#348

PIONEER 8

67-123A-01C

HOURLY AVERAGED VECTORS ON TAPE

PIONEER 7

PIONEER 8

HR. AVG. PLASMA PARAMETERS

HOURLY AVERAGED VECTORS ON TAPE

66-075A-03C

67-123A-01C

THESE DATA SETS HAVE BEEN RESTORED. THE ORIGINAL TAPES WERE 9-TRACK, 800 BPI AND 1600 BPI. THE TAPES WERE CREATED ON AN IBM 360 COMPUTER. THE DR TAPE IS A 3480 CARTRIDGE AND THE DS TAPE IS 9-TRACK, 6250 BPI. THE DR AND DS NUMBERS ALONG WITH THE CORRESPONDING D NUMBERS AND THE TIME SPANS ARE AS FOLLOWS:

DR#	DS#	D#	FILES	TIME SPAN
DR02871	DS02871	D06364	1	08/19/66 - 11/28/66 (PI07)
		D23793	2	12/17/67 - 12/30/69 (PI08)

REQ. AGENT	RAND NO.	ACQ. AGENT
WTJ	RC6223	JHK

PIONEER 8

HOURLY AVERAGED VECTORS ON TAPE

67-123A-01C

These data are contained on 1 9-track, 1600 BPI, single file, Binary magnetic tape generated on an IBM 360 computer.

Each physical record contains the hourly averages for one day, the record length 'L' is variable, L=N*14+3 where 'N' is the number of hourly averages in the day. The first three words of each physical record are the year, month and day, the remaining words are stored in a Matrix 14 x N where each column of 14 words contains all the information for one hourly average. All these quantities are in a solar-ecliptic frame fo reference (X_{se} toward the sun) centered on the spacecraft. All field quantities are given in units of gammas.

D#	C#	TIME SPAN
D-23793	C-17909	12/17/67 - 12/30/69

WORDS	DESCRIPTION	FORMAT
1	Year	I
2	Month	I
3	Day	I
4	Hour (starting time) of the 1st average of the day	I
5	Number of 30 sec. averages in this hour	I
6	Number of individual data points in this hour	I
7	Hourly average of the X component of the magnetic field (spacecraft centered solar ecliptic coordinates)	F
8	Hourly average of the Y component of the magnetic field	F
9	Hourly average of the Z component of the magnetic field	F
10	Hourly average of individual magnetic field intensity	F
11	Standard deviation for X component	F
12	Standard deviation for Y component	F
13	Standard deviation for Z component	F
14	Hourly average of standard deviation δX of X component for 30 sec. averages	F
15	Hourly average of standard deviation δY of Y component for 30 sec. averages	F
16	Hourly average of standard deviation δZ of Z component for 30 sec. averages	F
17	Hourly average of $\left\{\delta X^2+\delta Y^2+\delta Z^2\right\}^{1/2}$	F
18-31	Same as 4-17, for 2nd average of day	
32-45	Same as 4-17, for 3rd average of day	
ETC		

