR	WEIGHT=	43.78999
AT	110.00	GEOM KM	204.80 K	AND MOLECULAR	WEIGHT=	43.78999
AT	120.00	GEOM KM	262.80 K	AND MOLECULAR	WEIGHT=	43.78999
AT	130.00	GEOM KM	340.30 K	AND MOLECULAR	WEIGHT=	43.78999
AT	140.00	GEOM KM	426.80 K	AND MOLECULAR	WEIGHT=	43.78999
AT	150.00	GEOM KM	510.30 K	AND MOLECULAR	WEIGHT=	42.00000
AT	170.00	GEOM KM	625.10 K	AND MOLECULAR	WEIGHT=	39.39999
AT	180.00	GEOM KM	646.30 K	AND MOLECULAR	WEIGHT=	37.70000
AT	200.00	GEOP KM	650.00 K	AND MOLECULAR	WEIGHT=	33.59999

Table 3 (continued)
CALCULATED QUANTITIES

HEIGHT (CM)	TEMP (C)	PRESSURE (MB)	DENSITY (GM/CC)	SPEED OF SOUND (M/SEC)	MOLECULAR WEIGHT	DENS SCALE KM	NUMBER DENSITY (PER CC)	MF4M REFR PATH (M)	VIS- CITY (1+5)	PRFS SCALE (KM)	MF4M PARTICLE COLL VELOCITY (PER SEC)	COLUMNAR MASC
0	758.0	9.02E 04	5.22E-02	418.	43.4	19.67	8.62E 20	1.69E-09	3.18	16.35	3.61F 11	6.7
1	749.8	8.48E 04	5.94E-02	416.	43.4	19.72	3.19E 20	1.77E-09	3.16	16.17	3.41F 11	6.06E 03
2	741.6	7.97E 04	5.62E-02	413.	43.4	19.50	7.79E 20	1.87E-09	3.14	15.00	3.22F 11	1.182E 04
3	733.3	7.48E 04	5.33E-02	411.	43.4	19.29	7.39E 20	1.96E-09	3.13	15.83	3.04F 11	1.72E 04
4	725.1	7.02E 04	5.08E-02	409.	43.5	19.08	7.02E 20	2.07E-09	3.11	15.65	2.87F 11	2.274E 04
5	716.9	6.59E 04	4.80E-02	406.	43.5	18.86	5.66E 20	2.18E-09	3.09	15.48	2.71F 11	2.742E 04
6	708.8	6.17E 04	4.58E-02	404.	43.5	18.56	6.31E 20	2.33E-09	3.07	15.31	2.55F 11	3.21E 04
7	700.7	5.78E 04	4.31E-02	402.	43.5	18.35	5.98E 20	2.45E-09	3.03	15.14	2.40F 11	3.65E 04
8	692.6	5.41E 04	4.08E-02	400.	43.5	18.14	5.66E 20	2.57E-09	3.03	14.97	2.26F 11	4.07E 04
9	684.5	5.06E 04	3.86E-02	397.	43.5	17.94	5.35E 20	2.71E-09	3.00	14.80	2.13F 11	4.46E 04
10	676.4	4.72E 04	3.65E-02	395.	43.5	17.73	5.06E 20	2.87E-09	2.97	14.63	2.00F 11	4.84E 04
11	668.1	4.41E 04	3.45E-02	393.	43.5	17.50	4.78E 20	3.04E-09	2.94	14.45	1.88F 11	5.20E 04
12	659.9	4.11E 04	3.26E-02	391.	43.5	17.39	4.52E 20	3.22E-09	2.91	14.28	1.76F 11	5.53E 04
13	651.6	3.83E 04	3.08E-02	388.	43.5	17.18	4.26E 20	3.41E-09	2.88	14.10	1.65F 11	5.85E 04
14	643.4	3.57E 04	2.90E-02	386.	43.5	16.96	4.02E 20	3.61E-09	2.85	13.93	1.55F 11	6.15E 04
15	635.1	3.32E 04	2.73E-02	384.	43.5	16.75	3.79E 20	3.81E-09	2.83	13.76	1.45F 11	6.43E 04
16	626.7	3.09E 04	2.57E-02	381.	43.5	16.59	3.57E 20	4.07E-09	2.80	13.58	1.36F 11	6.69E 04
17	618.0	2.87E 04	2.42E-02	379.	43.5	16.38	3.36E 20	4.32E-09	2.77	13.40	1.27F 11	6.94E 04
18	609.3	2.66E 04	2.28E-02	376.	43.5	16.16	3.16E 20	4.60E-09	2.74	13.22	1.19F 11	7.18E 04
19	601.2	2.46E 04	2.14E-02	374.	43.5	15.94	2.97E 20	4.89E-09	2.71	13.05	1.11F 11	7.40E 04
20	593.2	2.28E 04	2.01E-02	372.	43.5	15.73	2.79E 20	5.21E-09	2.68	12.87	1.03F 11	7.61E 04
21	584.7	2.11E 04	1.89E-02	369.	43.5	15.52	2.61E 20	5.55E-09	2.65	12.69	9.60F 10	7.80E 04
22	576.4	1.95E 04	1.77E-02	367.	43.5	15.36	2.45E 20	5.93E-09	2.62	12.51	8.94F 10	7.98E 04
23	567.6	1.80E 04	1.66E-02	364.	43.5	15.13	2.29E 20	6.37E-09	2.59	12.33	8.31F 10	8.15E 04
24	559.0	1.66E 04	1.55E-02	361.	43.5	14.91	2.15E 20	6.77E-09	2.56	12.14	7.71F 10	8.31E 04
25	550.5	1.52E 04	1.45E-02	359.	43.5	14.69	2.01E 20	7.24E-09	2.54	11.96	7.15F 10	8.46E 04
26	541.8	1.40E 04	1.36E-02	356.	43.5	14.53	1.87E 20	7.75E-09	2.51	11.78	6.63F 10	8.60E 04
27	533.1	1.29E 04	1.28E-02	354.	43.5	14.30	1.75E 20	8.31E-09	2.48	11.59	6.13F 10	8.73E 04
28	524.4	1.18E 04	1.18E-02	351.	43.5	14.07	1.63E 20	8.91E-09	2.45	11.41	5.67F 10	8.86E 04
29	515.7	1.08E 04	1.09E-02	348.	43.5	13.84	1.52E 20	9.58E-09	2.42	11.22	5.23F 10	8.97E 04
30	507.0	9.87E 03	1.02E-02	345.	43.5	13.61	1.41E 20	1.03E-08	2.39	11.04	4.83F 10	9.08E 04
31	498.1	9.01E 03	9.45E-03	343.	43.5	13.46	1.31E 20	1.11E-08	2.36	10.85	4.44F 10	9.18E 04
32	489.2	8.21E 03	8.77E-03	340.	43.5	13.23	1.22E 20	1.19E-08	2.32	10.65	4.09F 10	9.26E 04
33	480.2	7.47E 03	8.13E-03	337.	43.5	12.99	1.13E 20	1.29E-08	2.28	10.46	3.75F 10	9.34E 04
34	471.3	6.78E 03	7.52E-03	334.	43.5	12.75	1.04E 20	1.39E-08	2.24	10.27	3.44F 10	9.43E 04
35	462.5	6.14E 03	6.95E-03	331.	43.5	12.51	9.63E 19	1.51E-08	2.21	10.08	3.15F 10	9.50E 04
36	453.7	5.56E 03	6.36E-03	329.	43.5	11.24	8.81E 19	1.65E-08	2.18	9.97	2.86F 10	9.57E 04
37	445.0	5.03E 03	5.81E-03	326.	43.5	11.12	8.06E 19	1.80E-08	2.16	9.86	2.60F 10	9.63E 04
38	446.9	4.56E 03	5.31E-03	326.	43.5	11.00	7.36E 19	1.97E-08	2.14	9.75	2.36F 10	9.68E 04
39	441.7	4.10E 03	4.85E-03	324.	43.5	10.87	6.72E 19	2.15E-08	2.10	9.64	2.15F 10	9.73E 04
40	436.5	3.69E 03	4.42E-03	322.	43.5	10.75	6.12E 19	2.37E-08	2.10	9.53	1.94F 10	9.78E 04
41	428.9	3.32E 03	4.05E-03	320.	43.5	11.24	5.61E 19	2.59E-08	2.07	9.37	1.76F 10	9.82E 04
42	421.2	2.98E 03	3.70E-03	317.	43.5	11.05	5.13E 19	2.83E-08	2.04	9.21	1.60F 10	9.86E 04
43	413.6	2.67E 03	3.38E-03	315.	43.5	10.85	4.68E 19	3.10E-08	2.01	9.04	1.45F 10	9.90E 04
44	406.0	2.39E 03	3.08E-03	312.	43.5	10.65	4.26E 19	3.41E-08	1.98	8.88	1.31F 10	9.93E 04
45	399.0	2.13E 03	2.79E-03	309.	43.5	10.31	3.87E 19	3.73E-08	1.95	8.73	1.18F 10	9.96E 04

Table 3 (continued)

