[redacted]

#457

OGO-6

BENNETT ION MASS SPECTROMETER

69-051A-05A

OGO 6

BENNETT ION MASS SPECTROMETER, TAPE

69-051A-05A

THIS DATA SET HAS BEEN RESTORED. THERE WERE ORIGINALLY 10 9-TRACK, 1600 BPI TAPES, WRITTEN IN BINARY. THERE ARE THREE RESTORED TAPES. THE DR TAPES ARE 3480 CARTRIDGES AND THE DS TAPES ARE 9-TRACK, 6250 BPI. THE TAPES WERE CREATED ON AN IBM 360 COMPUTER. THE DR AND DS NUMBERS ALONG WITH THE CORRESPONDING D NUMBERS AND TIME SPANS ARE AS FOLLOWS:

DR#	DS#	DD#	FILES	TIME SPAN
DR02684	DS02684	D38157	1-16	06/11/69 - 06/25/69
		D38158	17-49	07/01/69 - 08/07/69
		D38159	50-80	08/01/69 - 08/31/69
		D38160	80-103	10/01/69 - 11/01/69
DR02685	DS02685	D38161	1-29	03/01/70 - 03/30/70
		D38162	30-32	04/17/70 - 04/19/70
		D38163	33-61	05/03/70 - 05/29/70
DR02686	DS02686	D38164	1-34	07/01/70 - 08/04/70
		D38165	35-51	08/01/70 - 08/26/70
		D38166	52-77	09/27/70 - 12/31/70

REQ. AGENT	RAND NO.	ACQ. AGENT
VPL	V0028	RNH

OGO-6

BENNETT ION MASS SPECTROMETER

69-051A-05A

This data set catalog consists of 10 data tapes. The tapes are 9 track, 1600 BPI, Binary and are multifiled. The tapes were created on an IBM 360 computer.

THE TIME SPAN IS AS FOLLOWS:

D#	C#	FILES	TIME SPAN
D-38157	C-21311	16	6/11/69-6/25/69
D-38158	C-21312	33	7/01/69-8/07/69
D-38159	C-21313	31	8/01/69-8/31/69
D-38160	C-21314	23	10/01/69-11/01/69
D-38161	C-21315	29	3/01/70-3/30/70
D-38162	C-21316	3	4/17/70-4/19/70
D-38163	C-21317	29	5/03/70-5/29/70
D-38164	C-21318	34	7/01/70-8/04/70
D-38165	C-21319	17	8/01/70-8/26/70
D-38166	C-21320	26	9/27/70-12/31/70

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OGO 6 BIMS CONDENSED TAPE FORMAT

There is one tape per month and on each tape there is an EOF whenever the day changes. Normally a file will contain 28 passes, where each pass begins with a label record. (A pass is defined as that part of an orbit which is in the same direction in magnetic latitude.) Within each pass the data is sorted on AMU, so that all the H+ is first followed by the He+ points, N+, O_, N_2+, NO+ and O_2+ points in that order. The IBM 360 JCL for reading the tapes is:

```
//GO.FT11F001 DD UNIT=(2400-9,,DEFER),DISP=(OLD,PASS),
//    LABEL=(,BLP
//    DCB=(DEN=3,RECFM=VBS,BLKSIZE=20404,LRECL=68),
//    VOL=SER=(TAPE#)
```

The tape numbers are:

KA1750	JUN 69	KA1758	FEB 70
KA1751	JUL 69	KA1759	MAR 70
KA1752	AUG 69	KA1760	APR 70
KA1753	SEP 69	KA1761	MAY 70
KA1754	OCT 69	KA1762	JUN 70
KA1755	NOV 69	KA1763	JUL 70
KA1756	DEC 69	KA1764	AUG 70
KA1757	JAN 70	KA1765	SEP-DEC 70

The label record format

WORD NO.	PARAMETER	UNITS	INTEGER OR FLOATING
1	Label-0	#	I
2	Yr x 1000 + day at start of pass	#	I
3	Time of equator crossing	Millisec.	I
4	Local time of eq. crossing	Millisec.	I
5	Orbit numbers	#	I
6	Pass start time	Millisec.	I
7	Pass end time	Millisec.	I
8	Direction code (-1:N-S, +1:S-N)	#	I
9	Pass status (-1 No eq. crossing +1 eq. crossing)	#	I
10	Kp of event (at eq. crossing)	Code	I
11	Max Kp in 24 hrs. preceding the pass	Code	I
12	t hours before event of max Kp	Code	I
13	Altitude at equator crossing	Km	F
14	Geodetic longtitude	Degrees	F
15	Declination of Sun	Degrees	F
16	Alpha	Degrees	F