D-23793

Pioneer 8

12/17/67 - 12/30/69

```
*) LINK EDITOR  MEMORY MAP   DATE   06/22/70
( DPHEX
*HIGH  3500
*XFER  3000
$EOF 00
FSW 10
EXIT
*ACTION REQ?  SET DENSITY  ASSIGN IN TO TAPE FOR HEXDUMP    17:47:17
$EXE DPHEX,00
INPUT TAPE ON MSD
DATA INPUT     1  2  5
FILE  1        RECORD   1        LENGTH    796  BYTES
(    0)  000007AF  00000000  00000011  00000000A  00000077  00000ADF  413ED70A  417051EB  C1659999  41A28F5C
(   40)  41117EA3  4.E147AE  43F33333  40BA3D70  40970A3D  40947AE1  411FA3D7  00000000  00000078  00000AFB
(   80)  41D99999  41799999  C15D47AE  41A2147A  4117851E  40B851EB  4117AE14  40733333  40947AE1  40999999
(  120)  41100000  00000000  00000078  00000AF4  4142147A  415D70A3  C1766666  41B07AE1  4123851E  41100000
(  160)  4117DA3D  40BA3D70  40970A3D  409C28F5  4110F5C2  00000000  00000076  00000ACC  4170A3D7  417F0A3D
(  200)  C157AE14  41B5EB85  4115EB85  40BD70A3  41187AE1  409C28F5  40999999  4075C28F  411051EB  0000000E
(  240)  00000076  00000ACC  4164A3D7  41811EB8  3F28F5C2  41BBAE14  41107AE1  40970A3D  41199999  40A3D70A
(  280)  4097A3D  405C28F5  40FAE147  00000000F  00000074  00000A9B  41842BF5  41819999  41197DA3  41BD70A3
(  320)  40999999  41A147AE  4110AE14  409EB851  4091EB85  407851EB  41102BF5  00000010  00000078  00000AFB
(  360)  41B85C28  415DC28F  414147AE  41BD1EB8  40851EB8  4118851F  41326666  40999999  40800000  407851EB
(  400)  40F5C28F  00000011  00000078  00000AFB  41880000  414FAE14  4136B851  41B1C28F  40CF5C28  41168F5C
(  440)  4157D70A  409EB851  4091EB85  409EB851  4111C28F  00000012  00000078  00000AFB  414A147A  C0F5C28F
(  480)  41151EB  00000AFB  4151C28F  40B851EB  417DA3D7  41AC51EB  411E147A  4124F5C2  41111EB8  00000013
(  520)  409E147A  40A66666  40BD70A3  00000014  00000078  00000AFB  419851EB  41475C28  4123AE14  41863D70
(  560)  41151EB  41133333  41373333  40B5C28F  407AE147  4075C28F  41107AE1  00000015  00000078  00000AFA
(  600)  417F3333  41468B51  C1175C28  41BDA3D7  40CCCCCC  40B851  4143F5C2  40999999  407D70A3  4091EB85
(  640)  41102BF5  00000016  00000074  00000A9B  417451EB  4143F5C2  C15828F5  41A00000  40828F5C  40A66666
(  680)  4157B851  41028F5C  40EB851E  41199999  411E0000  41251EB8  407D70A3  4091EB85  40F251EB  413CA3D7
FILE  1        RECORD   2        LENGTH   1300  BYTES
(    0)  000007AF  00000000  00000012  00000000  00000078  00000AFA  41651EB8  4144F5C2  C143851E  41919999
(   40)  41187D70  41123D70  412E8F5C  40999999  40B51EB8  40970A3D  411FCCCC  00000001  00000078  00000AFC
(   80)  413F3E14  41140000  41128F5  41AE8F5C  41028F5  4118851E  41200000  406A3D70  40828F5C  40B851EB
(  120)  411170A3  00000002  00000078  00000AF9  41219999  CDA66666  416D47AE  4193D70A  41291EB8  40FAE147