46	392.0	1.84E 03	2.48E-03	306.	43.8	10.04	3.41E 19	4.25E-08	1.91	8.51	435.	1.03E 10	9.994E 04
47	385.0	1.66E 03	2.25E-03	303.	43.8	9.86	3.08E 19	4.70E-08	1.87	8.36	431.	9.19E 09	1.002E 05
48	378.0	1.45E 03	2.05E-03	301.	43.8	9.69	2.78E 19	5.20E-08	1.84	8.21	428.	8.22E 09	1.004E 05
49	366.2	1.28E 03	1.84E-03	297.	43.8	10.42	2.53E 19	5.72E-08	1.79	7.98	421.	7.37E 09	1.006E 05
50	356.5	1.13E 03	1.67E-03	293.	43.8	10.12	2.30E 19	6.30E-08	1.74	7.75	415.	6.59E 09	1.008E 05
51	345.7	9.92E 02	1.51E-03	289.	43.8	9.82	2.08E 19	6.97E-08	1.68	7.52	409.	5.87E 09	1.009E 05
52	335.0	8.67E 02	1.36E-03	285.	43.8	9.51	1.87E 19	7.73E-08	1.64	7.29	402.	5.21E 09	1.011E 05
53	326.5	7.54E 02	1.22E-03	281.	43.8	8.72	1.67E 19	8.65E-08	1.60	7.11	397.	4.59E 09	1.012E 05
54	318.0	6.54E 02	1.08E-03	278.	43.8	8.50	1.49E 19	9.72E-08	1.56	6.92	392.	4.03E 09	1.013E 05
55	309.5	5.65E 02	9.67E-04	275.	43.8	8.27	1.32E 19	1.10E-07	1.52	6.74	387.	3.53E 09	1.014E 05
56	301.0	4.86E 02	8.50E-04	271.	43.8	8.05	1.17E 19	1.24E-07	1.49	6.56	381.	3.08E 09	1.015E 05
57	291.2	4.16E 02	7.53E-04	267.	43.8	8.06	1.04E 19	1.40E-07	1.44	6.35	375.	2.68E 09	1.016E 05
58	281.5	3.55E 02	6.64E-04	263.	43.8	7.79	9.13E 18	1.59E-07	1.39	6.14	369.	2.33E 09	1.016E 05
59	271.7	3.00E 02	5.82E-04	259.	43.8	7.53	8.01E 18	1.81E-07	1.34	5.93	362.	2.00E 09	1.017E 05
60	262.0	2.53E 02	5.09E-04	255.	43.8	7.26	7.00E 18	2.07E-07	1.29	5.72	356.	1.72E 09	1.018E 05
61	255.0	2.12E 02	4.38E-04	252.	43.8	6.57	6.02E 18	2.41E-07	1.26	5.57	351.	1.46E 09	1.018E 05
62	248.0	1.77E 02	3.75E-04	249.	43.8	6.39	5.16E 18	2.81E-07	1.23	5.41	346.	1.23E 09	1.019E 05
63	241.0	1.46E 02	3.20E-04	246.	43.8	6.21	4.40E 18	3.29E-07	1.20	5.26	341.	1.04E 09	1.019E 05
64	234.0	1.21E 02	2.72E-04	243.	43.8	6.03	3.74E 18	3.87E-07	1.17	5.11	336.	8.69E 08	1.019E 05
65	237.3	9.95E 01	2.21E-04	244.	43.8	4.84	3.04E 18	4.77E-07	1.18	5.18	339.	7.10E 08	1.019E 05
66	240.5	8.21E 01	1.80E-04	245.	43.8	4.91	2.47E 18	5.85E-07	1.19	5.26	341.	5.83E 08	1.020E 05
67	243.8	6.80E 01	1.47E-04	247.	43.8	4.98	2.02E 18	7.17E-07	1.21	5.33	343.	4.79E 08	1.020E 05
68	247.0	5.64E 01	1.20E-04	248.	43.8	5.04	1.65E 18	8.75E-07	1.22	5.40	346.	3.95E 08	1.020E 05
69	245.5	4.69E 01	1.01E-04	248.	43.8	5.55	1.38E 18	1.05E-06	1.22	5.37	345.	3.29E 08	1.020E 05
70	244.0	3.89E 01	8.39E-05	247.	43.8	5.52	1.15E 18	1.25E-06	1.21	5.34	343.	2.74E 08	1.020E 05
71	242.5	3.22E 01	7.00E-05	246.	43.8	5.49	9.63E 17	1.50E-06	1.20	5.31	342.	2.28E 08	1.020E 05
72	241.0	2.67E 01	5.83E-05	246.	43.8	5.46	8.02E 17	1.81E-06	1.20	5.28	341.	1.89E 08	1.020E 05
73	240.0	2.21E 01	4.84E-05	245.	43.8	5.38	6.66E 17	2.17E-06	1.19	5.26	341.	1.57E 08	1.020E 05
74	239.0	1.82E 01	4.03E-05	245.	43.8	5.36	5.53E 17	2.62E-06	1.19	5.24	340.	1.30E 08	1.020E 05
75	238.0	1.51E 01	3.33E-05	244.	43.8	5.34	4.59E 17	3.16E-06	1.18	5.22	339.	1.07E 08	1.020E 05
76	237.0	1.24E 01	2.76E-05	244.	43.8	5.31	3.80E 17	3.81E-06	1.18	5.20	339.	8.89E 07	1.020E 05
77	230.5	1.02E 01	2.34E-05	241.	43.8	5.90	3.22E 17	4.50E-06	1.15	5.06	334.	7.41E 07	1.020E 05
78	224.0	8.37E 00	1.97E-05	238.	43.8	5.73	2.71E 17	5.35E-06	1.12	4.92	329.	6.15E 07	1.020E 05
79	217.5	6.81E 00	1.65E-05	235.	43.8	5.57	2.27E 17	6.38E-06	1.09	4.77	324.	5.08E 07	1.020E 05
80	211.0	5.51E 00	1.37E-05	232.	43.8	5.40	1.89E 17	7.66E-06	1.07	4.63	319.	4.17E 07	1.020E 05
81	202.0	4.42E 00	1.15E-05	227.	43.8	5.53	1.58E 17	9.14E-06	1.03	4.44	313.	3.42E 07	1.020E 05
82	193.0	3.51E 00	9.57E-06	222.	43.8	5.29	1.32E 17	1.10E-05	0.97	4.24	305.	2.78E 07	1.020E 05
83	184.0	2.76E 00	7.89E-06	217.	43.8	5.29	1.08E 17	1.33E-05	0.91	4.04	298.	2.23E 07	1.021E 05
84	175.0	2.14E 00	6.44E-06	212.	43.8	4.80	8.85E 16	1.64E-05	0.85	3.85	291.	1.78E 07	1.021E 05
85	168.7	1.64E 00	5.12E-06	209.	43.8	4.30	7.05E 16	2.06E-05	0.81	3.71	286.	1.39E 07	1.021E 05
86	162.5	1.25E 00	4.04E-06	205.	43.8	4.15	5.56E 16	2.60E-05	0.77	3.58	280.	1.08E 07	1.021E 05
87	156.2	9.38E 01	3.16E-06	201.	43.8	3.99	4.35E 16	3.33E-05	0.74	3.44	275.	8.25E 06	1.021E 05
88	150.0	6.97E 01	2.45E-06	197.	43.8	3.83	3.37E 16	4.30E-05	0.71	3.30	269.	6.25E 06	1.021E 05
89	145.0	5.12E 01	1.86E-06	194.	43.8	3.59	2.56E 16	5.66E-05	0.68	3.19	265.	4.68E 06	1.021E 05
90	143.1	3.70E 01	1.40E-06	191.	43.8	3.47	1.93E 16	7.51E-05	0.66	3.08	250.	3.46E 06	1.021E 05
91	143.0	2.70E 01	9.95E-07	193.	43.8	2.95	1.37E 16	1.06E-04	0.67	3.15	263.	2.49E 06	1.021E 05
92	146.3	1.98E 01	7.12E-07	195.	43.8	3.02	9.79E 15	1.48E-04	0.69	3.23	266.	1.80E 06	1.021E 05
93	149.4	1.45E 01	5.13E-07	197.	43.8	3.08	7.05E 15	2.05E-04	0.70	3.30	269.	1.31E 06	1.021E 05
94	152.6	1.08E 01	3.72E-07	199.	43.8	3.15	5.11E 15	2.83E-04	0.72	3.37	272.	9.59E 05	1.021E 05
95	155.7	8.03E 02	2.71E-07	201.	43.8	3.21	3.73E 15	3.88E-04	0.74	3.44	274.	7.08E 05	1.021E 05
96	158.9	6.02E 02	2.00E-07	203.	43.8	3.28	2.74E 15	5.28E-04	0.75	3.51	277.	5.25E 05	1.021E 05
97	162.0	4.54E 02	1.48E-07	205.	43.8	3.35	2.03E 15	7.14E-04	0.77	3.58	280.	3.92E 05	1.021E 05

Table 3 (continued)