OGO 6 BIMS CONDENSED TAPE FORMAT

2. Peak record format

Word No.	Parameter	Units	Integer or Floating Pt.
1	Ion mass code *	#	I
2	Yr x 1000 + day	#	I
3	Time	Millisec.	I
4	Eclipse flag 0-not in eclipse 1-in eclipse	#	I
5	Density *	Ions/cm^3	F
6	Current	Amps	F
7	Vs	Volts	F
8	Spacecraft charge	Volts	F
9	OPEP Shaft angle	Degrees	F
10	Velocity	Km/sec	F
11	Altitude	Km	F
12	Geodetic latitude	Degrees	F
13	Geodetic longitude	Degrees	F
14	Geomagnetic latitude	Degrees	F
15	True field L	R_E	F
16	MLT	Sec	F

* Densities are same as B2 densities.

Recent Cal. density corrections:

	Divide by	=	Move down
H+	2.67		0.427
He^+ → H_e^+	1.61		0.207
N+	1.72		0.236
O+	1.26		0.100
N_2+,NO+,O_2+	1.48		0.170

* H+ 1, H_2+ 2, N+ 3, O+ 4, N_2+ 5, NO+ 6, O_2+ 7
1 2 3 4 5 6

#/cm^3

Response to 8/10/79 Technical Request (#1 of 2)

OGO-6 Condensed tapes and Other Data Items

1. OGO-6 condensed tapes are contained in SASC Computer system (Bldg. 1.), Tapes Library System (TLS) slots 26631-26646, inclusive. Duplicates of these tapes are contained in TLS slots 26566-26581. These tapes contain one month of OGO-6 data per tape, segmented into files of one day's operation per file. Each file begins with a label record. The format of the label and data records is attached to this memorandum.

2. The densities on these tapes are not in final corrected form and reprocessing is required to conform to latest calibration data. The tapes also contain all necessary parameters of the orbital trajectory, as well as parameters describing the solar and magnetic activity. The following table details corrections to be applied to the individual ion densities.

Tape Ion Mass Code	AMU	Species	Divide density by
1	1	H+	2.67
2	4	He+	1.61
3	14	N+	1.72
4	16	O+	1.26
5	28	N_2+	1.48
6	30	NO+	1.48
7	32	O_2+	1.48

3. 4060 plotter graphic products for all OGO-6 data are contained in loose-leaf binders in the Norlin College Park Facility data room in cabinets on the west wall. Printouts of all orbital parameters and measured densities are contained in binders in cabinets on the North wall.

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(4)

10/29/79

DOCUMENTATION OF INPUT PARAMETERS:

IFILE, JFILE - Starting and ending file numbers to be plotted from the input tape. There is one day of data in each input tape file; 20-30 files per tape. A tapes canning utility can be used to find the number of files on each tape. Each file has a label record wherein the file contents can be determined (See attached tape format documentation).

ITIME, JTIME - Starting and ending times of data to be plotted (UT milliseconds). Normally used only if one file (part of it) is to be plotted. Setting both to zero plots all the data in each specified file.

M1, M2 - Two AMU can be plotted for each program run. M1 and M2 contain the codes for the mass numbers to be plotted. Available on the tapes are 1,4,14,16,28,30, and 32 AMU coded as follows:

AMU	M1, M2	AMU	M1, M2
1	1	28	5
4	2	30	6
14	3	32	7
16	4		

D1, D2 - These are the ranges of the ordinate (density) to be plotted. Normally 1.E1 to 1.E6 as on the sample plots will cover the range of all of the data to be encountered.