(  160)  4137A3A3  4070A3D7  40B8F5C2  40B8F5C2  40EF147A  00000003  00000078  00000AFC  C1347AE1  C14147AE
(  200)  411BFE14  4171EB85  41320000  41140000  413947AE  40851EB8  407AE147  40BCCCCC  40F0A3D7  00000004
(  240)  00000078  00000AFA  41285C28  C11CF5C2  4174F5C2  41335C28  4114CCCC  411AB851  411A6666  407D70A3
(  280)  409C28F5  40A3D70A  41111EB8  00000005  00000078  00000AFB  412EBF5C  409EB851  412451EB  4144F5C2
(  320)  411F0A3D  406147AE  4150F5C2  41AA8851  41D4A3D7  41291EB8  41073333  41159999  00000006  00000075  00000AB5
(  360)  4127AE14  00000007  00000078  00000AFB  C174F5C2  416EE147  C1C0A3D7  4210E666  412CA3D7  41200000
(  400)  4154F5C2  40BD70A3  40B851EB  40FA51EB  4117D70A  00000008  00000078  00000AFA  C11A147A  C13051EB
(  440)  4137851E  4212EB8  4197851E  417451EB  41E28851  41219999  41200000  41211EB8  413C28F5  00000009
(  480)  40A66666  40FF5C2  C1A35C29  4112B851  4210C51E  4213B8F5  4133AE14  411FDA3D  413451EB  411D7AE1
(  520)  41170D7A  41140000  4113851E  40C00000  4075C28F  40FD70A3  4115EB85  00000008  00000078  00000AFB
(  560)  C215C000  4137AE14  4135147A  421747AE  41480000  4134CCCC  41719999  4114F5C2  411AE147  411AE851
(  600)  41207AE1  00000000  00000078  00000AFE  C215AE14  4025147A  414451EB  421587AE  411028F5  412028F5
(  640)  41228666  4110A3D7  40BD70A3  40B33333  41187AE1  00000009  00000078  00000AFB  C21575C2  C0947AE1
(  680)  00000075  00000AB5  C1F40000  414451EB  C17CA3D7  4212A3D7  41426666  414A3D70  415A147A  4110F5C2
(  720)  40FDA3D7  41111EB8  411D9999  0000000F  00000078  00000AFA  C1E11EB8  41811EB8  C1528F5C  42117851
(  760)  413C51EB  41326666  414EB851  411C51EB  411EB851  41202BF5  41359999  00000010  00000078  00000AFC
(  800)  4133851E  00000011  00000078  00000AFB  C1635C29  4177D70A  C188A3D7  41FD70A3  4123D70  411CA3D7
(  840)  41C2CC3F  40C7AE14  40C7AE14  40C51EB  41165D70  00000012  00000078  00000AFA  C1BA6666  41607AE1
(  880)  C1BF2A3  41183851  41147AE1  41799999  41401EB8  40F7A3D  40F147AE  41100000  411AE851  00000013
(  920)  40E0A51E  00000AFB  C1C17A3  41411EB2  C1301EB8  41FE6666  41200000  41200000  415AE147  40F851EB
(  960)  4143EB85  41247AE1  415CF5C2  4115DA3D  4110A3D7  41100000  411F851F  00000016  00000078  00000AFB
(  1000)  41107AE1  40C7AE14  40C7AE14  40C51EB  41165D70  00000012  00000078  00000AFA  C1BA6666  41607AE1
(  1040)  C1BF2A3  41183851  41147AE1  41799999  41401EB8  40F7A3D  40F147AE  41100000  411AE851  00000013
(  1080)  40E0A51E  00000AFB  C1C17A3  41411EB2  C1301EB8  41FE6666  41200000  41200000  415AE147  40F851EB
(  1120)  4143EB85  41247AE1  411F147A  411F147AE  00000015  00000064  C0000BDC  C189EB85  40A66666  41F170A3  42125EB8
(  1160)  4143EB85  41247AE1  415CF5C2  4115DA3D  4110A3D7  41100000  411F851F  00000016  00000078  00000AFB
```

