[redacted]

#609

Viking II & Pioneer Venus
Accel. Gravity Data
High Resolution Accel. Gravity

75-083A-04G & 78-051A-23B

PIONEER VENUS 1

VIKING ORBITER 2

GRAVITATIONAL ACCELERATION DATA

78-051A-23B

75-083A-04G

THESE DATA SETS HAVE BEEN RESTORED. ORIGINALLY THEY CONTAINED FIVE 9-TRACK, 1600 BPI TAPES WRITTEN IN ASCII. THERE ARE FIVE RESTORED TAPES. DR/DS004850 CONTAIN BOTH DATA SETS AND DR/DS004851 THRU DR/DS004854 ARE DATA SET 78-051A-23B. THE DR TAPES ARE 3480 CARTRIDGES AND THE DS TAPES ARE 9-TRACK, 6250 BPI. THE ORIGINAL TAPES WERE CREATED ON AN UNIVAC 1100 COMPUTER AND WERE RESTORED ON AN IBM 9021 COMPUTER. THE DR AND DS NUMBERS ALONG WITH THE CORRESPONDING D NUMBERS ARE AS FOLLOWS:

DR#	DS#	D#	FILES	TIME SPAN
DR004850	DS004850	D059408	1	03/01/79 - 04/07/79
DR004851	DS004851	D059407	1	04/08/79 - 07/24/79
DR004852	DS004852	D059406	1	12/19/79 - 03/31/80
DR004853	DS004853	D059409	1	04/08/80 - 06/25/80
DR004854	DS004854	D059410	1	06/27/80 - 08/29/80

REQ. AGENT	RAND NO.	ACQ. AGENT
DAD	V0206	WSC

THIS DATA SET CATALOG CONSISTS OF 5, 9-TRACK, 1600 BPI, ASCII MAGNETIC TAPES. EACH TAPE HAS 1 FILE. THESE TAPES WERE CREATED ON THE UNIVAC 1100. FOUR OF THESE TAPES CONSISTS OF PIONEER VENUS DATA ONLY AND ONE OF THE TAPES D-59408 CONSISTS OF BOTH DATA SETS. THE DATA SETS NAMES AND ID'S, FOLLOWED BY THE CORRESPONDING D & C NUMBERS AND THE TIME SPANS ARE AS FOLLOWS:

PIONEER VENUS HIGH RESOLUTION ACCEL. GRAVITY DATA

78-051A-23B

D#	C#	TIME SPAN
D-59406	C-23356	12/19/79 - 03/31/80
D-59407	C-23357	04/08/79 - 07/24/79
D-59408	C-23358	03/01/79 - 04/07/79
D-59409	C-23359	04/08/80 - 06/25/80
D-59410	C-23360	06/27/80 - 08/29/80

VIKING II ACCEL. GRAVITY DATA

75-083A-04G

D#	C#	TIME SPAN
D-59408	C-23358	12/16/77 - 09/28/78

JET PROPULSION LABORATORY California Institute of Technology • 4800 Oak Grove Drive, Pasadena, California 91103

22 June 1983

Ms. W. Cameron
Goddard Space Flight Center
26-117
Greenbelt, Maryland 20771

Dear Ms. Cameron

Enclosed are five magnetic tapes that contain the Viking II gravity data from orbits 433 to 685 (Label K2030). This Viking data is redundant to that which was sent to you previously, but we have added the earth vector to every acceleration so the line-of-sight is easily established. There is also the Pioneer Venus HIGH RESOLUTION gravity data on tapes K2030 (the same tape as the Viking II data are on) - with orbits 87-124; K2172 with orbits 125-232; A2172 with orbits 380-489; F2099 with orbits 491-569; and I2000 with orbits 571-634. Also enclosed are partial dump listings for each tape. The headings for each column have been identified in the listings.

The tapes are nine track, 1600 BPI, unlabelled, 8-bit ASC II with a logical record length of 80 characters and a block size of one. There are software end-of-file marks between each element on the tape.

Sincerely yours

W. L. Sjogren

WLS:lap

cc: R. O. Fimmel

Viking II - 75-083A-04 G
PV1 - 78-051A-23 B

PIONEER VENUS I HIGH RESOL ACCEL. GRAVITY DATA.
VIKING II ACCELERATION GRAVITY DATA

Telephone 354-4321 Top data for GYF Telex 675421 Twx 910-588-3294

Format for Viking I + Pioneer Venus Tape
D-59408

Cd

1 s/c latitude, deg, Mars true equator of date.

