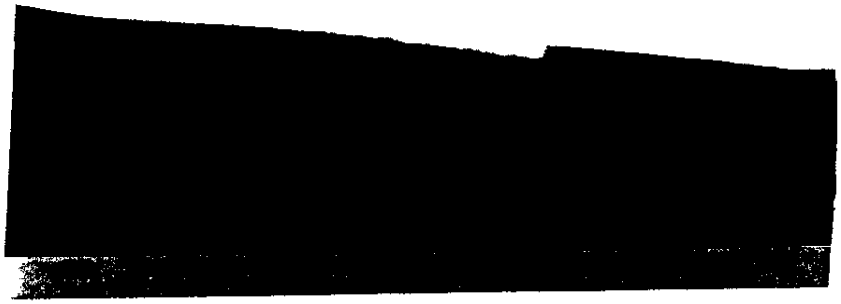


#369

IMP-H
72-073A-05A
IMP-J
73-078A-05A
30 MINUTE AVERAGED DATA OF COUNTS/SECONDS

IMP-J

30-MIN. AVG. COUNT RATES, ALL MODES

73-078A-05A

THIS DATA SET HAS BEEN RESTORED. ORIGINALLY IT CONTAINED FOUR 9-TRACK, 800 BPI TAPES WRITTEN IN BINARY. THERE IS ONE RESTORED TAPE. THE DR TAPE IS A 3480 CARTRIDGE AND THE DS TAPE IS 9-TRACK, 6250 BPI. THE ORIGINAL TAPES WERE CREATED ON A CDC 6600 COMPUTER AND WERE RESTORED ON AN IBM 9021 COMPUTER. THE DR AND DS NUMBER ALONG WITH THE CORRESPONDING D NUMBERS AND TIME SPANS ARE AS FOLLOWS:

DR#	DS#	D#	FILES	TIME SPAN
DR004085	DS004085	D042147	1	10/30/73 - 04/16/76
		D028765	2	03/15/75 - 12/23/75
		D043795	3	04/17/76 - 10/03/78
		D047378	4	10/04/78 - 03/11/80