98	165.1	3.44E-02	1.10E-07	207.	43.8	3.41	1.51E 15	9.59E-04	0.79	3.65	283.	2.94E 05	1.021E 05
99	168.3	2.62E-02	8.21E-08	208.	43.8	3.48	1.13E 15	1.28E-03	0.81	3.72	285.	2.22E 05	1.021E 05
100	171.4	2.01E-02	6.17E-08	210.	43.8	3.54	8.49E 14	1.71E-03	0.83	3.79	288.	1.69E 05	1.021E 05
101	174.7	1.55E-02	4.66E-08	212.	43.8	3.60	6.41E 14	2.26E-03	0.85	3.86	291.	1.29E 05	1.021E 05
102	178.1	1.20E-02	3.54E-08	214.	43.8	3.67	4.87E 14	2.97E-03	0.87	3.94	293.	9.87E 04	1.021E 05
103	181.4	9.31E-03	2.70E-08	216.	43.8	3.74	3.72E 14	3.90E-03	0.89	4.01	296.	7.80E 04	1.021E 05
104	184.8	7.27E-03	2.07E-08	218.	43.8	3.81	2.85E 14	5.08E-03	0.91	4.09	299.	5.89E 04	1.021E 05
105	188.1	5.71E-03	1.60E-08	220.	43.8	3.88	2.20E 14	6.59E-03	0.93	4.16	302.	4.58E 04	1.021E 05
106	191.5	4.50E-03	1.24E-08	221.	43.8	3.95	1.70E 14	8.51E-03	0.96	4.24	304.	3.58E 04	1.021E 05
107	194.8	3.56E-03	9.63E-09	223.	43.8	4.02	1.32E 14	1.09E-02	0.98	4.32	307.	2.81E 04	1.021E 05
108	198.1	2.83E-03	7.52E-09	225.	43.8	4.09	1.03E 14	1.40E-02	1.01	4.39	310.	2.21E 04	1.021E 05
109	201.5	2.26E-03	5.90E-09	227.	43.8	4.16	8.12E 13	1.78E-02	1.03	4.47	312.	1.75E 04	1.021E 05
110	204.8	1.81E-03	4.65E-09	228.	43.8	4.23	6.40E 13	2.26E-02	1.04	4.54	315.	1.39E 04	1.021E 05
111	208.1	1.46E-03	3.64E-09	231.	43.8	4.31	5.01E 13	2.89E-02	1.06	4.67	319.	1.10E 04	1.021E 05
112	216.4	1.18E-03	2.87E-09	234.	43.8	4.37	3.95E 13	3.67E-02	1.09	4.80	323.	8.81E 03	1.021E 05
113	222.2	9.60E-04	2.27E-09	237.	43.8	4.45	3.13E 13	4.63E-02	1.11	4.93	328.	7.08E 03	1.021E 05
114	228.0	7.86E-04	1.81E-09	240.	43.8	4.49	2.50E 13	5.80E-02	1.14	5.06	332.	5.72E 03	1.021E 05
115	233.8	6.47E-04	1.46E-09	242.	43.8	4.56	2.00E 13	7.23E-02	1.16	5.19	336.	4.85E 03	1.021E 05
116	239.6	5.35E-04	1.17E-09	245.	43.8	4.72	1.62E 13	8.96E-02	1.19	5.32	340.	3.80E 03	1.021E 05
117	245.4	4.44E-04	9.53E-10	248.	43.8	4.83	1.31E 13	1.10E-01	1.22	5.45	344.	3.12E 03	1.021E 05
118	251.2	3.70E-04	7.77E-10	250.	43.8	4.95	1.07E 13	1.36E-01	1.24	5.59	349.	2.57E 03	1.021E 05
119	257.0	3.10E-04	6.36E-10	253.	43.8	5.06	8.75E 12	1.66E-01	1.27	5.72	353.	2.13E 03	1.021E 05
120	262.8	2.61E-04	5.23E-10	255.	43.8	5.18	7.20E 12	2.01E-01	1.30	5.85	356.	1.77E 03	1.021E 05
121	270.6	2.21E-04	4.29E-10	259.	43.8	5.13	5.91E 12	2.45E-01	1.33	6.02	362.	1.48E 03	1.021E 05
122	278.3	1.87E-04	3.54E-10	262.	43.8	5.28	4.87E 12	2.97E-01	1.37	6.20	367.	1.23E 03	1.021E 05
123	286.1	1.60E-04	2.94E-10	265.	43.8	5.43	4.04E 12	3.58E-01	1.41	6.37	372.	1.04E 03	1.021E 05
124	293.8	1.37E-04	2.45E-10	268.	43.8	5.58	3.37E 12	4.29E-01	1.45	6.55	377.	8.78E 02	1.021E 05
125	301.6	1.18E-04	2.05E-10	272.	43.8	5.73	2.83E 12	5.12E-01	1.49	6.72	382.	7.45E 02	1.021E 05
126	309.3	1.02E-04	1.73E-10	275.	43.8	5.88	2.38E 12	6.09E-01	1.52	6.90	387.	6.35E 02	1.021E 05
127	317.1	8.80E-05	1.46E-10	278.	43.8	6.03	2.01E 12	7.20E-01	1.56	7.07	392.	5.44E 02	1.021E 05
128	324.8	7.65E-05	1.24E-10	281.	43.8	6.18	1.71E 12	8.48E-01	1.59	7.25	396.	4.67E 02	1.021E 05
129	332.6	6.68E-05	1.06E-10	284.	43.8	6.33	1.45E 12	9.95E-01	1.62	7.42	401.	4.03E 02	1.021E 05
130	340.3	5.85E-05	9.05E-11	287.	43.8	6.48	1.24E 12	1.16E 00	1.66	7.60	406.	3.49E 02	1.021E 05
131	349.0	5.13E-05	7.75E-11	290.	43.8	6.53	1.07E 12	1.36E 00	1.70	7.79	411.	3.02E 02	1.021E 05
132	357.6	4.52E-05	6.66E-11	293.	43.8	6.59	9.76E 11	1.58E 00	1.74	7.99	416.	2.63E 02	1.021E 05
133	366.3	4.00E-05	5.75E-11	296.	43.8	6.86	7.90E 11	1.83E 00	1.78	8.18	421.	2.30E 02	1.021E 05
134	374.9	3.54E-05	4.97E-11	300.	43.8	7.02	6.84E 11	2.12E 00	1.82	8.38	426.	2.01E 02	1.021E 05
135	383.6	3.15E-05	4.32E-11	303.	43.8	7.19	5.96E 11	2.44E 00	1.87	8.58	431.	1.77E 02	1.021E 05
136	392.2	2.80E-05	3.77E-11	306.	43.8	7.35	5.16E 11	2.80E 00	1.91	8.77	435.	1.56E 02	1.021E 05
137	400.9	2.51E-05	3.29E-11	309.	43.8	7.51	4.53E 11	3.20E 00	1.95	8.97	440.	1.38E 02	1.021E 05
138	409.5	2.24E-05	2.89E-11	312.	43.8	7.68	3.97E 11	3.65E 00	1.99	9.16	445.	1.22E 02	1.021E 05
139	418.2	2.01E-05	2.54E-11	315.	43.8	7.84	3.49E 11	4.15E 00	2.02	9.36	450.	1.08E 02	1.021E 05
140	426.8	1.81E-05	2.24E-11	318.	43.8	8.01	3.09E 11	4.71E 00	2.06	9.56	454.	9.65E 01	1.021E 05
141	435.2	1.63E-05	1.97E-11	321.	43.6	7.97	2.72E 11	5.30E 00	2.09	9.79	460.	8.64E 01	1.021E 05
142	443.5	1.48E-05	1.74E-11	325.	43.4	8.15	2.41E 11	6.00E 00	2.12	10.02	465.	7.75E 01	1.021E 05
143	451.9	1.34E-05	1.54E-11	328.	43.3	8.33	2.13E 11	6.75E 00	2.19	10.25	470.	6.97E 01	1.021E 05
144	460.2	1.22E-05	1.37E-11	332.	43.1	8.51	1.91E 11	7.47E 00	2.23	10.49	476.	6.28E 01	1.021E 05
145	468.6	1.11E-05	1.22E-11	335.	43.0	8.59	1.71E 11	8.47E 00	2.23	10.73	481.	5.68E 01	1.021E 05
146	476.9	1.01E-05	1.09E-11	339.	42.7	8.67	1.53E 11	9.45E 00	2.26	10.97	486.	5.14E 01	1.021E 05
147	485.3	9.22E-06	9.72E-12	342.	42.5	8.95	1.38E 11	1.05E 01	2.30	11.21	491.	4.67E 01	1.021E 05
148	493.6	8.44E-06	8.71E-12	345.	42.4	9.23	1.24E 11	1.17E 01	2.33	11.46	497.	4.25E 01	1.021E 05
149	502.0	7.74E-06	7.82E-12	349.	42.2	9.42	1.12E 11	1.30E 01	2.37	11.70	502.	3.87E 01	1.021E 05

Table 3 (continued)