2 s/c longitude, deg, Mars true equator of date, positive is East, negative is West.

3 The line of sight acceleration in mm/s^2 which can be converted to mgal by multiplying by 100.

4 The spacecraft altitude above the Martian surface, km. Mars was assumed spherical with a radius of 3394.0 km.

5 Earth latitude, deg, Mars true equator of date at the time of this line of sight observation.

6 Earth longitude, deg East (0-360), Mars true equator of date.

7 Earth distance from the center of Mars, in millions of kilometers.

Format for pioneer Venus Tapes.

see D-59406

VENUS DATA

LINE 1

1. PERIAPSIS #
2. Year
3. MONTH
4. DAY
5. HOUR
6. MINUTE
7. EARTH LONGITUDE, deg E
8. EARTH LATITUDE
9. EARTH DISTANCE, km

SUCCESSIVE LINES

1. s/c LATITUDE
2. s/c LONGITUDE
3. accel mm/s^2
4. altitude, km

D-59406

```
*EDM,QZ  UNBLOCK.
ED=A 298 09/20/83 15:32 (0):F,A
EDIT
NAME: P380AT2/ACCELS(0)
 380  1979  12  19   7  47  272.650   1.881 211021792.
      71.2707        59.7408        .02358169435     2338.7167
      71.1417        59.0812        .02173509519     2318.4708
      71.0097        58.4272        .01991638937     2298.2693
      70.8748        57.7789        .01812549215     2278.1097
      70.7370        57.1362        .01636232366     2257.9930
      70.5963        56.4995        .01462704444     2237.9224
      70.4527        55.8685        .01291957370     2217.8956
      70.3063        55.2435        .01123983506     2197.9143
      70.1502        54.7197        .00984140229     2181.0560
      70.1570        54.6244        .00958798244     2177.9794
      70.0048        54.0114        .00796393817     2158.0908
      69.8498        53.4043        .00636762986     2138.2498
      69.6920        52.8034        .00479920371     2118.4568
      69.5314        52.2085        .00325858596     2098.7133
      69.3680        51.6197        .00174570802     2079.0172
      69.2677        51.1268        .00048858860     2062.4074
      69.2018        51.0371        .00026070834     2059.3722
      69.0329        50.4605       -.00119648293     2039.7785
      68.8612        49.8901       -.00262593059     2020.2343
      68.6868        49.3258       -.00402750378     2000.7438
      68.5097        48.7676       -.00540126854     1981.3050
      68.3299        48.2155       -.00674728589     1961.9186
      68.1759        47.7537       -.00786314672     1945.5773
      68.1475        47.6696       -.00806543266     1942.5883
      67.9623        47.1296       -.00935577089     1923.3115
      67.7745        46.5957       -.01061835804     1904.0903
      67.5841        46.0679       -.01185307815     1884.9251
      67.3910        45.5460       -.01305999001     1865.8168
      67.1953        45.0301       -.01423914672     1846.7661
      67.0280        44.5987       -.01521380362     1830.7134
      66.9971        44.5200       -.01539044047     1827.7737
      66.7963        44.0159       -.01651392574     1808.8411
      66.5929        43.5176       -.01760965236     1789.9666
      66.3969        43.0251       -.01867751940     1771.1536
      66.1785        42.5384       -.01971757808     1752.4026
      65.9675        42.0573       -.02072987449     1733.7120
      65.7873        41.6553       -.02156338189     1717.9716
      65.7540        41.5820       -.02171431505     1715.0862
      65.5380        41.1122       -.02267094748     1696.5229
      65.3196        40.6479       -.02359981323     1678.0240
      65.0987        40.1892       -.02450082777     1659.5903
      64.8753        39.7359       -.02537403349     1641.2225
      64.6496        39.2880       -.02621946903     1622.9216
      64.4570        38.9138       -.02691188175     1607.5156
      64.4213        38.8454       -.02703705686     1604.6883
      64.1907        38.4081       -.02782683610     1586.5240
      63.9577        37.9760       -.02858884144     1568.4274
      63.7223        37.5490       -.02932300279     1550.4017
      63.4846        37.1272       -.03002935555     1532.4476
      63.2445        36.7103       -.03070793045     1514.5636
      63.0399        36.3622       -.03125930298     1499.5177
      63.0020        36.2985       -.03135866532     1496.7539
```