Refer to 72-073A-05A

DUMP OF TAPE GAIL2

IMP-J 10/04/78 - 03/11/80

73-078A-05A

D-47378/C-22487

INPUT TAPE GAIL2 ON MT4
DATA INPUT 89 FL 1 1 1

78 277

FILE 1 RECORD 1 LENGTH 5865BYTES

(0)	00000001	0000004E	00000115	00000096	00000029	0014CD00	0014CD01	0014CD02	0014CD03	0014CD04
(40)	0014CD05	0014CD07	0014CD08	0014CD09	0014CD0A	0014CD0B	0014CD0C	0014CD0D	0014CD0E	0014CD0F
(80)	0014CD10	0014CD11	0014CD12	0014CD13	0014CD14	0014CD15	0014CD16	0014CD17	0014CD18	0014CD19
(120)	0014CD1A	0014CD1B	0014CD1C	0014CD1D	0014CD1E	0014CD1F	0014CD20	0014CD21	0014CD22	0014CD24
(160)	0014CD25	0014CD26	0014CD27	0014CD28	0014CD2E	0014CD2F	0014CCF9	0014CCFA	0014CCFB	0014CCFC
(200)	0014CCFD	0014CCFE	0014CCFF	42138398	4115DB2C	3F229165	411962C2	41565A27	401D2AA9	3F1148AF
(240)	3F33DA0C	422BC5A6	412AF47D	00000000	00000000	40AD02E1	4232890B	411A2A44	3F2D9102	4119466F
(280)	41527834	40161CF6	00000000	3F582205	423F7A62	41429794	00000000	00000000	40B3E7F6	425D4EFC
(320)	41124C9F	40105839	41173D71	41A31CB9	3FD6D0CB	3F7D4F1C	3F3EA78B	42672808	416A56A0	00000000
(360)	00000000	40A69A81	421C7F5A	41138434	00000000	4116521B	4148710C	4011166F	00000000	3FC87EB8
(400)	4232A56F	4126700C	00000000	00000000	408CF919	421654E6	41115F25	00000000	4118 3ECE	413BC870
(440)	4016F92D	3F1FFE6D	3F1FFE69	42246683	412C3107	00000000	00000000	40AE4217	42125D88	40E601B1
(480)	00000000	411893CB	413A1A6D	4017667C	3F279229	3F9E48AA	421B0DE4	41208077	00000000	00000000
(520)	40A7A461	4212FA69	40D1C141	3F15783C	4117A9C6	4130A1BA	40142386	3F55ED02	3F2AF678	421F2820
(560)	411B3DAB	00000000	00000000	4099E940	421130BC	40A50397	3F117C1C	411AD792	412AD309	40148651
(600)	3F117C29	3F34746D	4216ECDF	411B7BEF	00000000	00000000	40A84AD9	4214FB70	409290A8	00000000
(640)	411ABE36	41295389	3FD6D010	3F121DE0	3F243BC9	4222C0D3	412401CC	00000000	00000000	40B0C5EC
(680)	4210EC16	40827706	00000000	411A774A	4123959E	3FACD6CD	3F23CD5F	3F11E6B4	42145916	4119D0AA
(720)	00000000	00000000	40AB9204	41834A7A	40C2ACC6	3F152DC9	411AE31E	41273078	40236905	3F2AF678
(760)	3F965EA9	42159451	412D54FF	00000000	00000000	40BBF64C	41AABEEF	40C03BF0	3F177ECF	41179649
(800)	41218279	4017D38F	3F43546E	00000000	4223F294	41279603	00000000	00000000	40C00C60	41CB9865
(840)	40E31EDE	3F2AF66A	411C31EC	412B0C03	401DC2B9	3F152DC4	3F152DC7	4213E4AD	4131B439	00000000
(880)	00000000	40AEF300	41AF481F	41104960	3F55701C	4118903F	4128EAB8	4028954A	3F222CD5	3F222CF4
(920)	4213FA8C	41290C81	00000000	3F334342	4088B929	41A2F2CA	41104F04	3F6A250F	411A65DD	4129CEE9
(960)	4026B2D2	3F23619F	3F23619D	4212219D	412A8359	00000000	3F11B0D0	40AA4601	419ECAE9	40F37EDE
(1000)	3F779CA1	41199073	412A0D0E	4029A826	3F11165A	3F222CA5	4213492F	412AEE9D	00000000	00000000
(1040)	40B7B07F	41A5339C	41113893	3F66862E	4118078 1	4129512D	40244F9C	3F33431C	3F111667	4215035A
(1080)	412BAE10	00000000	00000000	40858DFB	41FB5360	40ED1714	3F779CD6	411C6F4E	412AB80C	401CD5DB
(1120)	3F222CC9	3F557020	421CCB25	4131CCA9	00000000	00000000	40BBF69B	41DDE08A	4110F45B	3F445A0C
(1160)	411BB386	4128 2EFC	402BC98B	3F66873F	3F222D04	421F19F3	413EC39A	00000000	00000000	40C03D7F
(1200)	41A7FEE3	40C3CC94	00000000	411AC25C	4134DDA3	403863E1	3FBBF799	3FBBF799	4215C087	41736416
(1240)	00000000	00000000	40A92BA3	419C83A2	411577FF	3F26766A	4117B88F	41333B0D	403529B5	00000000
(1280)	3F287EAC	4212DCE5	414FBBAA	00000000	00000000	40AAFDFA	417DD5A0	40F3799F	00000000	411D438A
(1320)	4132B956	40257520	00000000	00000000	4214AAE6	412A23D1	00000000	00000000	4111BEEC	419E8829
(1360)	4112DDA2	3F533D45	411E4866	41373323	40223C95	3FECD817	3F4EFE2D	4213D3E7	412B5F99	00000000
(1400)	00000000	40C07F56	4198E32B	4116B398	3F4160D5	411BE661	413BDB6C	40416009	3F42D4C5	3F216A63
(1440)	4213EB81	41268D2F	00000000	00000000	408B206E	4195B5DF	411470DB	3FB76098	4118ED88	41359937
(1480)	402A83E2	00000000	00000000	42131D7D	4136494D	00000000	3F268E68	40A99302	41D48F13	411BA43A
(1520)	3F9E48B5	411A9636	4145B3E2	4034DD4B	00000000	3FB0E7D9	4218D9CC	4131CF5C	00000000	00000000
(1560)	400D86E6	41B0276D	411BCB06	3FD6D040	4118E4C8	414C849E	404959D1	3F45F05E	4013AB9F	4224B88B
(1600)	413A92EF	3FAED939	3FAED939	40D1185E	41952118	4116C94A	3F33DA02	4119B923	413A2982	4033D9FB
(1640)	3F1BD89B	3F37B13D	41E950A9	412E1BFF	00000000	00000000	40ADC69B	419D52D2	4115BEE5	3F39D5B4
(1680)	4115493A	4147051D	4030DECB	3F643F1A	3FC87E59	42106EF2	412A4AA6	00000000	00000000	40A05239
(1720)	4193AF07	4116605C	3F445969	41171839	413DF7EE	4036D269	3F68E86C	3F8BE08A	42115169	41266BE2
(1760)	00000000	3F20B056	40A2BEF0	41AC46E3	41177ECE	3F566B70	4119ED07	41498E71	403ABD01	3F222CC7
(1800)	3F668 66C	42178759	412C95D0	00000000	00000000	40A0F4E0	41A137F4	411702F1	3F9F36DB	41190840
(1840)	4140327C	402B1EDF	3F236185	3F6A24A3	42166941	412A013E	00000000	3F11B0C5	40C704B5	41996305
(1880)	411606DE	3F66365D	411BC463	413C5714	402AB7FC	3F334332	3F445994	41FAF8F2	412C000F	00000000
(1920)	3F111663	40A9CE0C	418F6843	411505A6	3F479AC7	41177EC9	41363F15	40310699	00000000	3F4F2455
(1960)	41D9013E	41262E07	00000000	00000000	4086D7A6	41718F5E	41131700	401F53B5	411973FE	414C5C07
(2000)	402597A1	00000000	3FD6D023	00000000	414B2F44	00000000	00000000	408CF89A	415CF8DA	411541F7
(2040)	3F4162E1	411B5379	41467C6F	402597AD	3F3EA779	00000000	4211000E	41277BDC	00000000	00000000
(2080)	40803702	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(2120)	00000000	00000000	00000000	00000000	419E4436	40EAF3C6	3F7D4ECF	41155FC6	413A6967	401F53B4
(2160)	00000000	00000000	41815CD1	4124B40E	00000000	00000000	40AA2E7F	41802464	40ED6D2C	3F27922C
(2200)	41177ECD	4132A456	401E7AFC	00000000	3F2CA401	41E5AB54	41209FFC	00000000	00000000	40B1CD6D
(2240)	41AE2390	411153E7	3F4959E0	4116 7F82	4140C54B	401936E3	00000000	3F68E8B6	419A86C7	412FB8B2
(2280)	00000000	00000000	40B036DA	413DA702	41113851	3F526501	41179367	414847E0	40282E3F	3F293280