(1200)	C15CD70A	41226666	41C147AE	41051EB8	412547AE	414DC28F	414E6666	4110A3D7	41175C28	4113D70A
(1240)	41247AE1	00000017	00000078	00000AFF	C18F3333	4145C28F	416CA3D7	41C6147A	41175C28	41330A3D
(1280)	413CCCCC	40C7AE14	411051EB	4111EB85	411CCCCC					
FILE 1	RECORD	5	LENGTH	1536 BYTES						
(0)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	C1A0F147	41580CCC	41175C28	41B40000
(40)	41187AE1	41257CA3	414D1EB8	40C7AE14	40D1EB51	41111EB8	411A6F5C	00000001	00000078	00000AFB
(80)	C1919999	41C7D70A	40C0A51E	41E99999	41135C1F	41ID9999	413C7AE1	40CF5C2F	40DC28F5	4110F5C2
(120)	411AC851	00000002	00000074	00000AC3	C1868F5C	415851EB	414CA3D7	41BE3D7D	412451EB	413547AF
(160)	413223D7D	40F851EB	411CCCCC	4111C28F	41122000	00000003	00000078	00000AFB	C1733333	417C8F5C
(200)	C04CCCCC	41AF851E	4125CA3D	41266666	41378514	40F851EB	40E147AE	4112147A	411CF5C2	00000004
(240)	00000078	00000AFB	C1A6AE14	415DC28F	C1275C28	41970A3	411A3D70	4122147A	4120147A	40C28F5C
(280)	4BD7CA3	40CE5C28	411A3D7E	00000005	00000078	00000AFB	C172B851	41187AE1	C157D70A	419AB851
(320)	4122BF5C	4122B851	413BF5C2	40AB851E	40A66666	40000000	411451FB	00000006	00000078	00000AFB
(360)	C1600000	412F3333	41B6147A	41A0E147	412D6666	41375C28	41419999	40F66666	40F33333	40F851EB
(400)	411F3333	00000007	00000078	00000AFC	C17D9999	411AB851	4174CCCC	41EF5C28	413147AF	4121C28F
(440)	4156147A	4110E147	4113D70A	411BBF5C	4126B851	00000003	00000077	00000AE5	C1768F5C	405EB851
(480)	41133333	417CCCCC	41147AE1	41187AE1	41259999	40B851EB	40A66666	40AE147A	4113AE14	00000009
(520)	00000078	00000AFB	C12CF5C2	4051EB85	41233333	419DEB85	412FCA3D	41230A3D	414547AE	40D47AE1
(560)	40DFB851	41107AE1	411AB851	00000000A	00000078	00000AFB	C1C5C2CF	C1263D70	C122147A	4104CCCC
(600)	411547AF	4123851E	41473333	40C28F5C	409C28F5	40F851EB	41147AE1	00000008	00000076	00000AB7
(640)	C1900000	C14D47AE	C171C28F	41CEB851	41423F5C	41200000	4126C147	40F851EB	40BAE147	40E147AE
(680)	41151EB8	00000CCC	00000075	00000AB3	C1380000	C16C7AE1	C145EB85	41A51EB8	41433333	4124F5C2
(720)	4144A3D7	41191EB8	41126666	4116A3D7	41291EB8	00000000	00000078	00000AFB	C170A3D7	C1473333
(760)	C15A3D70	41B947AE	4143AE14	4136BF5C	4136B851	411851EB	4117CA3D	411851EB	412B851E	0000000E
(800)	00000078	00000AFB	C1F4A3D7	C12C0000	412C28F5	41C33333	41340000	4140F5C2	415B3333	40F851EB
(840)	411147AE	411451EB	4120CCCC	0000000F	00000078	00000AFB	C17BAE14	C11AE147	C0FAE147	41B28F5C
(880)	412F3333	4134F5C2	416F5C28	4110A3D7	4111EB85	4112F147	4120CCCC	00000010	00000078	00000AFB
(920)	C19B0A3D	C1499999	C11D70A3	41C451EB	412C28F5	41317CA3	41533333	4111EB85	41128851	41159999
(960)	41235C28	00000011	00000078	00000AFB	C1626F5C	C14F0A3D	C17D70A3	41C851EB	41228F5C	411D1EB8
(1000)	411F851E	411051EB	40D47AE1	4CC2CF5C	411V7CA3	00000012	00000078	00000AF7	C16D9999	3F51EB85
(1040)	C134F5C2	41ACCCCC	41438851	4150A3D7	4121AE14	40EE147A	41102CF5	41100000	411CCCCC	00000013
(1080)	00000078	00000AFB	C17AB851	C14AE147	C14A147A	41BD1EB8	41355C28	4155EB85	41370A3D	4113851E
(1120)	41138514	411B8851	4125C22F	00000014	00000078	00003BF4	C171C2CF	C1628F5C	C13051EB	41C2147A
(1160)	4143AE14	41523D70	415D9999	41147AE1	4111EB85	41173333	4126147A	00000015	00000078	00000AFB
(1200)	C11A0000	C1101EB8	C1C5C2CF	41D3D70A	412051EB	41300000	412F3851	40EE147A	41387AE1	40CA3D70
(1240)	411A0251	00000016	00000078	00000AFC	C1251EB8	415FD70A	C1A426F5	416A147A	4120A3D7	4124CCCC
(1280)	411A3D7	4CAF5C2	40D1EB85	4[illegible]51EB	4115C28F	00000017	00000078	00000AFA	C1351EB8	4126147A
(1320)	C1451EB8	41D7851E	414B0A3D	415C51EB	41ADEB85	40F33333	40EE147A	411051EB	41100000	
FILE 1	RECORD	6	LENGTH	1536 BYTES						