D-38157
OGO-6
6/11/69-6/25/69

DUMP OF TAPE J10UT1

INPUT TAPE J10UT1 ON MT2
DATA INPUT H9 NF 16 FL 1 1 1 SR 16 1 1 SR 16 LASTY1

FILE 1 RECORD 1 LENGTH 20404BYTES

(0)	4FB40000	00440000	00000000	00010E2A	00000000	00000000	00000000	001D4C00	00325AA0	FFFFFFFF
(40)	FFFFFFFF	00000000	00000000	00000000	00000000	00000000	00000000	00440000	00000001	
(80)	00010E2A	001E0205	00000000	43251A15	37BF56E8	42353333	C12E6666	42108DFD	417CF8AE	431BC9E0
(120)	4168F767	42570424	C13F39D4	40FE24D2	445CC3D8	00440000	00000001	00010E2A	001E91BD	00000000
(160)	43276E03	37B35F94	42386666	C12E6666	42108DFD	417CD7DC	431C3C30	414288E6	42573384	C165C538
(200)	41100A54	445CE67A	00440000	00000001	00010E2A	001F21BD	00000000	43294B2E	379DC880	423B9999
(240)	C12E6666	42108DFD	417CB4DE	431CB740	411C1BF6	42576246	C18C4E69	41103DB3	445D08DD	00440000
(280)	00000001	00010E2A	001FB175	00000000	432E6BE8	3789DDAF	423ECCCC	C12E6666	42108DFD	417C8FEF
(320)	431D3AE0	C0A27683	42579087	C1B2ADAF	41109107	445D2B03	00440000	00000001	00010E2A	002C4205
(360)	00000000	433AE329	3812E774	42353333	C12E6666	42108DFD	417C68D7	431DC760	C1308C09	4257BEED
(400)	C1D92E43	4110F198	445D4D47	00440000	00000001	00010E2A	0020D1BD	00000000	43430727	3812F2F1
(440)	42386666	C12E6666	42124638	417C401D	431E5B30	C1569C70	4257ED30	C1FF5A88	41116485	445D6F63
(480)	00440000	00000001	00010E2A	00216175	00000000	434ECDA5	3812B580	423B9999	C12E6666	4212B446
(520)	417C159D	431EF6A0	C17C9102	42581BE4	C21256B6	4111F719	445D91AC	00440000	00000001	00010E2A
(560)	0021F175	00000000	4351C455	37F161E8	423ECCCC	C12E6666	41D8B970	417BE95C	431F99B0	C1A27A98
(600)	42534B64	C214B720	411298F2	445DB454	00440000	00000001	00010E2A	00228205	00000000	435F7891
(640)	381E7AD6	42353333	C12E6666	4210FC0C	417BBB4D	432044B0	C1C86A04	42587C21	C21717F7	41136485
(680)	445DD798	00440000	00000001	00010E2A	002311BD	00000000	436797FC	381D2185	42386666	C12E6666
(720)	4212B446	417B8C05	4320F530	C1EDFF69	4258ADE4	C219733D	41144A04	445DFB45	00440000	00000001
(760)	00010E2A	0023A175	00000000	436D7C76	3819D819	423B9999	C12E6666	4212B446	417B5B4F	4321AC20
(800)	C2113721	4258E14D	C21BCC70	41154AE1	445E1FAE	00440000	00000001	00010E2A	00243175	00000000
(840)	4362571A	381206F7	423ECCCC	C12E6666	4212B446	417B292E	43226970	C2138D31	425916D2	C21E24A5
(880)	41167D85	445E4522	00440000	00000001	00010E2A	0024C205	00000000	438B811E	382C3A1C	42353333
(920)	C12E6666	4212B446	417AF5A3	43232D10	C215E32E	42594EED	C2207CEC	4117D432	445E6BE4	00440000
(960)	00000001	00010E2A	0025500D	00000000	00000000	00000000	4239E9C7	C12E6666	4212B446	417AC1E0
(1000)	4323F270	C2182C55	425988CA	C222C879	41196C8B	445E9355	00440000	00000001	00010E2A	0025E175
(1040)	00000000	43C9FF39	382F5E52	423B9999	C12E6666	4212B446	417A8BD4	4324C150	C21A80D1	4259C748
(1080)	C2251F99	411B44C5	445EBD62	00440000	00000001	00010E2A	00267175	00000000	43DA8D26	3827CA0A
(1120)	423ECCCC	C12E6666	42124638	417A5563	43259290	C21CCCE3	425A08EA	C2276E7D	411D488E	445EE8F4
(1160)	00440000	00000001	00010E2A	002701BC	00000000	43F2C3DC	384C6C39	42353333	C12E6666	42124638