150	510.3	7.11E-06	7.04E-12	352.	42.0	9.60	1.01E 11	1.43E 01	2.40	11.95	507.	3.54E 01	1.021E 05
151	516.1	6.55E-06	6.39E-12	355.	41.9	10.34	9.19E 10	1.58E 01	2.41	12.13	511.	3.24E 01	1.021E 05
152	521.8	6.03E-06	5.80E-12	357.	41.7	10.49	8.37E 10	1.73E 01	2.43	12.31	514.	2.98E 01	1.021E 05
153	527.6	5.56E-06	5.28E-12	359.	41.6	10.63	7.64E 10	1.90E 01	2.45	12.49	518.	2.73E 01	1.021E 05
154	533.3	5.14E-06	4.81E-12	362.	41.5	10.77	6.98E 10	2.07E 01	2.47	12.66	522.	2.52E 01	1.021E 05
155	539.1	4.75E-06	4.38E-12	364.	41.3	10.91	6.38E 10	2.24E 01	2.49	12.85	525.	2.32E 01	1.021E 05
156	544.8	4.40E-06	4.00E-12	367.	41.2	11.06	5.85E 10	2.42E 01	2.51	13.03	529.	2.14E 01	1.021E 05
157	550.6	4.08E-06	3.66E-12	369.	41.1	11.20	5.36E 10	2.70E 01	2.53	13.21	533.	1.97E 01	1.021E 05
158	556.3	3.78E-06	3.35E-12	371.	41.0	11.35	4.92E 10	2.94E 01	2.55	13.40	536.	1.82E 01	1.021E 05
159	562.1	3.51E-06	3.07E-12	374.	40.8	11.50	4.52E 10	3.20E 01	2.57	13.58	540.	1.69E 01	1.021E 05
160	567.8	3.26E-06	2.81E-12	376.	40.7	11.64	4.16E 10	3.48E 01	2.59	13.77	543.	1.56E 01	1.021E 05
161	573.5	3.04E-06	2.58E-12	378.	40.6	11.79	3.83E 10	3.78E 01	2.61	13.96	547.	1.44E 01	1.021E 05
162	579.3	2.83E-06	2.37E-12	381.	40.4	11.94	3.54E 10	4.10E 01	2.63	14.15	551.	1.34E 01	1.021E 05
163	585.0	2.64E-06	2.18E-12	383.	40.3	12.09	3.26E 10	4.44E 01	2.65	14.34	554.	1.25E 01	1.021E 05
164	590.7	2.46E-06	2.01E-12	386.	40.2	12.24	3.02E 10	4.80E 01	2.67	14.53	558.	1.16E 01	1.021E 05
165	596.5	2.30E-06	1.85E-12	388.	40.0	12.39	2.79E 10	5.19E 01	2.69	14.72	562.	1.08E 01	1.021E 05
166	602.2	2.15E-06	1.71E-12	390.	39.9	12.54	2.58E 10	5.61E 01	2.71	14.92	565.	1.01E 01	1.021E 05
167	607.9	2.01E-06	1.58E-12	393.	39.8	12.69	2.39E 10	6.05E 01	2.73	15.11	569.	9.40E 00	1.021E 05
168	613.7	1.88E-06	1.46E-12	395.	39.7	12.84	2.22E 10	6.52E 01	2.75	15.31	572.	8.77E 00	1.021E 05
169	619.4	1.76E-06	1.35E-12	397.	39.5	12.99	2.06E 10	7.03E 01	2.77	15.51	576.	8.20E 00	1.021E 05
170	625.1	1.65E-06	1.25E-12	400.	39.4	13.15	1.92E 10	7.56E 01	2.79	15.71	580.	7.67E 00	1.021E 05
171	627.2	1.55E-06	1.17E-12	401.	39.2	13.12	1.79E 10	8.08E 01	2.80	15.84	582.	7.20E 00	1.021E 05
172	629.3	1.46E-06	1.09E-12	403.	39.1	13.22	1.68E 10	8.63E 01	2.81	15.96	586.	6.76E 00	1.021E 05
173	631.5	1.37E-06	1.01E-12	404.	38.9	13.32	1.57E 10	9.22E 01	2.81	16.09	586.	6.36E 00	1.021E 05
174	633.6	1.29E-06	9.48E-13	406.	38.7	13.42	1.47E 10	9.84E 01	2.82	16.22	589.	5.99E 00	1.021E 05
175	635.7	1.21E-06	8.82E-13	407.	38.5	13.52	1.38E 10	1.05E 02	2.82	16.35	591.	5.63E 00	1.021E 05
176	637.8	1.14E-06	8.24E-13	409.	38.4	13.63	1.29E 10	1.12E 02	2.83	16.49	593.	5.30E 00	1.021E 05
177	639.9	1.07E-06	7.70E-13	410.	38.2	13.73	1.21E 10	1.19E 02	2.84	16.62	595.	4.99E 00	1.021E 05
178	642.1	1.01E-06	7.19E-13	412.	38.0	13.83	1.14E 10	1.27E 02	2.85	16.75	598.	4.70E 00	1.021E 05
179	644.2	9.51E-07	6.73E-13	414.	37.9	13.94	1.07E 10	1.35E 02	2.85	16.89	600.	4.43E 00	1.021E 05
180	646.3	8.97E-07	6.29E-13	415.	37.7	14.04	1.00E 10	1.44E 02	2.86	17.03	602.	4.18E 00	1.021E 05
181	648.4	8.44E-07	5.91E-13	416.	37.5	14.14	9.48E 09	1.53E 02	2.86	17.11	604.	3.95E 00	1.021E 05
182	646.6	7.98E-07	5.55E-13	417.	37.4	14.24	8.94E 09	1.62E 02	2.86	17.19	605.	3.73E 00	1.021E 05
183	646.7	7.53E-07	5.21E-13	418.	37.2	14.34	8.43E 09	1.72E 02	2.86	17.27	606.	3.53E 00	1.021E 05
184	646.9	7.10E-07	4.90E-13	419.	37.1	14.44	7.96E 09	1.83E 02	2.86	17.35	608.	3.34E 00	1.021E 05
185	647.0	6.71E-07	4.61E-13	420.	36.9	14.54	7.51E 09	1.92E 02	2.86	17.43	609.	3.16E 00	1.021E 05
186	647.1	6.33E-07	4.33E-13	421.	36.8	14.64	7.09E 09	2.04E 02	2.86	17.51	610.	2.99E 00	1.021E 05
187	647.3	5.98E-07	4.07E-13	421.	36.6	14.74	6.70E 09	2.16E 02	2.86	17.59	611.	2.83E 00	1.021E 05
188	647.4	5.65E-07	3.83E-13	422.	36.5	14.84	6.33E 09	2.29E 02	2.87	17.68	613.	2.68E 00	1.021E 05
189	647.5	5.34E-07	3.60E-13	423.	36.3	14.94	5.98E 09	2.42E 02	2.87	17.76	614.	2.54E 00	1.021E 05
190	647.7	5.05E-07	3.39E-13	424.	36.2	15.04	5.65E 09	2.56E 02	2.87	17.84	616.	2.40E 00	1.021E 05
191	647.8	4.78E-07	3.19E-13	425.	36.0	15.14	5.34E 09	2.71E 02	2.87	17.93	617.	2.28E 00	1.021E 05
192	648.0	4.52E-07	3.01E-13	426.	35.9	15.24	5.05E 09	2.87E 02	2.87	18.02	618.	2.16E 00	1.021E 05
193	648.1	4.28E-07	2.83E-13	427.	35.7	15.34	4.78E 09	3.03E 02	2.87	18.10	620.	2.05E 00	1.021E 05
194	648.2	4.05E-07	2.67E-13	428.	35.6	15.44	4.52E 09	3.20E 02	2.87	18.19	621.	1.94E 00	1.021E 05
195	648.4	3.83E-07	2.52E-13	429.	35.4	15.54	4.28E 09	3.38E 02	2.87	18.28	623.	1.84E 00	1.021E 05
196	648.5	3.63E-07	2.37E-13	430.	35.3	15.64	4.05E 09	3.57E 02	2.87	18.37	624.	1.75E 00	1.021E 05
197	648.6	3.43E-07	2.24E-13	431.	35.1	15.74	3.84E 09	3.77E 02	2.87	18.46	625.	1.66E 00	1.021E 05
198	648.8	3.25E-07	2.11E-13	432.	34.8	15.84	3.64E 09	3.99E 02	2.87	18.55	627.	1.57E 00	1.021E 05
199	648.9	3.08E-07	1.99E-13	433.	34.8	15.94	3.44E 09	4.21E 02	2.87	18.64	628.	1.49E 00	1.021E 05
200	649.1	2.92E-07	1.88E-13	434.	34.6	16.04	3.26E 09	4.44E 02	2.87	18.73	630.	1.42E 00	1.021E 05

T A B L E 4

Model of the venus atmosphere based on the data of Venera 9 measurements
construction parameters,

SURFACE PRESSURE = 90190.00 MB SURFACE TEMPERATURE = 758.00 K SURFACE DENSITY = 0.638E-01 GM/CC
 BASE CF EXOSPHERE = 4000.00(KM) MOLECULAR WEIGHT = 44.553 SURFACE GRAVITY = 887.600 CM/SEC/SEC
 RADIUS OF VENUS = 6050.00(KM) HYDROGEN = 0.0 PERCENT CO2 = 95.000
 PERCENT OXYGEN = 0.0 PERCENT ARGON = 0.0 PERCENT NEON = 0.0
 PERCENT NITROGEN = 0.0 PERCENT HELIUM = 0.0 PERCENT WATER = 1.000
 PERCENT CO = 0.0 PERCENT SO2 = 4.000

TEMPERATURE AND MOLECULAR WEIGHT DISTRIBUTION

AT	5.00	GEOM KM	716.40 K	AND MOLECULAR	WEIGHT=	44.53999
AT	10.00	GEOM KM	676.40 K	AND MOLECULAR	WEIGHT=	44.53999
AT	15.00	GEOM KM	635.10 K	AND MOLECULAR	WEIGHT=	44.53999
AT	20.00	GEOM KM	593.20 K	AND MOLECULAR	WEIGHT=	44.53999
AT	25.00	GEOM KM	550.50 K	AND MOLECULAR	WEIGHT=	44.53999
AT	30.00	GEOM KM	507.00 K	AND MOLECULAR	WEIGHT=	44.53999
AT	35.00	GEOM KM	462.40 K	AND MOLECULAR	WEIGHT=	44.53999
AT	40.00	GEOM KM	436.50 K	AND MOLECULAR	WEIGHT=	44.53999
AT	44.00	GEOM KM	406.00 K	AND MOLECULAR	WEIGHT=	44.53999
AT	48.00	GEOM KM	378.00 K	AND MOLECULAR	WEIGHT=	44.53999
AT	52.00	GEOM KM	343.00 K	AND MOLECULAR	WEIGHT=	44.53999
AT	56.00	GEOM KM	303.00 K	AND MOLECULAR	WEIGHT=	44.53999
AT	60.00	GEOM KM	269.00 K	AND MOLECULAR	WEIGHT=	44.53999
AT	64.00	GEOM KM	254.00 K	AND MOLECULAR	WEIGHT=	44.53999
AT	68.00	GEOM KM	238.00 K	AND MOLECULAR	WEIGHT=	44.53999
AT	72.00	GEOM KM	222.00 K	AND MOLECULAR	WEIGHT=	44.53999
AT	76.00	GEOM KM	207.00 K	AND MOLECULAR	WEIGHT=	44.53999
AT	80.00	GEOM KM	197.00 K	AND MOLECULAR	WEIGHT=	44.53999
AT	84.00	GEOM KM	184.00 K	AND MOLECULAR	WEIGHT=	44.53999
AT	88.00	GEOM KM	171.00 K	AND MOLECULAR	WEIGHT=	44.53999
AT	90.00	GEOM KM	175.00 K	AND MOLECULAR	WEIGHT=	44.53999
AT	100.00	GEOM KM	171.40 K	AND MOLECULAR	WEIGHT=	44.53999
AT	110.00	GEOM KM	204.80 K	AND MOLECULAR	WEIGHT=	44.53999
AT	120.00	GEOM KM	262.80 K	AND MOLECULAR	WEIGHT=	44.53999
AT	130.00	GEOM KM	340.30 K	AND MOLECULAR	WEIGHT=	44.53999
AT	140.00	GEOM KM	426.80 K	AND MOLECULAR	WEIGHT=	44.53999
AT	150.00	GEOM KM	510.30 K	AND MOLECULAR	WEIGHT=	42.06000
AT	170.00	GEOM KM	625.10 K	AND MOLECULAR	WEIGHT=	39.39999
AT	180.00	GEOM KM	646.30 K	AND MOLECULAR	WEIGHT=	37.70000
AT	200.00	GEOP KM	650.00 K	AND MOLECULAR	WEIGHT=	33.59999