(0)	00000AF	00000CC	00000014	00000000	00000078	00000AFB	4146F5C	419EE147	414F3333	41E68F5C
(40)	4140A3D7	412C7AE1	41797CA3	41197CA3	4130A3D	4119EB85	412A6851	00000001	00000078	00000AFB
(80)	C106AE14	414CA3D7	00EB851	41A0CCCC	41373333	413451EB	414C28F5	41175C28	4115EB85	411A147A
(120)	412A3D70	00000002	00000078	00000AFA	C1CCA3D7	4117D70A	C15F0A3D	413EE147	4135C28F	41423D70
(160)	416547AF	41142BF5	4116E147	41147AE1	41270A3D	00000003	00000078	00000AFB	C16BAE14	41409999
(200)	C0551EB	41A5C28F	413828F5	41368851	4150F5C2	41128851	41119999	4113AE14	412170A3	00000004
(240)	00000078	00000AFC	C1147AE	5FF5C28F	BFA3D70A	419C7AE1	4120A3D7	414B3333	4136147	40E147AE
(280)	40FD70A3	40FD70A3	411C51EB	00000005	00000078	00000AE5	C164CCCC	414BD70A	411451EB	41A7851E
(320)	41557CA3	4126BD70	41659999	411C51EB	4118CCF5	4122B851	4134A3D7	00000006	00000078	00000AFA
(360)	C11D1EB8	414547AE	4143D70A	4177851E	411F5C28	411E8F5C	41300000	40D1EB85	40C28F5C	40E3D70A
(400)	4117D70A	00000007	00000078	00000AFB	C139EB85	41299999	41347AE1	41687AE1	411B5C28	411C51EB
(440)	412FB147	4CBF5C2	40B851EB	4CC7AE14	4116F5C2	00000008	00000078	00000AFB	C1340000	C0AB851E
(480)	C1275C28	414E5F5C	41166666	411CF5C2	411C7AE1	40BCCCCC	40947AE1	417AE147	41100000	00000009
(520)	00000078	00000AFC	C11A147A	4152E147	411DEB85	4165B851	412E2F5C	4127851E	413B0A3D	40F5C28F
(560)	4FCCCCCC	40E3D70A	4113C2CF	00000000A	00000075	00000AE5	C1135C28	41463D70	413E6666	4176E147
(600)	4153D70A	41275C28	41267AE1	40FCA3D7	40D1EB85	40E3D70A	41199999	00000008	00000078	00000AFB
(640)	C15CF5C2	414431EB	C1151EB6	416A6851	4119C2CF	41109999	4128B5C28	4BC51EB6	40B33333	40D99999
(680)	411C6666	00000000C	00000078	00000AEA	C13851EB	411C51EB	C1147AE1	4154CCCC	41135C28	4120A3D7
(720)	412B51E	4CA3D70	4091EB85	4DAE51E	41117CA3	00000000D	00000078	00000AFB	C1411EB8	411A6666
(760)	411F147A	415CF5C2	411C51FB	41299999	411FCA3D	40BAE147	40A66666	40B0A3D7	4113D70A	0000000E
(800)	00000078	00000AFC	C13F3333	4129EB85	C1340000	41942BF5	412C28F5	415547AE	41551EB8	411828F5
(840)	411CCCCC	4116147A	4125EB85	00000CCF	00000074	00000AVE	C131C2CF	C1503A3D7	C1173333	4170A3D7
(880)	4122147A	411D47AF	411C0000	4DCA3D70	40AE851E	40D1EB85	41143D70	00000010	00000075	00000AB5
(920)	C1433333	C1357CA3	C126A3D7	41257CA3	411FAE14	4116F5C2	41130A3D	40999999	4097CA3D	408A3D70
(960)	411CF5C2	00000011	00000007	00000AFB	C144F5C2	C126147A	C119C28F	410B0A3D	412B3333	41259999
(1000)	413547AE	40D99999	40BD70A3	40BAE147	41168F5C	00000012	00000078	00000AFC	C15FD70A	408CCCCC
(1040)	4017CA3D	41B851EB	41548A3D7	4145C28	4137CA3C	41123333	4117D70A	41197CA3	412DC28F	00000013

```
(  720)  404F5C28  406E147A  4050A3D7  4055C28F  408A3D70  00000011  00000035  0000006E  C13FAE14  4110A3D7
(  760)  40FF147A  4144CCCC  40400000  40947AE1  409C28F5  4068851E  403D70A3  403D70A3  4091EB85  00000012
(  800)  [illegible]  [illegible]  C13A[illegible]  40FD7[illegible]A3  411A[illegible]  4144F5C2  404F5C28  41126666  4068F5C2  4068F5C2
(  840)  40[illegible]  4047AE14  40947AE1  [illegible]13  [illegible]  [illegible]FD  C133AE14  40F33333  4127AE14  41451EB8
(  880)  404CCCCC  40F33333  40551EB8  405[illegible]51  40451EB8  40947AE1  40999999  00000014  0000003C  0000007C
(  920)  C13C7AE1  4113AE14  411CF5C2  41465D70  404A3D70  40333333  40599999  406F147A  403AE147  404F5C28
(  960)  40999999
FILE    1      # OF DATA RECORDS    694      # SUCCESSFUL READS    699
       # PERMANENT READ ERRORS    0      # ZERO BYTE ERRORS    0      # SHORT RECORDS    0      # UNDEFINED ERRORS    0
          # OF RECORDS RETRIED    0      TOTAL # OF RETRIES    0
```