D-8 59408

```
*EDM,QZ  UNBLOCK.
ED=A 298 09/20/83 15:29 (0):F,A
EDIT
NAME:433/MELOS(0)
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1	2	3	4	5	6	7
-32.5004	126.8391	.026994	1582.2971	14.4415	119.6669	170.58937
-32.1147	126.8912	.017705	1563.6750	14.4416	119.6264	170.58924
-31.7260	126.9432	.010086	1545.1153	14.4416	119.5858	170.58911
-31.3343	126.9951	.004136	1526.6184	14.4416	119.5452	170.58898
-31.1829	127.0151	.002293	1519.5232	14.4416	119.5296	170.58893
-30.9396	127.0470	-.000144	1508.1849	14.4416	119.5047	170.58885
-30.5419	127.0988	-.002757	1489.8178	14.4416	119.4641	170.58872
-30.1411	127.1505	-.003700	1471.5177	14.4416	119.4236	170.58859
-29.9862	127.1703	-.003619	1464.5018	14.4416	119.4080	170.58854
-29.7372	127.2021	-.002974	1453.2852	14.4416	119.3830	170.58846
-29.3302	127.2537	-.000580	1435.1235	14.4417	119.3424	170.58834
-28.9200	127.3053	.003015	1417.0331	14.4417	119.3019	170.58821
-28.7616	127.3251	.004379	1410.1015	14.4417	119.2863	170.58816
-28.5067	127.3568	.006512	1399.0149	14.4417	119.2613	170.58808
-28.0903	127.4083	.009833	1381.0718	14.4417	119.2207	170.58795
-27.6706	127.4597	.012980	1363.2047	14.4417	119.1802	170.58782
-27.5086	127.4795	.014142	1356.3625	14.4417	119.1646	170.58777
-27.2477	127.5112	.015951	1345.4143	14.4417	119.1396	170.58769
-26.8216	127.5626	.018747	1327.7039	14.4418	119.0990	170.58756
-26.3923	127.6140	.021367	1310.0742	14.4418	119.0585	170.58743
-26.2265	127.6337	.022327	1303.3268	14.4418	119.0429	170.58738
-25.9596	127.6654	.023813	1292.5261	14.4418	119.0179	170.58730
-25.5236	127.7168	.026083	1275.0628	14.4418	118.9773	170.58717
-25.0844	127.7683	.028139	1257.6852	14.4418	118.9368	170.58704
-24.9149	127.7880	.028843	1251.0384	14.4418	118.9212	170.58699
-24.6417	127.8197	.029873	1240.3942	14.4418	118.8962	170.58691
-24.1957	127.8712	.031279	1223.1932	14.4418	118.8556	170.58678
-23.7464	127.9228	.032358	1206.0839	14.4419	118.8151	170.58665
-23.5730	127.9425	.032684	1199.5427	14.4419	118.7995	170.58660
-23.2936	127.9743	.033108	1189.0657	14.4419	118.7745	170.58652
-22.8374	128.0260	.033531	1172.1428	14.4419	118.7340	170.58639
-22.3778	128.0777	.033625	1155.3160	14.4419	118.6934	170.58626
-22.2006	128.0975	.033574	1148.8873	14.4419	118.6778	170.58621
-21.9147	128.1294	.033391	1138.5867	14.4419	118.6528	170.58613
-21.4481	128.1812	.032830	1121.9580	14.4419	118.6123	170.58600
-20.9781	128.2332	.032074	1105.4313	14.4420	118.5717	170.58587
-20.7969	128.2531	.031827	1099.1214	14.4420	118.5561	170.58582
-20.5045	128.2852	.031492	1089.0076	14.4420	118.5311	170.58574
-20.0274	128.3373	.031100	1072.6902	14.4420	118.4906	170.58561
-19.5468	128.3895	.030915	1056.4805	14.4420	118.4500	170.58548
-19.3617	128.4096	.030894	1050.2960	14.4420	118.4345	170.58543
-19.0627	128.4419	.030921	1040.3798	14.4420	118.4094	170.58535
-18.5750	128.4943	.031123	1024.3913	14.4420	118.3689	170.58522
-18.0837	128.5470	.031521	1008.5164	14.4421	118.3283	170.58509
-17.8945	128.5672	.031725	1002.4639	14.4421	118.3128	170.58504
-17.5888	128.5997	.032114	992.7564	14.4421	118.2877	170.58496
-17.0903	128.6526	.032904	977.1149	14.4421	118.2472	170.58484
-16.5882	128.7057	.033935	961.5930	14.4421	118.2066	170.58471
-16.3949	128.7261	.034427	955.6796	14.4421	118.1911	170.58466
-16.0825	128.7590	.035335	946.1923	14.4421	118.1660	170.58458
-15.5731	128.8124	.037110	930.9163	14.4421	118.1255	170.58445
-15.0602	128.8660	.039262	915.7664	14.4421	118.0849	170.58432
-14.8628	128.8866	.040185	909.9991	14.4422	118.0694	170.58427

D-59406
12/19/79-