Table 3 (continued)
CALCULATED QUANTITIES

HEIGHT (KM)	TEMP (K)	PRESSURE (MB)	DENSITY (GM/CC)	SPEED OF SOUND (M/SEC)	MOLECULAR WEIGHT	DENS SCALE KM	NUMBER DENSITY (PER CC)	MEAN FREE PATH (M)	VIS- COSITY (E+S)	PRES SCALE (KM)	MEAN PARTICLE VELOCITY (M/SEC)	COLL FREQ (PER SEC)	COLUMNAR MASS
0	758.0	9.02E 04	6.38E-02	412.	44.6	19.32	8.62E 20	1.67E-09	3.17	15.94	600.	3.60E 11	0.0
1	749.7	8.47E 04	6.05E-02	410.	44.6	19.09	8.18E 20	1.76E-09	3.15	15.77	597.	3.39E 11	6.21E 03
2	741.4	7.94E 04	5.74E-02	408.	44.5	18.89	7.70E 20	1.85E-09	3.13	15.60	594.	3.20E 11	1.211E 04
3	733.0	7.45E 04	5.44E-02	405.	44.5	18.69	7.30E 20	1.95E-09	3.12	15.43	590.	3.02E 11	1.770E 04
4	724.7	6.98E 04	5.16E-02	403.	44.5	18.48	6.90E 20	2.06E-09	3.10	15.26	587.	2.85E 11	2.300E 04
5	716.4	6.53E 04	4.89E-02	401.	44.5	18.28	6.61E 20	2.18E-09	3.08	15.09	584.	2.68E 11	2.802E 04
6	708.4	6.11E 04	4.62E-02	399.	44.5	17.96	6.29E 20	2.30E-09	3.06	14.93	580.	2.52E 11	3.277E 04
7	700.4	5.71E 04	4.37E-02	396.	44.5	17.76	5.91E 20	2.43E-09	3.05	14.76	577.	2.37E 11	3.727E 04
8	692.4	5.34E 04	4.13E-02	394.	44.5	17.56	5.58E 20	2.58E-09	3.02	14.60	574.	2.23E 11	4.151E 04
9	684.4	4.98E 04	3.90E-02	392.	44.5	17.37	5.27E 20	2.73E-09	2.99	14.44	570.	2.09E 11	4.553E 04
10	676.4	4.65E 04	3.68E-02	390.	44.5	17.17	4.99E 20	2.89E-09	2.96	14.27	567.	1.96E 11	4.932E 04
11	668.1	4.33E 04	3.47E-02	388.	44.5	17.08	4.70E 20	3.06E-09	2.93	14.10	564.	1.84E 11	5.289E 04
12	659.9	4.03E 04	3.27E-02	385.	44.5	16.88	4.43E 20	3.25E-09	2.90	13.93	560.	1.72E 11	5.626E 04
13	651.6	3.75E 04	3.08E-02	383.	44.5	16.67	4.17E 20	3.45E-09	2.87	13.76	557.	1.61E 11	5.946E 04
14	643.4	3.49E 04	2.90E-02	381.	44.5	16.47	3.93E 20	3.66E-09	2.85	13.59	553.	1.51E 11	6.243E 04
15	635.1	3.24E 04	2.73E-02	379.	44.5	16.26	3.69E 20	3.89E-09	2.82	13.42	549.	1.41E 11	6.525E 04
16	626.7	3.00E 04	2.57E-02	376.	44.5	16.11	3.47E 20	4.14E-09	2.79	13.25	546.	1.32E 11	6.790E 04
17	618.3	2.79E 04	2.41E-02	374.	44.5	15.90	3.26E 20	4.41E-09	2.76	13.08	542.	1.23E 11	7.039E 04
18	610.0	2.59E 04	2.26E-02	371.	44.5	15.69	3.06E 20	4.70E-09	2.73	12.90	538.	1.15E 11	7.273E 04
19	601.6	2.39E 04	2.12E-02	369.	44.5	15.47	2.87E 20	5.01E-09	2.70	12.73	535.	1.07E 11	7.492E 04
20	593.2	2.20E 04	1.99E-02	367.	44.5	15.26	2.69E 20	5.35E-09	2.67	12.56	531.	9.93E 10	7.698E 04
21	584.7	2.03E 04	1.86E-02	364.	44.5	15.12	2.52E 20	5.71E-09	2.64	12.38	527.	9.24E 10	7.890E 04
22	576.1	1.88E 04	1.74E-02	362.	44.5	14.90	2.36E 20	6.10E-09	2.61	12.20	523.	8.58E 10	8.071E 04
23	567.6	1.73E 04	1.63E-02	359.	44.5	14.69	2.20E 20	6.53E-09	2.58	12.03	519.	7.96E 10	8.239E 04
24	559.0	1.59E 04	1.52E-02	357.	44.5	14.47	2.04E 20	6.99E-09	2.55	11.85	515.	7.37E 10	8.397E 04
25	550.5	1.46E 04	1.42E-02	354.	44.5	14.25	1.92E 20	7.50E-09	2.52	11.67	512.	6.82E 10	8.543E 04
26	541.8	1.34E 04	1.32E-02	352.	44.5	14.10	1.79E 20	8.04E-09	2.49	11.49	507.	6.31E 10	8.680E 04
27	533.1	1.23E 04	1.23E-02	349.	44.5	13.87	1.67E 20	8.64E-09	2.47	11.31	503.	5.83E 10	8.808E 04
28	524.4	1.12E 04	1.15E-02	346.	44.5	13.65	1.56E 20	9.29E-09	2.44	11.13	499.	5.37E 10	8.927E 04
29	515.7	1.02E 04	1.06E-02	344.	44.5	13.43	1.44E 20	1.00E-08	2.41	10.95	495.	4.95E 10	9.037E 04
30	507.0	9.34E 03	9.87E-03	341.	44.5	13.21	1.33E 20	1.08E-08	2.38	10.77	491.	4.55E 10	9.140E 04
31	498.1	8.50E 03	9.15E-03	338.	44.5	13.06	1.22E 20	1.16E-08	2.34	10.58	487.	4.18E 10	9.235E 04
32	489.2	7.73E 03	8.47E-03	335.	44.5	12.83	1.14E 20	1.26E-08	2.31	10.40	482.	3.84E 10	9.323E 04
33	480.2	7.02E 03	7.83E-03	332.	44.5	12.60	1.06E 20	1.36E-08	2.27	10.21	478.	3.51E 10	9.404E 04
34	471.3	6.35E 03	7.22E-03	330.	44.5	12.37	9.77E 19	1.47E-08	2.23	10.02	473.	3.21E 10	9.479E 04
35	462.4	5.75E 03	6.66E-03	327.	44.5	12.14	9.07E 19	1.60E-08	2.19	9.84	469.	2.93E 10	9.549E 04
36	457.2	5.19E 03	6.09E-03	325.	44.5	10.94	8.22E 19	1.75E-08	2.17	9.73	466.	2.66E 10	9.612E 04
37	452.0	4.68E 03	5.54E-03	323.	44.5	10.82	7.50E 19	1.92E-08	2.15	9.62	464.	2.42E 10	9.670E 04
38	446.9	4.21E 03	5.05E-03	322.	44.5	10.70	6.89E 19	2.11E-08	2.13	9.52	461.	2.19E 10	9.723E 04
39	441.7	3.79E 03	4.60E-03	320.	44.5	10.58	6.22E 19	2.31E-08	2.11	9.41	458.	1.98E 10	9.771E 04
40	436.5	3.41E 03	4.18E-03	318.	44.5	10.46	5.65E 19	2.54E-08	2.09	9.30	456.	1.79E 10	9.815E 04
41	428.9	3.05E 03	3.82E-03	316.	44.5	10.32	5.14E 19	2.79E-08	2.06	9.14	452.	1.62E 10	9.855E 04
42	421.2	2.74E 03	3.49E-03	313.	44.5	10.73	4.71E 19	3.06E-08	2.03	8.98	447.	1.46E 10	9.892E 04
43	413.6	2.45E 03	3.17E-03	310.	44.5	10.54	4.29E 19	3.36E-08	2.00	8.82	443.	1.32E 10	9.925E 04
44	406.0	2.18E 03	2.88E-03	308.	44.5	10.35	3.89E 19	3.69E-08	1.97	8.66	439.	1.19E 10	9.955E 04
45	399.0	1.94E 03	2.61E-03	305.	44.5	10.01	3.59E 19	4.08E-08	1.94	8.52	436.	1.07E 10	9.982E 04

Table 4 (continued)