$$
$ACTION /BCR/ PLEASE UNLOAD TAPE FOR HEXDUMP 17:47:57
$$ OF LP

```
0001              DIMENSION MAT(14,24),DAT(14,24),IV(339)
0002              EQUIVALENCE (MAT,DAT),(IV(4),MAT(1,1))
0003        1000  FORMAT(/5X3I10)
0004        1001  FORMAT(1X3I8,11F5.1)
0005        1002  FORMAT(/'  END OF FILE',10X,'RECORDS ARE',I5)
0006              NREC=0
0007        1     NB=1400
0008              CALL LAMIO2(1,IV,NB,IEOF,4)
0009              IF(IEOF)2,3,2
0010        2     WRITE(3,1002)NREC
0011              CALL EXIT
0012        3     NREC=NREC+1
0013              IF(NREC.GT.20.AND.NREC.LT.674)GO TO 1
0014              MED=(NB/4-3)/14
0015              WRITE(3,1000)(IV(I),I=1,3)
0016              DO 4 K=1,MED
0017        4     WRITE(3,1001)(MAT(I,K),I=1,3),(DAT(J,K),J=4,14)
0018              GO TO 1
0019              END
```

arrays containing the data

reads the record

in output gives the record length in bytes

Each record contains the hourly averages for one day. The record length L is variable; $L = N*14+3$, where N is the number of hourly averages in the day.

The first three words of the record (IV(1), IV(2), IV(3)) give respectively the year, the month, the day. The remaining words are stored in a matrix $14 \times N$, where each column of 14 words contains all the information for one hourly average, with the following meaning:

word		
4	MAT(1,K)	hour (starting time) of the K-th average
5	MAT(2,K)	number of 30-sec. averages in this hour
6	MAT(3,K)	number of individual data points "
7	DAT(4,K)	hourly average of x component of the magnetic field
8	DAT(5,K)	" y " "
9	DAT(6,K)	" z " "
10	DAT(7,K)	" of individual magnetic field intensity
11	DAT(8,K)	standard deviation for x component
12	DAT(9,K)	" y "
13	DAT(10,K)	" z "
14	DAT(11,K)	hourly average of standard deviations δx of x component for 30-sec. averages
15	DAT(12,K)	" δy " y " "
16	DAT(13,K)	" δz " z " "
17	DAT(14,K)	" of $\sqrt{\delta x^2+\delta y^2+\delta z^2}$

All these quantities are in a solar-ecliptic frame of reference (x_{SE} toward the Sun), centered on the spacecraft.

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// ASSGN-SYS004,X'282'
// EXEC
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printout of the first records of the tape

IV(1)

IV(2)

IV(3)