(4960)	00000000	00000000	00000000	00000000	00000000	41500000	00000000	00000000	00000000	00000000
(5000)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(5040)	00000000	00000000	4148BA2E	4148BA2E	41368BA2	41368BA2	4148BA2E	4148BA2E	4148BA2E	4148BA2E
(5080)	4148BA2E	4148BA2E	4148BA2E	4148BA2E	4148BA2E	41122E8B	41122E8B	41122E8B	41122E8B	41245D17
(5120)	41122E8B	41245D17	41245D17	00000000	41122E8B	41122E8B	41122E8B	00000000	41122E8B	00000000
(5160)	41122E8B	41122E8B	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(5200)	00000000	C412C63B	C3B42872	C3466218	435CF2E1	439F926F	4419656E	441F8302	4426AEDC	442DD957
(5240)	44350246	443C2978	44434EC6	444A71FE	445192FC	4458B18D	445FCD8B	4466E6CA	446DFD2B	4475107C
(5280)	447C2096	44832D5D	448B177B	44913C3D	4493E13	449F3BF8	44A635D0	44AD2B71	44B41CBE	44BB0997
(5320)	44C1F1D5	44C8D55B	44CFB409	44D68DC0	44E85CFA	44EAFBEB	44F1D440	44FC7999	44FF4CB9	45128F2E
(5360)	4512DB74	451343F8	C44504CF	C4385076	C436AF2C	C42F8247	C42E5454	C42125F3	C419F614	C5353022
(5400)	C5354CA0	C5356528	C5358709	C53593FC	C535BF69	C535CEB8	C535DF4B	C535EE5C	C535FBF2	C536080F
(5440)	C5361296	C5361BE9	C53623AB	C53629FE	C5362EE6	C5363264	C536347C	C5363530	C5363433	C5363278
(5480)	C5362E86	C5362A4F	C5362437	C5361CC3	C536140E	C5360A02	C535FEAA	C535F208	C535E41F	C535D4F2
(5520)	C535C482	C535B2D4	C5357EC9	C5357665	C5355F90	C5353971	C5352ECF	C53477B2	C5345F96	C5343D77
(5560)	C5344460	C5348793	C5348FD6	C534B31A	C534D4C1	C534F4CE	C5351343	446FA6A7	44756B8A	447AAC93
(5600)	4485277A7	4485A36D	44915782	4495F70D	4498E5F92	44A0C386	44A622D1	44AB7D4D	44B0D2DF	44B62369
(5640)	44BB6ECF	44C0B4F4	44C5F5BC	44CB310D	44D066CB	44D596DD	44DAC129	44DFE596	44E5A75B	44EA1C72
(5680)	44EF2EB2	44F43AB3	44F94061	44FE3FA3	45103386	45108249	4510D161	45111FAD	45116D8C	4511BAFD
(5720)	45128351	4512A0AD	4512ED34	451363C9	4513832A	45154D60	45158149	4515C83C	4448ABF5	4452984C
(5760)	4453DD6D	44597226	445F03FC	446492C8	446A1E63	42280000	41200000	00000000	41500000	42150000
(5800)	00000000	00000000	00000000	42160000	41700000	00000000	00000000	00000000	41300000	00000000
(5840)	00000000	00C02710	0000000A	00000064	0000000A	00000002	00			