46	392.0	1.73E 03	2.36E-03	303.	44.5	9.84	3.19E 19	4.51E-08	1.90	8.37	432.	9.57E 09	1.001E 05
47	385.0	1.53E 03	2.13E-03	300.	44.5	9.67	2.88E 19	5.00E-08	1.87	8.22	428.	8.56E 09	1.003E 05
48	378.0	1.35E 03	1.92E-03	298.	44.5	9.50	2.59E 19	5.55E-08	1.83	8.08	424.	7.64E 09	1.005E 05
49	369.2	1.19E 03	1.73E-03	295.	44.5	9.71	2.34E 19	6.14E-08	1.79	7.89	419.	6.82E 09	1.007E 05
50	360.5	1.05E 03	1.56E-03	292.	44.5	9.48	2.11E 19	6.52E-08	1.75	7.71	414.	6.07E 09	1.008E 05
51	351.7	9.21E 02	1.40E-03	288.	44.5	9.25	1.90E 19	7.59E-08	1.71	7.52	409.	5.39E 09	1.010E 05
52	343.0	8.05E 02	1.26E-03	285.	44.5	9.03	1.70E 19	8.46E-08	1.67	7.34	404.	4.77E 09	1.011E 05
53	333.0	7.01E 02	1.13E-03	281.	44.5	9.07	1.52E 19	9.43E-08	1.62	7.13	398.	4.22E 09	1.012E 05
54	323.0	6.08E 02	1.01E-03	278.	44.5	8.80	1.36E 19	1.06E-07	1.58	6.91	392.	3.71E 09	1.01E 05
55	313.0	5.25E 02	8.98E-04	274.	44.5	8.53	1.21E 19	1.18E-07	1.53	6.70	386.	3.26E 09	1.014E 05
56	303.0	4.51E 02	7.97E-04	270.	44.5	8.26	1.08E 19	1.33E-07	1.49	6.49	380.	2.84E 09	1.015E 05
57	294.5	3.86E 02	7.02E-04	266.	44.5	7.72	9.49E 18	1.52E-07	1.45	6.31	374.	2.47E 09	1.016E 05
58	286.0	3.28E 02	6.15E-04	263.	44.5	7.50	8.32E 18	1.73E-07	1.40	6.13	369.	2.13E 09	1.017E 05
59	277.5	2.78E 02	5.37E-04	259.	44.5	7.28	7.27E 18	1.98E-07	1.36	5.95	363.	1.83E 09	1.017E 05
60	269.0	2.35E 02	4.67E-04	256.	44.5	7.06	6.32E 18	2.28E-07	1.32	5.77	358.	1.57E 09	1.017E 05
61	265.2	1.97E 02	3.98E-04	254.	44.5	6.19	5.38E 18	2.67E-07	1.30	5.69	355.	1.33E 09	1.018E 05
62	261.5	1.65E 02	3.38E-04	253.	44.5	6.10	4.57E 18	3.14E-07	1.28	5.61	353.	1.12E 09	1.019E 05
63	257.7	1.38E 02	2.87E-04	251.	44.5	6.02	3.88E 18	3.71E-07	1.27	5.53	350.	9.44E 08	1.019E 05
64	254.0	1.15E 02	2.43E-04	249.	44.5	5.93	3.28E 18	4.38E-07	1.25	5.46	347.	7.93E 08	1.019E 05
65	250.0	9.57E 01	2.05E-04	247.	44.5	5.88	2.77E 18	5.19E-07	1.23	5.37	345.	6.64E 08	1.019E 05
66	246.0	7.93E 01	1.73E-04	246.	44.5	5.78	2.33E 18	6.16E-07	1.21	5.29	342.	5.55E 08	1.020E 05
67	242.0	6.55E 01	1.45E-04	244.	44.5	5.69	1.96E 18	7.33E-07	1.20	5.20	339.	4.62E 08	1.020E 05
68	238.0	5.40E 01	1.22E-04	242.	44.5	5.60	1.64E 18	8.76E-07	1.18	5.12	336.	3.84E 08	1.020E 05
69	234.0	4.43E 01	1.01E-04	240.	44.5	5.51	1.37E 18	1.05E-06	1.16	5.03	334.	3.18E 08	1.020E 05
70	230.0	3.63E 01	8.45E-05	238.	44.5	5.42	1.14E 18	1.26E-06	1.14	4.95	331.	2.63E 08	1.020E 05
71	226.0	2.96E 01	7.02E-05	237.	44.5	5.32	9.49E 17	1.52E-06	1.12	4.87	328.	2.16E 08	1.020E 05
72	222.0	2.41E 01	5.80E-05	235.	44.5	5.23	7.85E 17	1.83E-06	1.11	4.78	325.	1.77E 08	1.020E 05
73	218.2	1.95E 01	4.78E-05	233.	44.5	5.11	6.46E 17	2.23E-06	1.09	4.70	322.	1.45E 08	1.020E 05
74	214.5	1.57E 01	3.93E-05	231.	44.5	5.03	5.31E 17	2.71E-06	1.08	4.62	319.	1.18E 08	1.020E 05
75	210.7	1.26E 01	3.21E-05	229.	44.5	4.94	4.34E 17	3.31E-06	1.06	4.54	317.	9.56E 07	1.020E 05
76	207.0	1.01E 01	2.62E-05	227.	44.5	4.86	3.54E 17	4.06E-06	1.04	4.46	314.	7.72E 07	1.020E 05
77	204.5	8.08E 00	2.12E-05	226.	44.5	4.66	2.86E 17	5.03E-06	1.03	4.41	312.	6.20E 07	1.020E 05
78	202.0	6.43E 00	1.71E-05	225.	44.5	4.61	2.31E 17	6.24E-06	1.02	4.36	310.	4.97E 07	1.020E 05
79	199.5	5.11E 00	1.37E-05	224.	44.5	4.55	1.85E 17	7.76E-06	1.01	4.31	308.	3.97E 07	1.020E 05
80	197.0	4.04E 00	1.10E-05	222.	44.5	4.50	1.49E 17	9.68E-06	0.99	4.25	306.	3.16E 07	1.020E 05
81	193.7	3.19E 00	8.82E-06	221.	44.5	4.50	1.19E 17	1.21E-05	0.97	4.18	303.	2.52E 07	1.020E 05
82	190.5	2.51E 00	7.05E-06	219.	44.5	4.43	9.53E 16	1.51E-05	0.95	4.12	301.	2.02E 07	1.020E 05
83	187.2	1.96E 00	5.61E-06	217.	44.5	4.35	7.59E 16	1.90E-05	0.92	4.05	298.	1.57E 07	1.020E 05
84	184.0	1.53E 00	4.45E-06	215.	44.5	4.28	6.02E 16	2.39E-05	0.90	3.98	296.	1.24E 07	1.020E 05
85	180.7	1.19E 00	3.52E-06	214.	44.5	4.20	4.75E 16	3.03E-05	0.88	3.91	293.	9.69E 06	1.020E 05
86	177.5	9.16E-01	2.77E-06	212.	44.5	4.13	3.74E 16	3.85E-05	0.86	3.84	290.	7.55E 06	1.020E 05
87	174.2	7.05E-01	2.17E-06	210.	44.5	4.06	2.93E 16	4.91E-05	0.84	3.77	288.	5.86E 06	1.020E 05
88	171.0	5.39E-01	1.69E-06	208.	44.5	3.98	2.28E 16	6.30E-05	0.82	3.70	285.	4.53E 06	1.020E 05
89	175.0	4.12E-01	1.28E-06	209.	44.5	3.59	1.73E 16	8.33E-05	0.83	3.75	287.	3.44E 06	1.020E 05
90	173.0	3.16E-01	9.68E-07	210.	44.5	3.63	1.31E 16	1.10E-04	0.84	3.79	288.	2.62E 06	1.020E 05
91	174.6	2.43E-01	7.45E-07	210.	44.5	3.81	1.01E 16	1.43E-04	0.84	3.78	288.	2.02E 06	1.020E 05
92	174.3	1.86E-01	5.73E-07	210.	44.5	3.81	7.75E 15	1.86E-04	0.84	3.78	288.	1.55E 06	1.020E 05
93	173.9	1.43E-01	4.40E-07	210.	44.5	3.80	5.96E 15	2.42E-04	0.84	3.77	288.	1.19E 06	1.020E 05
94	173.6	1.10E-01	3.39E-07	210.	44.5	3.79	4.58E 15	3.14E-04	0.84	3.76	287.	9.14E 05	1.020E 05
95	173.2	8.41E-02	2.60E-07	209.	44.5	3.79	3.45E 15	4.09E-04	0.83	3.76	287.	7.01E 05	1.020E 05
96	172.8	6.44E-02	2.00E-07	209.	44.5	3.78	2.70E 15	5.33E-04	0.83	3.75	287.	5.38E 05	1.020E 05
97	172.5	4.93E-02	1.53E-07	209.	44.5	3.77	2.07E 15	6.94E-04	0.83	3.74	286.	4.12E 05	1.020E 05

Table 4 (continued)