	MAT(1,K)	MAT(2,K)	MAT(3,K)	DAT(4,K)	DAT(5,K)	DAT(6,K)	DAT(7,K)	DAT(8,K)	DAT(9,K)	DAT(10,K)	DAT(11,K)	DAT(12,K)	DAT(13,K)	DAT(14,K)
	1967		12	17										
10	119	2783	4.0	7.0	-6.3	10.2	1.1	0.9	0.9	0.5	0.6	0.6	1.0	
11	120	2811	3.8	7.3	-5.8	10.1	1.5	0.7	1.5	0.4	0.6	0.6	1.0	
12	120	2804	4.1	6.8	-7.4	11.0	2.2	1.0	1.4	0.5	0.6	0.6	1.1	
13	118	2764	7.0	7.9	-3.5	11.4	1.4	0.7	1.5	0.6	0.6	0.5	1.0	
14	118	2764	8.3	8.1	0.0	11.7	1.0	0.6	1.6	0.6	0.6	0.4	1.0	
15	116	2717	8.3	8.1	1.6	11.8	0.6	0.6	1.7	0.6	0.6	0.5	1.0	
16	120	2811	8.7	5.9	4.1	11.8	0.5	1.7	3.1	0.6	0.5	0.5	1.0	
17	120	2811	8.5	5.0	3.4	11.1	0.8	1.4	3.5	0.6	0.6	0.6	1.1	
18	120	2811	4.6	-1.0	8.0	9.8	1.7	2.5	1.2	0.5	0.5	0.7	1.1	
19	120	2811	5.1	0.9	7.0	10.8	1.9	2.3	5.6	0.5	0.4	0.6	1.0	
20	120	2811	9.5	4.5	2.2	11.4	1.0	1.2	3.4	0.7	0.5	0.5	1.0	
21	120	2794	7.9	4.4	-1.5	10.0	0.8	0.9	4.6	0.6	0.5	0.6	1.0	
22	116	2715	7.3	4.6	-5.5	10.0	0.5	0.6	0.8	0.6	0.5	0.5	1.0	
23	120	2811	6.1	3.8	-5.4	9.2	0.9	1.6	1.9	0.5	0.5	0.6	1.0	
	1967		12	18										
0	120	2810	6.3	4.3	-4.2	9.1	1.4	1.1	2.9	0.6	0.5	0.6	1.0	
1	120	2812	4.0	1.3	8.0	9.7	2.0	1.7	2.8	0.5	0.5	0.7	1.1	
2	120	2809	2.1	-0.6	6.8	9.2	2.6	1.0	5.3	0.4	0.4	0.7	0.9	
3	120	2812	-3.3	-4.1	1.7	7.1	3.0	1.3	3.6	0.5	0.5	0.5	0.9	
4	120	2810	2.7	-1.8	7.3	8.2	1.3	1.7	1.6	0.5	0.6	0.6	1.1	
5	120	2811	2.9	0.6	2.3	4.3	1.8	1.3	2.1	0.8	0.7	0.8	1.3	
6	117	2741	1.9	0.4	3.1	8.7	6.3	2.6	6.4	1.4	1.1	1.5	2.5	
7	120	2811	-7.3	8.9	-12.0	16.9	2.8	2.0	3.3	0.7	0.7	1.0	1.5	
8	120	2810	-1.6	-3.0	3.5	18.4	9.5	7.3	14.2	2.1	2.0	2.1	3.8	
9	120	2811	-10.2	1.2	16.0	19.4	3.2	1.9	3.3	1.0	0.6	0.9	1.6	
10	120	2810	-13.2	0.4	19.4	23.3	1.5	1.3	1.2	0.8	0.5	1.0	1.4	
11	120	2811	-21.0	3.5	6.9	23.3	4.5	3.3	7.1	1.3	1.7	1.7	2.8	
12	120	2798	-21.7	0.2	4.3	21.5	1.0	2.0	2.1	1.0	0.7	0.7	1.5	
13	120	2811	-21.5	-0.6	-3.3	21.1	0.7	1.0	2.6	0.9	0.7	0.7	1.4	
14	117	2741	-15.3	4.3	-7.8	18.6	4.1	4.6	5.6	1.1	0.9	1.1	1.8	
15	120	2810	-14.1	8.1	-5.2	17.5	3.8	3.1	4.9	1.8	1.9	2.0	3.3	
16	120	2812	-18.1	7.8	-4.9	20.1	3.4	2.7	2.8	1.4	1.9	2.0	3.2	
17	120	2811	-11.2	7.5	-8.5	15.8	2.1	1.8	1.6	0.8	0.8	0.7	1.4	
18	120	2810	-11.6	6.0	-8.8	16.2	1.3	2.3	4.6	0.8	0.9	1.0	1.7	
19	120	2811	-12.1	8.1	-3.8	15.9	2.5	2.5	5.7	1.0	0.9	1.1	1.8	
21	100	2268	-8.6	0.6	15.1	18.4	4.8	2.3	3.8	1.2	1.0	1.0	2.0	
22	120	2811	-8.2	2.1	8.1	13.3	2.3	4.9	4.9	1.0	1.5	1.2	2.3	
23	120	2799	-8.9	4.4	6.0	12.4	1.5	3.2	3.8	0.8	1.0	1.1	1.8	
	1967		12	19										
0	120	2811	-8.4	5.5	1.5	11.3	1.5	2.3	4.8	0.8	0.9	1.1	1.7	
1	120	2811	-9.1	6.5	0.4	11.6	1.2	1.8	3.8	0.8	0.9	1.1	1.7	
2	118	2755	-8.4	5.5	4.8	11.9	2.3	3.3	3.1	1.0	1.0	1.1	1.9	
3	120	2811	-7.2	7.4	-0.3	11.0	2.2	2.4	3.5	1.0	0.9	1.1	1.8	
4	120	2811	-6.7	3.9	-2.5	8.6	1.6	2.1	2.4	0.8	0.7	0.8	1.4	
5	120	2811	-7.2	1.5	-5.5	9.7	2.2	2.2	3.6	0.7	0.6	0.8	1.3	
6	120	2811	-6.0	2.7	6.4	10.4	2.9	3.5	4.1	0.9	0.9	1.0	1.7	
7	120	2812	-7.8	1.4	7.3	12.0	3.1	2.1	5.4	1.4	1.2	1.4	2.4	
8	119	2787	-7.4	0.4	1.2	7.8	1.3	1.5	2.3	0.7	0.6	0.7	1.2	
9	120	2811	-8.6	0.6	2.2	9.9	2.9	2.2	4.3	0.8	0.9	1.0	1.7	
10	120	2811	-12.4	-2.4	-2.1	13.3	1.3	2.2	4.4	0.8	0.6	0.7	1.3	
11	118	2743	-9.0	-4.8	-7.1	12.9	4.2	2.0	2.4	1.0	0.7	0.9	1.6	
12	117	2739	-3.5	-6.8	-4.4	10.3	4.2	2.3	4.3	1.6	1.1	1.5	2.6	
13	120	2811	-7.0	-4.4	-5.6	11.6	4.2	3.4	3.4	1.5	1.4	1.5	2.7	
14	120	2811	-9.2	-2.8	2.5	12.2	3.3	4.1	5.7	1.0	1.1	1.3	2.0	
15	120	2811	-7.7	-1.7	-1.0	11.2	2.9	3.3	7.0	1.0	1.1	1.2	2.0	