80 71

FILE 1 RECORD 525 LENGTH 5865BYTES

(0)	00000002	00000050	00000047	000000C0	00000025	00152F40	00152F41	00152F42	00152F43	00152F44
(40)	00152F45	00152F46	00152F47	00152F48	00152F49	00152F4A	00152F4B	00152F4C	00152F4D	00152F4E
(80)	00152F4F	00152F50	00152F51	00152F52	00152F53	00152F54	00152F55	00152F56	00152F57	00152F58
(120)	00152F59	00152F5A	00152F5B	00152F5C	00152F5D	00152F5E	00152F5F	00152F60	00152F61	00152F62
(160)	00152F63	00152F64	00152F07	00152F08	00152F09	00152F0A	00152F0B	00152F0C	00152F0D	00152F0E
(200)	00152F0F	00152D8E	00152D8F	4152AFCB	00000000	00000000	4112ED12	3F2D9D34	00000000	3F2D9D31
(240)	00000000	4086473A	402F0A1F	00000000	00000000	405E1440	41552875	3F3350EC	3F111AFA	41123DC1
(280)	3F66A1C9	00000000	00000000	00000000	40B39B29	4027CB63	00000000	00000000	4067B37C	415195B9
(320)	3F111AFA	00000000	4112E8D5	3FAB0DE4	00000000	3F111AFB	00000000	40B6D06E	4027CB70	00000000
(360)	00000000	4057AA51	416C3ECB	3F446BEA	00000000	40FB3C66	3F88D7FF	00000000	3F111B04	00000000
(400)	4122ADB9	4019612E	00000000	00000000	4061497E	4153DB67	3F223604	00000000	41120A7C	3F791D63
(440)	00000000	00000000	00000000	40A05D38	40586445	00000000	3F111B00	4059CDC9	414D1028	3F236B28
(480)	00000000	4110CF5C	3F7BF6FF	00000000	3F3520C5	00000000	40A198EC	402C45F5	00000000	3F11B598
(520)	4065D416	414A809E	3F3350FE	00000000	4110C2E7	3F5586E4	00000000	00000000	00000000	40A4A3BA
(560)	402235FC	00000000	00000000	405AD5F0	4146F60C	3F111B07	00000000	4112C6A5	3F77BD1A	3F111B11
(600)	3F111AFD	00000000	4086B4AC	4024B6D4	00000000	00000000	407152E2	4145E09F	3F1180EC	00000000
(640)	41139F84	3FB1182B	00000000	3F2301DB	00000000	40A0D053	4025309F	00000000	3F1180D1	40604B9C
(680)	414FED73	3F2301AD	00000000	4112F070	3FB117B9	00000000	00000000	00000000	403480E4	402D823F
(720)	00000000	00000000	40543C30	414366F0	3F236B11	3F11B583	41111626	3F352093	00000000	3F236B09
(760)	00000000	4097A266	405C49A7	00000000	00000000	406C77E4	414BB6C2	3F12956C	3F129567	411200BF
(800)	3F6F807F	3F12956D	3F12D0E6	00000000	40DCAE52	40233034	00000000	00000000	40619071	414FE2FF
(840)	3F229AA4	00000000	4111C6CA	3F33E7F3	00000000	3F229AA4	3F114D52	411AE635	402E622F	00000000
(880)	00000000	40637C97	4147E43F	00000000	00000000	4112BC81	3F6F80BE	00000000	00000000	00000000
(920)	4119225C	402A40F0	00000000	00000000	40767BBB	414C70CB	00000000	00000000	411285A8	4012D0EF
(960)	00000000	00000000	00000000	40F8A445	4112BE05	00000000	00000000	4079C068	4142E2BA	00000000
(1000)	00000000	40F1EC21	00000000	00000000	00000000	00000000	40C69D85	4113FE00	00000000	00000000
(1040)	4041DB4C	4152521F	00000000	00000000	411399A5	00000000	00000000	3FD70AC5	00000000	4096876A
(1080)	403D9489	00000000	00000000	4053A0A2	415433BE	3F2D9D6F	00000000	41122150	3FC23B19	00000000
(1120)	3F2B0213	00000000	40A4A41B	40D8ABC5	00000000	00000000	406374E9	41479F42	3F271933	00000000
(1160)	41125AF1	3F9E7392	3F130DE9	00000000	00000000	43AA9977	403096A5	00000000	00000000	405339A2
(1200)	4147FE9F	00000000	00000000	4114E495	3F2DB943	00000000	3F1EB860	00000000	40AF9DFD	4094F5FF
(1240)	00000000	00000000	40861D6B	41419F07	00000000	00000000	4113F33B	3FFAE1AC	00000000	00000000
(1280)	00000000	409F369A	40368079	00000000	00000000	4086D94C	414D9DD1	00000000	00000000	4113C73E
(1320)	00000000	00000000	00000000	00000000	40A147EF	4016944F	00000000	00000000	405E14A0	413C907A
(1360)	00000000	00000000	40DE5F4D	00000000	00000000	00000000	3F88D82F	40C999EA	4034AF64	00000000
(1400)	00000000	4041DB3D	413F0BEF	00000000	00000000	4111E549	3F4B4387	00000000	3F446BFF	00000000
(1440)	40A28087	402BE76F	00000000	00000000	4066A1FF	41432AF2	3F322D11	00000000	4110BC43	3F88D816
(1480)	00000000	00000000	00000000	40C9999B	401D737C	00000000	00000000	4052CA5F	4145A335	3F1B5E6B
(1520)	00000000	4112F256	3F66A1E4	3F3D70A4	3F1EB849	00000000	40C9997E	408C32B2	00000000	00000000
(1560)	405AAAA3	4143DE4A	3F114D55	3F1180D5	4112F067	3FD20A06	3F1180CC	00000000	00000000	40A417D3
(1600)	402A63DE	00000000	00000000	4066EF47	4144D91F	00000000	00000000	411121C1	3FA9581F	3F24B6D7