98	172.1	3.78E-02	1.18E-07	44.5	3.77	1.59E 15	9.05E-04	0.83	3.74	286.	3.16E 05	1.020E 05
99	171.8	2.89E-02	9.01E-08	44.5	3.76	1.22E 15	1.18E-03	0.83	3.73	286.	2.42E 05	1.020E 05
100	171.4	2.21E-02	6.91E-08	44.5	3.75	9.34E 14	1.54E-03	0.82	3.72	285.	1.85E 05	1.020E 05
101	174.7	1.69E-02	5.19E-08	210.	3.54	7.02E 14	2.05E-03	0.84	3.80	288.	1.41E 05	1.020E 05
102	178.1	1.31E-02	3.93E-08	210.	3.61	5.31E 14	2.71E-03	0.86	3.87	291.	1.07E 05	1.020E 05
103	181.4	1.01E-02	2.98E-08	214.	3.68	4.04E 14	3.56E-03	0.89	3.95	294.	8.24E 04	1.020E 05
104	184.8	7.86E-03	2.28E-08	216.	3.75	3.08E 14	4.67E-03	0.91	4.02	296.	6.35E 04	1.020E 05
105	183.1	6.15E-03	1.75E-08	218.	3.82	2.37E 14	6.08E-03	0.93	4.09	299.	4.92E 04	1.020E 05
106	191.5	4.82E-03	1.35E-08	219.	3.89	1.83E 14	7.88E-03	0.95	4.17	302.	3.83E 04	1.020E 05
107	194.8	3.80E-03	1.05E-08	221.	3.96	1.41E 14	1.02E-02	0.98	4.24	304.	2.99E 04	1.020E 05
108	198.1	3.01E-03	8.14E-09	223.	4.02	1.10E 14	1.31E-02	1.00	4.32	307.	2.35E 04	1.020E 05
109	201.5	2.39E-03	6.36E-09	225.	4.09	8.60E 13	1.67E-02	1.02	4.39	309.	1.85E 04	1.020E 05
110	204.8	1.91E-03	4.99E-09	226.	4.16	6.75E 13	2.13E-02	1.03	4.47	312.	1.46E 04	1.020E 05
111	210.6	1.53E-03	3.89E-09	229.	4.28	5.27E 13	2.83E-02	1.06	4.59	316.	1.16E 04	1.020E 05
112	216.4	1.24E-03	3.06E-09	232.	4.41	4.13E 13	3.48E-02	1.08	4.72	321.	9.22E 03	1.020E 05
113	222.2	1.00E-03	2.42E-09	235.	4.43	3.27E 13	4.40E-02	1.11	4.85	325.	7.38E 03	1.020E 05
114	228.0	8.18E-04	1.92E-09	238.	4.42	2.60E 13	5.54E-02	1.13	4.98	329.	5.95E 03	1.020E 05
115	233.8	6.71E-04	1.54E-09	240.	4.53	2.08E 13	6.92E-02	1.16	5.11	333.	4.81E 03	1.020E 05
116	239.6	5.53E-04	1.24E-09	243.	4.65	1.67E 13	8.61E-02	1.18	5.23	337.	3.92E 03	1.020E 05
117	245.4	4.58E-04	9.99E-10	245.	4.76	1.35E 13	1.07E-01	1.21	5.36	342.	3.21E 03	1.020E 05
118	251.2	3.81E-04	8.12E-10	248.	4.87	1.10E 13	1.31E-01	1.24	5.49	346.	2.64E 03	1.020E 05
119	257.0	3.18E-04	6.63E-10	251.	4.99	8.96E 12	1.61E-01	1.26	5.62	350.	2.18E 03	1.020E 05
120	262.8	2.67E-04	5.43E-10	253.	5.10	7.35E 12	1.96E-01	1.29	5.75	353.	1.91E 03	1.020E 05
121	270.6	2.25E-04	4.45E-10	255.	5.26	6.01E 12	2.39E-01	1.33	5.92	359.	1.50E 03	1.020E 05
122	278.3	1.90E-04	3.65E-10	260.	5.21	4.95E 12	2.91E-01	1.37	6.09	364.	1.25E 03	1.020E 05
123	286.1	1.62E-04	3.03E-10	263.	5.35	4.10E 12	3.45E-01	1.40	6.26	369.	1.05E 03	1.020E 05
124	293.8	1.38E-04	2.52E-10	266.	5.50	3.41E 12	4.22E-01	1.44	6.44	374.	8.85E 02	1.020E 05
125	301.6	1.19E-04	2.11E-10	284.	5.65	2.85E 12	5.05E-01	1.48	6.61	379.	7.49E 02	1.020E 05
126	309.3	1.02E-04	1.77E-10	269.	5.80	2.39E 12	6.02E-01	1.52	6.78	383.	6.37E 02	1.020E 05
127	317.1	8.82E-05	1.49E-10	275.	5.94	2.02E 12	7.14E-01	1.55	6.95	388.	5.44E 02	1.020E 05
128	324.8	7.66E-05	1.26E-10	278.	6.09	1.71E 12	8.43E-01	1.58	7.12	393.	4.66E 02	1.020E 05
129	332.6	6.66E-05	1.07E-10	281.	6.24	1.45E 12	9.91E-01	1.62	7.30	398.	4.01E 02	1.020E 05
130	340.3	5.82E-05	9.16E-11	284.	6.38	1.24E 12	1.16E 00	1.65	7.47	402.	3.46E 02	1.020E 05
131	349.9	5.10E-05	7.83E-11	287.	6.44	1.06E 12	1.36E 00	1.69	7.66	407.	3.00E 02	1.020E 05
132	357.6	4.48E-05	6.71E-11	291.	6.60	9.08E 11	1.58E 00	1.73	7.85	412.	2.60E 02	1.020E 05
133	366.3	3.95E-05	5.78E-11	294.	6.76	7.82E 11	1.84E 00	1.77	8.05	417.	2.27E 02	1.020E 05
134	374.9	3.50E-05	4.99E-11	297.	6.92	6.75E 11	2.13E 00	1.82	8.24	422.	1.98E 02	1.020E 05
135	383.6	3.10E-05	4.33E-11	300.	7.08	5.85E 11	2.46E 00	1.86	8.43	427.	1.74E 02	1.020E 05
136	392.2	2.76E-05	3.77E-11	303.	7.25	5.09E 11	2.83E 00	1.90	8.62	432.	1.53E 02	1.020E 05
137	400.9	2.46E-05	3.29E-11	306.	7.41	4.44E 11	3.24E 00	1.95	8.82	437.	1.35E 02	1.020E 05
138	409.5	2.20E-05	2.87E-11	309.	7.57	3.89E 11	3.70E 00	1.98	9.01	441.	1.19E 02	1.020E 05
139	418.2	1.97E-05	2.52E-11	312.	7.73	3.41E 11	4.22E 00	2.01	9.20	446.	1.06E 02	1.020E 05
140	426.8	1.77E-05	2.22E-11	315.	7.89	3.00E 11	4.79E 00	2.05	9.40	450.	9.40E 01	1.020E 05
141	435.2	1.59E-05	1.95E-11	319.	8.06	2.65E 11	5.43E 00	2.08	9.64	456.	8.40E 01	1.020E 05
142	443.5	1.44E-05	1.72E-11	322.	8.22	2.35E 11	6.13E 00	2.12	9.88	462.	7.53E 01	1.020E 05
143	451.9	1.30E-05	1.52E-11	326.	8.38	2.08E 11	6.90E 00	2.15	10.13	467.	6.77E 01	1.020E 05
144	460.2	1.18E-05	1.34E-11	330.	8.53	1.86E 11	7.75E 00	2.19	10.38	473.	6.10E 01	1.020E 05
145	468.6	1.07E-05	1.19E-11	333.	8.68	1.66E 11	8.68E 00	2.22	10.63	479.	5.51E 01	1.020E 05
146	476.9	9.77E-06	1.06E-11	337.	8.81	1.48E 11	9.69E 00	2.25	10.88	484.	5.00E 01	1.020E 05
147	485.3	8.92E-06	9.46E-12	341.	8.97	1.33E 11	1.08E 01	2.29	11.14	490.	4.54E 01	1.020E 05
148	493.6	8.16E-06	8.47E-12	344.	9.07	1.20E 11	1.20E 01	2.33	11.40	495.	4.13E 01	1.020E 05
149	502.0	7.49E-06	7.59E-12	348.	9.26	1.08E 11	1.33E 01	2.36	11.67	501.	3.76E 01	1.020E 05

Table 4 (continued)

150	510.3	6.88E-06	6.82E-12	352.	42.1	9.44	9.76E 10	1.47E 01	2.39	11.94	507.	3.44E 01	1.020E 05
151	516.1	6.33E-06	6.18E-12	354.	41.9	16.32	8.88E 10	1.62E 01	2.41	12.11	510.	3.15E 01	1.020E 05
152	521.8	5.83E-06	5.62E-12	357.	41.8	10.47	8.09E 10	1.78E 01	2.43	12.29	514.	2.89E 01	1.020E 05
153	527.6	5.38E-06	5.11E-12	359.	41.7	10.61	7.30E 10	1.95E 01	2.45	12.47	518.	2.66E 01	1.020E 05
154	533.3	4.97E-06	4.65E-12	361.	41.5	11.75	6.75E 10	2.13E 01	2.47	12.65	521.	2.44E 01	1.020E 05
155	539.1	4.59E-06	4.24E-12	364.	41.4	10.90	6.17E 10	2.35E 01	2.49	12.83	525.	2.25E 01	1.020E 05
156	544.8	4.25E-06	3.87E-12	366.	41.3	11.04	5.65E 10	2.55E 01	2.51	13.01	529.	2.08E 01	1.020E 05
157	550.6	3.94E-06	3.54E-12	369.	41.1	11.19	5.18E 10	2.78E 01	2.54	13.20	532.	1.92E 01	1.020E 05
158	556.3	3.64E-06	3.24E-12	371.	41.0	11.33	4.76E 10	3.02E 01	2.54	13.38	536.	1.77E 01	1.020E 05
159	562.1	3.39E-06	2.97E-12	373.	40.9	11.48	4.37E 10	3.29E 01	2.56	13.57	540.	1.64E 01	1.020E 05
160	567.8	3.15E-06	2.72E-12	376.	40.7	11.63	4.02E 10	3.58E 01	2.58	13.76	543.	1.52E 01	1.020E 05
161	573.5	2.93E-06	2.50E-12	378.	40.6	11.77	3.70E 10	3.88E 01	2.60	13.95	547.	1.41E 01	1.020E 05
162	579.3	2.73E-06	2.29E-12	381.	40.5	11.92	3.41E 10	4.21E 01	2.62	14.14	551.	1.31E 01	1.020E 05
163	585.0	2.55E-06	2.11E-12	383.	40.3	12.07	3.15E 10	4.56E 01	2.64	14.33	554.	1.21E 01	1.020E 05
164	590.7	2.38E-06	1.94E-12	385.	40.2	12.22	2.91E 10	4.94E 01	2.66	14.52	558.	1.13E 01	1.020E 05
165	596.5	2.22E-06	1.79E-12	388.	40.1	12.37	2.69E 10	5.34E 01	2.68	14.72	561.	1.05E 01	1.020E 05
166	602.2	2.07E-06	1.65E-12	390.	39.9	11.52	2.49E 10	5.77E 01	2.70	14.91	565.	9.80E 00	1.020E 05
167	607.9	1.94E-06	1.53E-12	392.	39.8	11.67	2.31E 10	6.22E 01	2.72	15.11	569.	9.14E 00	1.020E 05
168	613.7	1.82E-06	1.41E-12	395.	39.7	11.83	2.14E 10	6.71E 01	2.74	15.31	572.	8.53E 00	1.020E 05
169	619.4	1.70E-06	1.31E-12	397.	39.5	12.01	1.99E 10	7.23E 01	2.76	15.51	576.	7.97E 00	1.020E 05
170	625.1	1.60E-06	1.21E-12	400.	39.4	13.13	1.85E 10	7.78E 01	2.78	15.71	580.	7.45E 00	1.020E 05
171	631.2	1.50E-06	1.13E-12	401.	39.2	14.12	1.73E 10	8.31E 01	2.79	15.84	582.	7.00E 00	1.020E 05
172	637.3	1.41E-06	1.05E-12	403.	39.1	14.22	1.62E 10	8.88E 01	2.80	15.96	584.	6.58E 00	1.020E 05
173	643.5	1.32E-06	9.79E-13	404.	38.9	14.32	1.52E 10	9.49E 01	2.80	16.09	586.	6.18E 00	1.020E 05
174	649.6	1.24E-06	9.13E-13	406.	38.7	14.42	1.42E 10	1.01E 02	2.81	16.22	589.	5.81E 00	1.020E 05
175	655.7	1.17E-06	8.52E-13	407.	38.5	14.52	1.33E 10	1.08E 02	2.82	16.35	591.	5.47E 00	1.020E 05
176	637.8	1.10E-06	7.96E-13	409.	38.4	14.63	1.25E 10	1.15E 02	2.83	16.49	593.	5.15E 00	1.020E 05
177	639.9	1.04E-06	7.43E-13	410.	38.2	14.73	1.17E 10	1.23E 02	2.83	16.62	595.	4.85E 00	1.020E 05
178	642.1	9.75E-07	6.95E-13	412.	38.0	14.83	1.10E 10	1.31E 02	2.84	16.75	598.	4.57E 00	1.020E 05
179	644.2	9.19E-07	6.50E-13	413.	37.9	14.94	1.03E 10	1.39E 02	2.85	16.89	600.	4.31E 00	1.020E 05
180	646.3	8.66E-07	6.08E-13	415.	37.7	15.04	9.71E 09	1.48E 02	2.86	17.03	602.	4.07E 00	1.020E 05
181	646.4	8.17E-07	5.71E-13	416.	37.5	15.94	9.15E 09	1.57E 02	2.86	17.11	604.	3.84E 00	1.020E 05
182	646.6	7.70E-07	5.36E-13	417.	37.4	16.00	8.63E 09	1.67E 02	2.86	17.19	605.	3.63E 00	1.020E 05
183	646.7	7.27E-07	5.04E-13	418.	37.2	16.07	8.14E 09	1.77E 02	2.86	17.27	606.	3.43E 00	1.020E 05
184	646.9	6.86E-07	4.73E-13	418.	37.1	16.14	7.68E 09	1.87E 02	2.86	17.35	608.	3.25E 00	1.020E 05
185	647.1	6.48E-07	4.45E-13	419.	36.9	16.20	7.25E 09	1.98E 02	2.86	17.43	609.	3.07E 00	1.020E 05
186	647.1	6.12E-07	4.18E-13	420.	36.8	16.27	6.85E 09	2.10E 02	2.86	17.51	610.	2.91E 00	1.020E 05
187	647.3	5.78E-07	3.93E-13	421.	36.6	16.34	6.47E 09	2.22E 02	2.86	17.59	612.	2.75E 00	1.020E 05
188	647.4	5.46E-07	3.70E-13	422.	36.5	16.40	6.11E 09	2.35E 02	2.86	17.68	613.	2.60E 00	1.020E 05
189	647.5	5.16E-07	3.48E-13	423.	36.3	16.47	5.77E 09	2.49E 02	2.86	17.76	614.	2.47E 00	1.020E 05
190	647.7	4.88E-07	3.28E-13	424.	36.2	16.54	5.46E 09	2.64E 02	2.86	17.84	616.	2.34E 00	1.020E 05
191	647.8	4.61E-07	3.09E-13	425.	36.0	16.61	5.16E 09	2.79E 02	2.86	17.93	617.	2.21E 00	1.020E 05
192	648.0	4.36E-07	2.91E-13	426.	35.9	16.68	4.88E 09	2.95E 02	2.86	18.02	618.	2.10E 00	1.020E 05
193	648.1	4.13E-07	2.74E-13	427.	35.7	16.75	4.61E 09	3.12E 02	2.86	18.10	620.	1.99E 00	1.020E 05
194	648.2	3.91E-07	2.58E-13	428.	35.6	16.82	4.37E 09	3.29E 02	2.86	18.18	621.	1.89E 00	1.020E 05
195	648.4	3.70E-07	2.43E-13	429.	35.4	16.89	4.13E 09	3.48E 02	2.86	18.28	623.	1.79E 00	1.020E 05
196	648.5	3.50E-07	2.29E-13	430.	35.3	16.96	3.91E 09	3.68E 02	2.86	18.37	624.	1.70E 00	1.020E 05
197	648.6	3.32E-07	2.16E-13	431.	35.1	17.03	3.70E 09	3.88E 02	2.86	18.46	626.	1.61E 00	1.020E 05
198	648.8	3.14E-07	2.04E-13	432.	34.9	17.10	3.51E 09	4.10E 02	2.86	18.55	627.	1.53E 00	1.020E 05
199	648.9	2.98E-07	1.92E-13	433.	34.8	17.17	3.32E 09	4.33E 02	2.86	18.64	628.	1.45E 00	1.020E 05
200	649.1	2.82E-07	1.81E-13	434.	34.6	17.25	3.15E 09	4.57E 02	2.87	18.73	630.	1.38E 00	1.020E 05