18	83	176	-3.8	3.1	2.5	7.4	1.5	2.1	2.0	0.4	0.3	0.4	0.8
19	120	255	-0.1	-0.5	1.3	5.8	3.6	3.9	2.5	0.4	0.4	0.4	0.8
20	58	123	3.6	-1.3	3.9	7.4	2.3	3.4	3.1	0.5	0.4	0.4	0.8

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4	102	175	-4.7	4.4	4.5	8.5	1.1	1.9	2.3	0.5	0.5	0.5	0.9
5	95	181	-3.4	4.8	2.8	7.8	1.2	2.0	3.5	0.4	0.5	0.5	0.9
6	111	221	-4.9	3.6	2.8	7.5	1.4	1.7	2.5	0.5	0.5	0.5	0.9
7	115	236	-3.6	1.8	-4.2	6.6	2.0	2.0	1.8	0.5	0.5	0.5	0.9
8	118	243	-0.2	7.5	3.0	9.6	2.8	2.5	3.6	0.4	0.6	0.4	0.9
9	84	159	-3.9	5.7	-0.8	8.3	2.6	3.5	1.5	0.4	0.5	0.3	0.8
10	117	225	-4.2	4.0	1.6	7.1	1.7	2.4	2.6	0.5	0.5	0.4	0.9
11	113	220	-2.1	-0.6	4.7	6.6	2.3	3.0	1.8	0.4	0.5	0.5	0.9
12	87	169	-6.4	2.0	0.7	6.9	0.4	1.2	0.9	0.5	0.4	0.2	0.7
13	81	169	-6.2	4.0	-1.2	7.6	0.3	0.9	0.6	0.5	0.4	0.3	0.8
14	120	253	-5.3	1.7	-0.5	5.7	0.5	1.2	0.7	0.5	0.3	0.2	0.6
15	120	255	-4.6	0.8	0.7	4.7	0.1	0.5	0.3	0.4	0.2	0.2	0.5
16	120	248	-4.2	0.6	0.9	4.4	0.3	0.7	0.3	0.4	0.2	0.2	0.5
17	53	110	-4.0	1.0	0.9	4.3	0.3	0.6	0.6	0.4	0.2	0.2	0.6
18	111	235	-3.6	1.0	1.6	4.3	0.3	1.1	0.4	0.4	0.2	0.3	0.6
19	120	251	-3.2	0.9	2.5	4.3	0.3	0.9	0.5	0.4	0.3	0.3	0.6
20	60	124	-3.8	1.2	1.8	4.4	0.3	0.2	0.3	0.4	0.2	0.3	0.6

END OF FILE RECORDS ARE 654