REQ. AGENT	RAND NO.	ACQ. AGENT
CMP	RC7008	JHK
DEW		RWP
GLS	V0130	HKH
SAR		RWP

IMP-J
IMP-H

30 MINUTE AVERAGED DATA OF COUNT/SECONDS

73-078A-05A
72-073A-05A

This data set catalog consists fo 4 tapes of IMP-H data and 4 tapes of IMP-J data tapes. They are written in Binary and are 9-track, 800 BPI, and have only one file of data. The tapes are created on an CDC 6600 computer, but are in IBM 32-bit format.

IMP-H

D#	C#	TIME SPAN
D-28154	C-18630	09/27/72 - 03/14/75
D-28764	C-18669	10/30/73 - 08/09/75
D-42145	C-21218	03/15/75 - 06/19/77
D-42146	C-21219	06/23/77 - 09/25/78

IMP-J

D#	C#	TIME SPAN
D-28765	C-18670	03/15/75 - 12/23/75
D-42147	C-21217	10/30/73 - 04/17/76
D-43795	C-24926	04/17/76 - 10/03/78
D-47378	C-22187	10/04/78 - 03/11/80

Format - 1

IMP-H (IMP-7 or EXPLORER 47) and IMP-J (IMP-8 or EXPLORER 50)

30-Minute-Average Data of Counts/Second

The supplied tape(s) were generated on a CDC-6600 computer. Data items (described below) have been converted to an IBM-format. Records are fixed length (1466 32-bit words) and represent one day of averages (48 averages for each of 13 channels per day - averages synchronized to the half-hour). Tape characteristics (hopefully in correct IBM terminology) are:

unlabelled
9-TRACK
RECFM=F
LRECL=5864
BLKSIZ=5864
DEN=24

WORD	DESCRIPTION	TYPE
1	Record Type[1] (1 or 2)	I4
2	Year (YY)	I4
3	Day of Year (DDD, Day 1 = Jan 1)	I4
4	Orbit Number	I4
5	Number of Actual Data Items (Between 0 and 48)	I4
6-53	Half-hour of the Century[2]	48*I4
54-101	30-min Ave. for Channel L1	48*R4
102-149	30-min Ave. for Channel L3	48*R4
150-197	30-min Ave. for Channel L5	48*R4
198-245	30-min Ave. for Channel L9	48*R4
246-293	30-min Ave. for Channel L2	48*R4
294-341	30-min Ave. for Channel L4	48*R4
342-389	30-min Ave. for Channel L6	48*R4
390-437	30-min Ave. for Channel L10	48*R4
438-485	30-min Ave. for Channel F	48*R4
486-533	30-min Ave. for Channel L7	48*R4
534-581	30-min Ave. for Channel L12	48*R4
582-629	30-min Ave. for Channel L11	48*R4
630-677	30-min Ave. for Channel L8	48*R4
678-725	Percent Bad Data During Average for Channel L1	48*R4
726-773	Percent Bad Data During Average for Channel L3	48*R4
774-821	Percent Bad Data During Average for Channel L5	48*R4
822-869	Percent Bad Data During Average for Channel L9	48*R4
870-917	Percent Bad Data During Average for Channel L2	48*R4
918-965	Percent Bad Data During Average for Channel L4	48*R4
966-1013	Percent Bad Data During Average for Channel L6	48*R4
1014-1061	Percent Bad Data During Average for Channel L10	48*R4
1062-1109	Percent Bad Data During Average for Channel F	48*R4
1110-1157	Percent Bad Data During Average for Channel L7	48*R4
1158-1205	Percent Bad Data During Average for Channel L12	48*R4
1206-1253	Percent Bad Data During Average for Channel L11	48*R4
1254-1301	Percent Bad Data During Average for Channel L8	48*R4
1302-1349	GSE_x	48*R4

Formal . 2

WORD	DESCRIPTION	TYPE
1350-1397	GSE_y Geocentric Solar Ecliptic	48*R4
1398-1445	GSE_z Coordinates (km.)	48*R4
1446-1461	Dummy	16*R4
1462	J1 Filter Variable[3]	I4
1463	J2 Filter Variable[3]	I4
1464	J3 Filter Variable[3]	I4
1465	J4 Filter Variable[3]	I4
1466	Satellite LD (1 means IMP-H(7), 2 means IMP-J(8))	I4

1. All record-types should be "1", except possibly for the last record which may be "2" indicating that that record is incomplete.