```
$NOP
$NOP ********* DCUT-01 ************
$EXE TPLIST BS

INPUT PARAMETERS ARE:  AS SR=1=5 1

 TAPE NO.   1              FILE NO.   1
 RECORD   1                LENGTH   81
NAME: P380AT2/ACCELS(0)

 TAPE NO.   1              FILE NO.   1
 RECORD   2                LENGTH   81
 380 '1979 12 19 7 47  272.650   1.881 211021792.
     year month day Hr. minute
 TAPE NO.   1              FILE NO.   1
 RECORD   3                LENGTH   81
      71.2707       59.7408        .02358169435     2338.7167

 TAPE NO.   1              FILE NO.   1
 RECORD   4                LENGTH   81
      71.1417       59.0812        .02173509519     2318.4708

 TAPE NO.   1              FILE NO.   1
 RECORD   5                LENGTH   81
      71.0097       58.4272        .01991638937     2298.2693

***** JOB DONE.
$EXE TPLIST BS

$$
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D 50406
3/31/80

```
RECORD   213              LENGTH   81
    -49.7051     134.4461      -.04449573625     2596.9958

TAPE NO.   1              FILE NO.   1
RECORD   214              LENGTH   81
    -49.8398     134.3510      -.04349859664     2610.1263

TAPE NO.   1              FILE NO.   1
RECORD   215              LENGTH   81
    -50.0512     134.2007      -.04188200552     2630.8512

TAPE NO.   1              FILE NO.   1
RECORD   216              LENGTH   81
    -50.2613     134.0498      -.04021060560     2651.6105

TAPE NO.   1              FILE NO.   1
RECORD   217              LENGTH   81
    -50.4702     133.8982      -.03848409047     2672.4037

TAPE NO.   1              FILE NO.   1
RECORD   218              LENGTH   81
    -50.6780     133.7461      -.03670261055     2693.2323

TAPE NO.   1              FILE NO.   1
RECORD   219              LENGTH   81
    -50.8845     133.5933      -.03486633720     2714.0902

TAPE NO.   1              FILE NO.   1
RECORD   220              LENGTH   81
    -50.9597     133.5373      -.03418180579     2721.7200

TAPE NO.   1              FILE NO.   1
RECORD   221              LENGTH   81
    -51.0899     133.4399      -.03297493374     2734.9843

TAPE NO.   1              FILE NO.   1
RECORD   222              LENGTH   81
    -51.2941     133.2859      -.03102856549     2755.9086

TAPE NO.   1              FILE NO.   1
RECORD   223              LENGTH   81
    -51.4971     133.1312      -.02902741847     2776.8644

TAPE NO.   1              FILE NO.   1
RECORD   224              LENGTH   81
NAME: P483AT2/ACCELS(0)

TAPE NO.   1              FILE NO.   1
RECORD   225              LENGTH   81
483 1980 3 31  10  50  186.297  -4.314 112439277.

TAPE NO.   1              FILE NO.   1
RECORD   226              LENGTH   81
     69.8946     -74.6002       .00436305755     5073.7390

TAPE NO.   1              FILE NO.   1
RECORD   227              LENGTH   81
     69.9826     -74.9233       .00443861587     5051.3333

TAPE NO.   1              FILE NO.   1
RECORD   228              LENGTH   81
     70.0363     -75.1225       .00448628730     5037.6519

TAPE NO.   1              FILE NO.   1
RECORD   229              LENGTH   81
     70.0704     -75.2503       .00451727980     5028.9341
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475 records from EOF