(1200)	417A1DF6	43266840	C21F1767	425A4EF5	C229BC11	411FD43A	445F16EF	00440000	00000001	00010E2A
(1240)	002791BD	00000000	43DCD39C	383D403F	42386666	C12E6666	42124638	4179E5ED	43274100	C2215E09
(1280)	425A99C7	C22C0606	4122A554	445F477E	00440000	00000001	00010E2A	00282175	00000000	43BD866C
(1320)	382C1C2C	423B9999	C12E6666	42124638	4179AD56	43281C80	C223A0B3	425AEA11	C22E4C52	4125EFA1
(1360)	445F7B30	00440000	00000001	00010E2A	0028B175	00000000	43998797	381BBB5D	423ECCCC	C12E6666
(1400)	42124638	4179741B	4328FB20	C225E18B	425B40EE	C2309127	4129D6CB	445FB2B8	00440000	00000001
(1440)	00010E2A	00294205	00000000	4386BA66	382A0E38	42353333	C12E6666	42124638	41793A2C	4329DCE0
(1480)	C228219E	425B9F90	C2320D5A4	412E3E06	445FEEFD	00440000	00000001	00010E2A	0029D1BD	00000000
(1520)	43601EE1	381A6DE0	42386666	C12E6666	42124638	41790039	432ABF10	C22A5B3B	425C061A	C2351419
(1560)	4133F167	44603036	00440000	00000001	00010E2A	002A6175	00000000	432AA974	379DC880	423B9999
(1600)	C12E6666	41ED5C30	4178C604	432BA2D0	C22C91AA	425C765C	C2374FE5	413A97A6	446077D8	00440000
(1640)	00000001	00010E2A	002AF12E	00000000	431ABC1A	374CB763	423ECCCC	C12E6666	41ED5C30	41788BA5
(1680)	432C8760	C22EC4DA	425CF1E2	C239890A	41425B9D	4460C736	00440000	00000001	00010E2A	002B81BD
(1720)	00000000	431D6BE1	379210CB	42353333	C12E6666	41ED5C30	417850D9	432D6E10	C230F7E2	425D7B4E
(1760)	C23BC2C4	414CC852	44612099	00440000	00000001	00010E2A	002C11BD	00000000	432DBB70	37C80225
(1800)	42386666	C12E6666	41ED5C30	41781644	432E53E0	C233252C	425E138A	C23DF786	4158D35E	44618569
(1840)	00440000	00000001	00010E2A	002CA175	00000000	432250E1	377DD15B	423B9999	C12E6666	42101FEF
(1880)	4177DBEC	432F3900	C2354DA0	425EBD6A	C2402853	41686FC4	4461F8C3	00440000	00000001	00010E2A
(1920)	002D312E	00000000	4323AD23	37657A7A	423ECCCC	C12E6666	42101FEF	4177A1C5	43301D80	C237722D
(1960)	425F7C7C	C242564A	417D7CDE	44627ED3	00440000	00000001	00010E2A	002DC205	00000000	43441B7C
(2000)	3814F647	42353333	C12E6666	41ED5C30	4177676E	433102D0	C23996B8	4260569D	C2448586	41965A7E
(2040)	44631EA0	00440000	00000001	00010E2A	002E51BC	00000000	43389381	37F567CF	42386666	C12E6666
(2080)	41E67B40	41772DE3	4331E4E0	C23BB274	42614D8E	C246AD4A	41BEEFBF	4463DDB8	00440000	00000001
(2120)	00010E2A	002EE174	00000000	436388AB	3816A30E	423B9999	C12E6666	41E67B40	4176F4CA	4332C530
(2160)	C23DC936	42626973	C248D1A4	41F3D9F7	4464C94B	00440000	00000001	00010E2A	002F712C	00000000
(2200)	435DE122	38108E8B	423ECCCC	C12E6666	41E67B40	4176BC34	4333A360	C23FDA6D	4263B2B2	C24AF23F
(2240)	42140963	4465F3E1	00440000	00000001	00010E2A	003001BC	00000000	43A812F4	383350EC	42353333
(2280)	C12E6666	41E67B40	417683E0	43348050	C241E850	426536C3	C24D1177	421CCD86	44677E67	00440000

```
( 14560)  00000007  00010E38  001076E6  00000000  00000000  00000000  42479999  C2170000  41FB1E00  4177BDB7
( 14600)  432EC840  C1BB905D  4242530B  C213D6C6  4113A328  4443ECB0  00440000  00000007  00010E38  00119656