2. e.g. 1257648 would be the first half-hour of day 270 of 1972.

3. See attachment 2.

IMP-7 and IMP-8

TABLE 2. EPE NORMAL DISCRIMINATOR LEVELS AND OUTPUT LOGIC

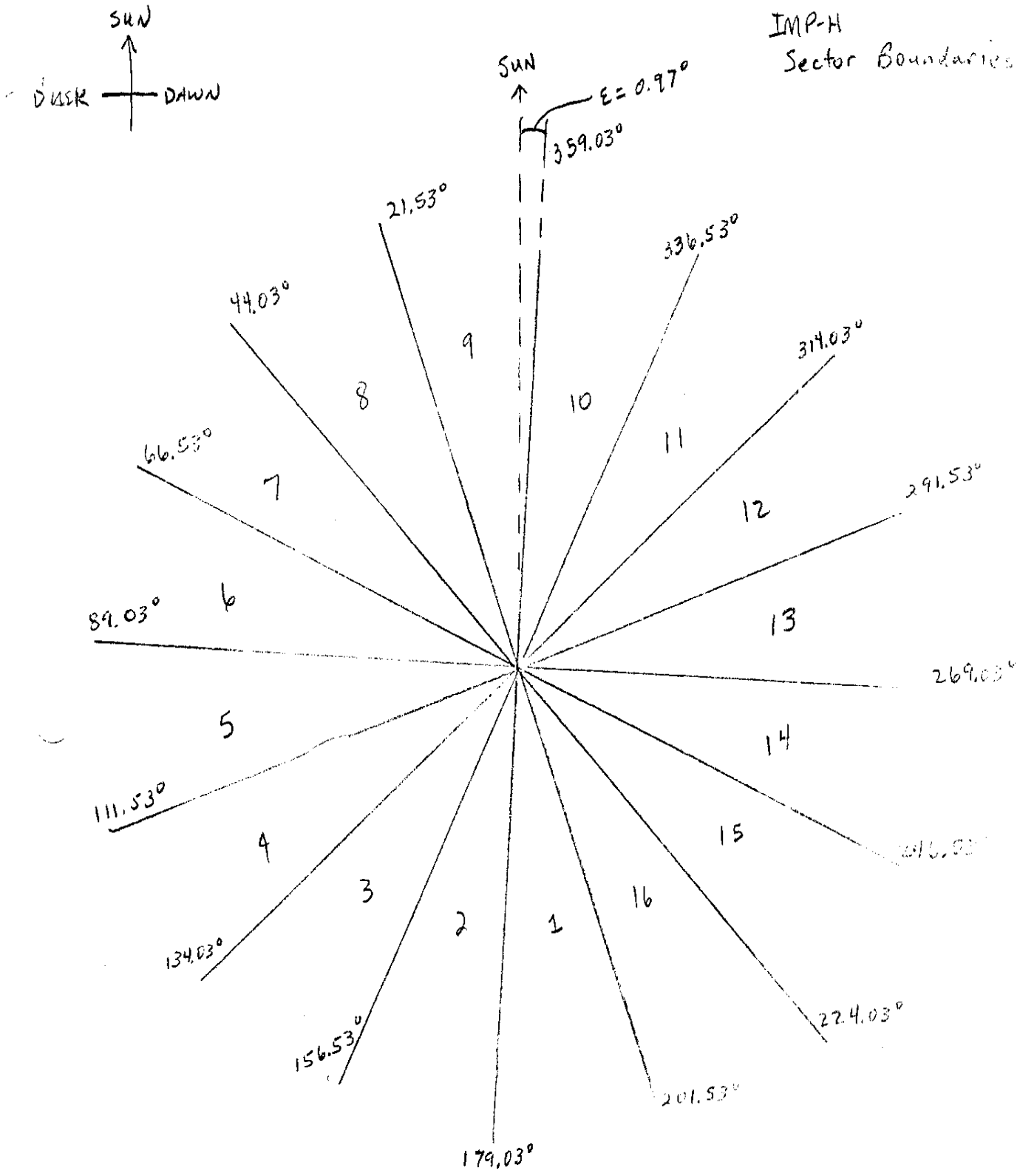
Detector	Discriminator* Levels (MeV)		Logic	Output Channels (MeV)	Designation	Nuclear Charge Range	Samples per spin
A	A1	0.03	$A_1\bar{A}_2\bar{B}_1$	0.05 - 0.22	L_1	$Z \geq 1$	16
	A2	0.20	$A_2\bar{A}_4\bar{B}_1$	0.22 - 0.80	L_2	$Z \geq 1$	16
	A3	0.50	$A_3\bar{A}_4B_2\bar{B}_3C$	4.5 - 8.5	L_5	$Z = 1$	8
	A4	0.80	$A_4\bar{A}_5\bar{B}_1$	0.80 - 2.1	L_3	$Z \geq 1$	16
	A5	2.5	$A_4\bar{A}_5B_1\bar{B}_2C$	2.1 - 4.5	L_4	$Z = 1$	16
	A6	3.5	$A_6B_1\bar{C}$	8.4 -16.0	L_{11}	$Z = 2$	8
			$\bar{A}_2B_1\bar{C}$	background	L_9		8
B	B1	0.10	$A_5\bar{B}_1$	2.2 - 8.4	L_{10}	$Z \geq 2$	8
	B2	3.6	$A_5\bar{A}_6B_2\bar{C}$	16.0 -35.0	L_{12}	$Z = 2$	8
	B3	9.0					
C	C	0.10	A_2B_1C	8.5 -25.0	L_6	$Z = 1$	8
D	D1	0.030	$D_1\bar{D}_2$	0.03 - 0.10	L_7	electrons	16
	D2	0.100					
E	E1	0.100	$E_1\bar{E}_2$	0.10 - 0.20	L_8	electrons	16
	E2	0.200					
F	F1	0.015	F_1	>0.015	F	electrons and ions	16
G	G1	0.60	G_1	>0.6	G_1	$Z \geq 2$	16
	G2	1.0	G_2	>1.0	G_2	$Z \geq 2$	8
	G3	2.0	G_3	>2.0	G_3	$Z \geq 3$	8