(Venera 9). For the two different temperatures of 758° K (Venera 9) and 738° K (Venera 10) that we have taken into account. The computed physical parameters are very similar. The different spacecrafts, that have observed the Venus atmosphere, have seen different layers of clouds. Their observations are summarized in table 5. The refractive index

TABLE 5

Altitudes of the observed cloud layers.

Spacecraft	ALTITUDE	Reference
1. Venera 4 (October 1967)	50 - 60 km	West, 1977
2. Mariner 5 (October 1967)	1) 50 km 2) 60 km	West, 1977
3. Venera 5, 6 (May 1969)	50 - 60 km	West, 1977
4. Venera 8 (July 1972)	1) 35 km (aerosols) 2) 50 - 70 km	Marov, 1973
5. Mariner 10 (February, 1974)	1) 35 - 52 km 52 - 60 km 2) 81 km (Blue haze)	Dunne, 1978
6. Venera 9, 10 (October 1975)	1) 30 - 49 km (aerosols) 2) 49 - 60 km	Marov, 1978

ALTITUDES WHERE THE CALCULATED AND MEASURED PRESSIONS AND NUMBER DENSITIES AGREE

For the chemical composition	1	46 - 76 km
»	2	40 - 50 km
»	3	—

estimated from polarimetry data $n = 1,44$ (Hansel et al 1975) and identification of some peculiar features in Venus spectra suggest, the hypothesis of sulfuric acid solution, that contain the cloud layers from 35 - 60 km. (Sill, 1972, Young et al, 1973, Prinn, 1973), proposed a photochemical mechanism to explain the presence of H_2SO_4 in these clouds. The chemical reactions proposed by Prinn, suggest the presence of SO_2 in the 35 - 60 km altitude range of the Venus atmosphere. The quantity of SO_2 in the Venus atmosphere is unknown. For this reason we propose, the chemical compositions 2 and 3 in table 1.

We have compared the computed physical parameters (pressure and number density) (Macris - Petropoulos, 1978) to the measured by Venera 9 and 10 (Kolosov et al, 1977) and we have found, as it is shown in table 5, that the computed and measured values are in agreement, with these actually measured only in the altitude range, from 44 to 70 km for the parameters computed with the chemical composition (1), and from 40 to 50 km for the chemical composition (2) of the table 1. It is interesting to note from the aerosol measurements of Venera 9 and 10. (between 30 - 49 km), that the Venusian atmosphere contains a small percentage of SO_2 (1 %) at these heights, which is in agreement with our results.

In conclusion the proposed model for the Venus atmosphere can be considered as a standard model for the following reasons: The Venus atmosphere does not present seasonal variations, of the pressures and temperatures, near the surface. The above model can be applied for every latitude and longitude of Venus because Mariner 10 (Dunne, 1978) has found that this planet is 100 times closer to being a perfect sphere than is Earth. Consequently no corrections of the acceleration with latitude and longitude is necessary for the above model.

Π Ε Ρ Ι Λ Η Ψ Ι Σ

Εἰς τὴν παροῦσαν ἐργασίαν δίδομεν ἓνα πρότυπον τῆς ἀτμοσφαιρας τῆς Ἀφροδίτης (Πίνακες 2, 3, 4), ἀπὸ τὴν ἐπιφάνειαν μέχρι ὕψους 200 km, διὰ τρεῖς χημικὰς συνθέσεις αὐτῆς (Πίναξ 1). Ἐβασίσθημεν ἐπὶ τῶν μετρήσεων θεο-

μοκρασίας και πίεσεως, τὰς ὁποίας ἐξετέλεσαν τὰ διαστημόπλοια Venera 9 καὶ 10 καὶ Mariner 10.

Διὰ τοὺς ὑπολογισμοὺς τῶν διαφόρων φυσικῶν παραμέτρων ἐχρησιμοποίησαμεν τὴν πίεσιν ἐπὶ τῆς ἐπιφανείας τοῦ πλανῆτου, τὴν ἀπόλυτον μᾶζα καὶ τὴν ἀκτίνα τῆς Ἀφροδίτης καθὼς καὶ τὴν κατανομὴν τῶν θερμοκρασιῶν μεταξὺ 0 - 40 km (Venera 9 καὶ 10) καὶ 90 - 200 km (Mariner 5 καὶ 10).

Δεδομένου ὅτι ἡ περιεκτικότης τῆς ἀτμοσφαίρας τῆς Ἀφροδίτης εἰς CO₂ εἶναι ἀνωτέρα τῶν 95 %, αὕτη θεωρεῖται ὁμογενῆς καὶ διὰ τὸν ὑπολογισμὸν τῶν φυσικῶν παραμέτρων ἐχρησιμοποίησαμε τὸ πρόγραμμα Pitts, τὸ ὁποῖον βασίζεται εἰς τὴν ὑδροστατικὴν ὑπόθεσιν.

Βάσει τῶν χημικῶν συνθέσεων τοῦ Πίνακος 1, ἐκ τῶν ὁποίων αἱ ὑπ' ἀριθμ. 2 καὶ 3 περιέχουν SO₂ ὑπελογίσθη ἡ κατανομὴ τοῦ μοριακοῦ βάρους ἀπὸ 0 - 200 km, ἣτις καὶ ἐλήφθη ὑπ' ὄψιν διὰ τοὺς ἐκτελεσθέντας ὑπολογισμοὺς.

Ἡ σύγκρισις τῶν ὑπολογισθειῶν τιμῶν τῶν δύο φυσικῶν παραμέτρων πίεσεως καὶ πυκνότητος πρὸς τὰς μετρηθείσας ὑπὸ τῶν Venera 9 καὶ 10, ἔδειξεν ὅτι αἱ ἀνωτέρω τιμαὶ συμπίπτουν μόνον διὰ τὰ ὕψη 46 - 76 km διὰ τὴν χημικὴν σύνθεσιν 1 καὶ 40 - 50 km διὰ τὴν χημικὴν σύνθεσιν 2 τοῦ πίνακος 1 (Πίναξ 5).

Ἡ Ἀφροδίτη δὲν παρουσιάζει ἐποχιακὰς μεταβολὰς πίεσεως καὶ θερμοκρασίας καὶ ὡς ἐκ τούτου τὸ πρότυπον τὸ ὁποῖον δίδομεν δύναται νὰ θεωρηθῇ ὡς κανονικὸν πρότυπον (Standard Model), λόγῳ δὲ τῆς σφαιρικότητος τοῦ πλανῆτου ἰσχύει μέχρι τοῦ ὕψους τῶν 200 km.

Ἀπὸ τοῦ ὕψους τῶν 200 km καὶ ἄνω ἡ κατανομὴ τῆς θερμοκρασίας τῆς ἀτμοσφαίρας τῆς Ἀφροδίτης ἐξαρτᾶται καὶ ἀπὸ ἄλλους παράγοντας.

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