( 14640)  00000000  00000000  00000000  424D9999  C2170000  41DF9A60  417749BB  43308EB0  C2101DD0  4242AB9B
( 14680)  C2183C03  41153F87  4443E1B1  00440000  00000007  00010E38  0012B6E6  00000000  00000000  00000000
( 14720)  42479999  C2170000  41DF9A60  4176D6DC  433255D0  C2147DA0  42430AB9  C21C9CA3  4117561A  4443D47D
( 14760)  00440000  00000007  00010E38  0013469E  00000000  00000000  00000000  424A6666  C2170000  41DF9A60
( 14800)  41769E70  43333740  C216A7EC  42433D2D  C21EC787  41188AD3  4443CD07  00440000  00000007  00010E38
( 14840)  0013D656  00000000  00000000  00000000  424D9999  C2170000  41A89310  417666BE  433416E0  C218CED0
( 14880)  42437205  C220EF2A  4119FA51  4443C4E5  00440000  00000007  00010E38  0014F6E6  00000000  00000000
( 14920)  00000000  42479999  C2170000  4163C9F0  4175F8FF  4335D2C0  C21D1AC0  4243E556  C2253D2E  411D3F18
( 14960)  4443B25D  00440000  00000007  00010E38  0015869E  00000000  00000000  00000000  424A6666  C2170000
( 15000)  4163C9F0  4175C390  4336AC70  C21F3B23  42442432  C2275EF3  411F4950  4443A7E0  00440000  00000007
( 15040)  00010E38  00161656  00000000  00000000  00000000  424D9999  C2170000  4163C9F0  41758F0C  43378350
( 15080)  C2215906  42446757  C2297E81  41217BFD  44439C7A  00440000  00000007  00010E38  001736E6  00000000
( 15120)  00000000  00000000  42479999  C2170000  41113F10  417528B8  43392890  C22590F3  4244FD63  C22DBAC7
( 15160)  4126F843  4443825A  00440000  00000007  00010E38  0017C655  00000000  00000000  00000000  424A6666
( 15200)  C2170000  41113F10  4174F787  4339F440  C227A585  424550EA  C22FD21A  412A2267  4443737F  00440000
( 15240)  00000007  00010E38  0018560D  00000000  00000000  00000000  424D9999  C2170000  41113F10  4174C758
( 15280)  433ABC80  C229B961  4245ABE4  C231E935  412DECB2  4443631D  00440000  00000007  00010E38  001A069D
( 15320)  00000000  00000000  00000000  424A6666  C2170000  41113F10  41743DFA  433CFAF0  C22FE9E9  4246F3E6
( 15360)  C2382729  413D1663  4443268A  00440000  00000007  00010E38  001A9655  00000000  00000000  00000000
( 15400)  424D9999  C2170000  C1414BE0  41741318  433DAF40  C231F268  42477782  C23A35A7  41439A6E  44430D92
( 15440)  00440000  00000007  00010E38  001B2655  00000000  C1A00000  3615F4F2  4244CCCC  C2170000  C1414BE0
( 15480)  4173E97C  433E5EB0  C233F9E1  42480A0D  C23C4420  414C0CE7  4442F153  00440000  00000007  00010E38
( 15520)  001BB6E5  00000000  00000000  00000000  42479999  C2170000  C1414BE0  4173C13B  433F08C0  C2360030
( 15560)  4248AE1D  C23E529E  4155CD2B  4442D113  00440000  00000007  00010E38  001C469D  00000000  00000000
( 15600)  00000000  424A6666  C2170000  C1414BE0  41739AB4  433FABE0  C23800D7  42496542  C2405CC8  4161438C
( 15640)  4442AC32
```

FILE	INPUT RECS.	DATA RECORDS INPUT	MAX. SIZE	READ ERROR SUMMARY PERM	ZERO B	SHORT	UNDEF.	INPUT RETRIES #RECS.	TOTAL#
16	23	24	20404	0	0	0	0	0	0

EOJ DUMP STOPPED AFTER FILE 16 # OF PERMANENT READ ERRORS 0

START TIME 01/27/81 17:57:59 STOP TIME 01/27/81 18:00:32