* Levels A_1 and D_1 are commandable to 50 keV. Level F_1 is commandable to 30 keV.

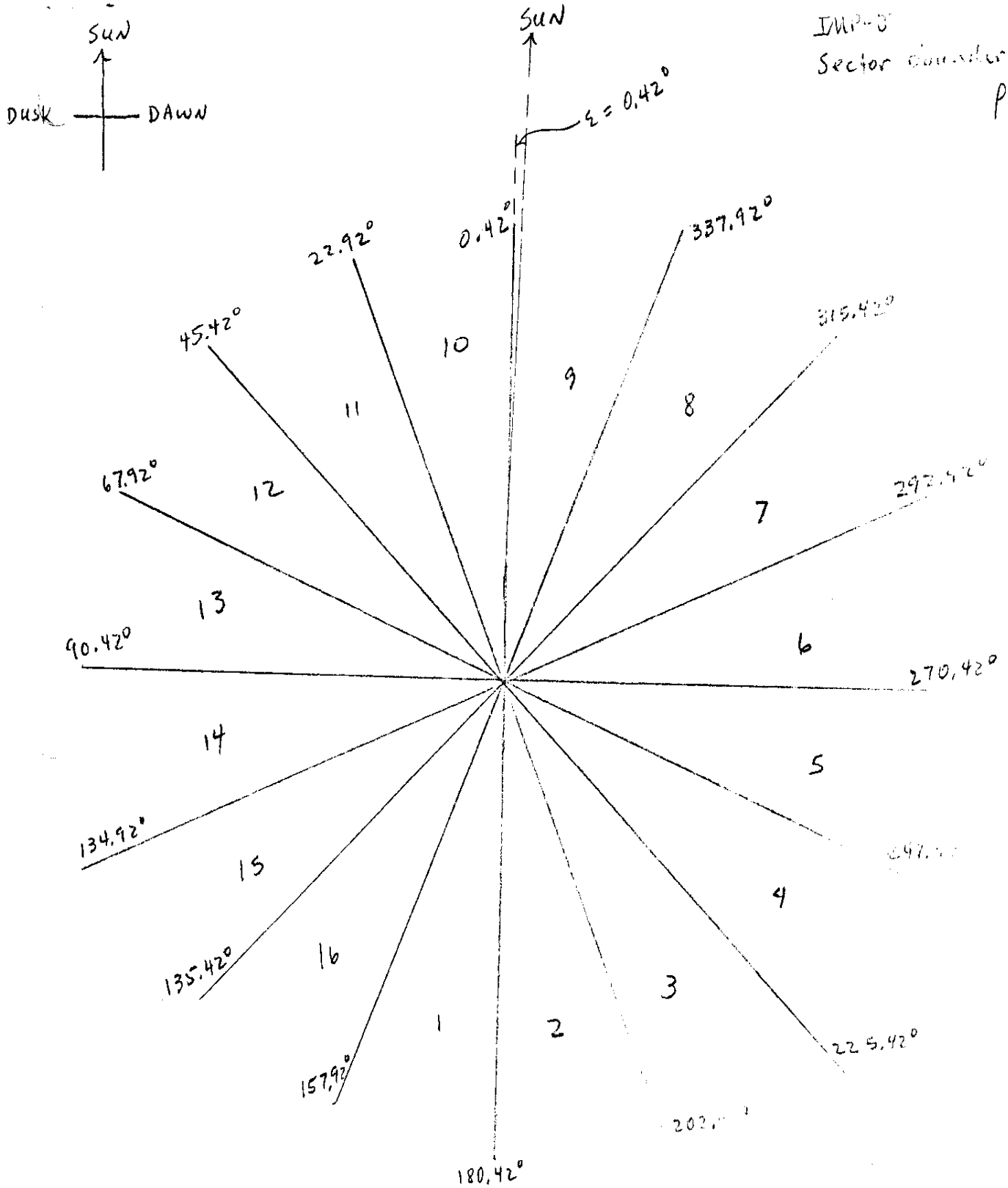
**Low energy proton response is 50 keV due to aluminum dead layer. For the same reason, detector F low energy proton response is 0.024 MeV and 0.038 MeV on IMP 7 and 8 respectively.

As a safeguard against possible failure in the logic circuitry, a commandable mode was incorporated into the EPE whereby all discriminator levels could be routed to the multiplexers, thereby giving discriminator output counts only. Further safeguards include commandable low-level discriminators on detectors A, D, and F to protect against possible detector noise increases, and bias voltages commandable in four steps from normal operating bias to one-half that value to guard against excessive detector bias current. None of these safeguard modes has been required to date. For reference, routinely monitored EPE status and housekeeping functions are listed in Tables 3 and 4.

IMP-H
Sector Boundaries p. 1



IMP-3
Sector boundaries
p. 2



DRIVER 2:

This package plots 30-minute averages of COUNTS/SECOND for all 16 channels. 30-minute averages are synchronized on the half-hour. Values are plotted on a logarithmic scale. Four days of averages are plotted per microfilm frame.

(a) Converting COUNTS/SECTOR to COUNTS/SECOND:
For a given 30-minute period let LREC represent the number of IMP-H pages encountered during that 30 minutes. For each channel k (k=1,2,...,16), let $LSKIP_k$ denote the number of pages ignored for channel k during the 30 minutes (specifically, pages are ignored for a given channel if any sector has a value of -99, or if MODE= CAL RUN). Thus $LREC-LSKIP_k$ is the number of pages actually used for channel k in accumulating an average for the given 30 minutes.

For each page i (i=1,2,...,LREC) and each channel k

$$N_{i,k}\text{cnts/second} = (t\ \text{cnts}/r_1\text{channel})(1\ \text{spin}/k_2\text{millisec})(1000\ \text{millisec/sec})(1\ \text{channel}/r_3\text{spins}).$$

4 samples

where: t = sum of counts over $16xr_1$ sectors of channel k for 1 page

r_1= 11/16 for channel L7
= 1 otherwise

k_2=spin period in millisec (item #77 of ORBIT TAPE records)

r_3= 1 if SLAVE=TM
= 3 if SLAVE=OA and ID=IMP-H
= 1 if SLAVE=OA and ID=IMP-C

Thus, the average counts/second, x_k, for channel k over the given 30 minutes is:

$$x_k = \left\{ \sum_{i=1}^{LREC-LSKIP_k} N_{i,k} \right\} \Big/ \left\{ LREC-LSKIP_k \right\}$$

(b) Data filtering:

In the following description, the phrase "channel total" refers to the total counts for a given channel where the counts are summed over one page. During the accumulation of a 30-minute average, data is then filtered for each separate channel by the following process:

i) Ignore total if any sector has a value of -99.

ii) If present channel total exceeds last good channel by a factor of J1* discard it (if last good channel total is zero use an increase of J1 counts instead of factor).

iii) If the present channel total exceeds the last good channel total by a factor greater than J3 (J4 for channels G2 and G3) hold it

*Initially we are setting J1=10,000, J2=10, J3=100, and J4=10.

temporarily. Check last good total against next total. If the same situation holds, use present and next total, then proceed. If next total is less than or equal to a factor of J2 discard present total. (If last good channel total was zero use <u>increases</u> of J2, J3, and J4 instead of <u>factors</u>).

To start this process (ie. - recognize "good" channel totals for the first time), for each channel do the following:

i) Calculate 5 consecutive channel totals from data which is not in CAI RUN mode nor which has any sectors containing values of -99.

ii) Take the square root of the maximum and minimum of the 5 values. If $\sqrt{MAX} \leq 5\sqrt{MIN}$ then the channel total is good. Otherwise repeat.