
Subject: *** Error: checking data fill: tried to move past end of file
Posted by on Thu, 15 Jun 2017 08:10:38 GMT
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Hi guys,

I'm a bit desperate with some fits file manipulation, thought I might ask here as I found a similar discussion ... however, without the answer to my question.

So when I check the FITS file I generate using this tool (https://fits.gsfc.nasa.gov/fits_verify.html), I get one error :

'*** Error: checking data fill: tried to move past end of file'

I get this error only on the 5th of five binary table extensions, and when I read the data using my home-made function I do not get any error and do not see any corrupted data.

I write the data like this :

```
fxbcreate, unit, fitsfile, hk_hdr
fxbwritm, unit, [1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,$
16,17,18,19,20,21,22,23,24,25,26,27,28,29,30], $
double(hk(0,*)), $
ulong( hk(1,*)), $
ulong( hk(2,*)), $
ulong( hk(3,*)), $
ulong( hk(4,*)), $
ulong( hk(5,*)), $
ulong( hk(6,*)), $
ulong( hk(7,*)), $
ulong( hk(8,*)), $
ulong( hk(9,*)), $
ulong( hk(10,*)), $
ulong( hk(11,*)), $
ulong( hk(12,*)), $
ulong( hk(13,*)), $
ulong( hk(14,*)), $
ulong( hk(15,*)), $
ulong( hk(16,*)), $
ulong( hk(17,*)), $
ulong( hk(18,*)), $
ulong( hk(19,*)), $
ulong( hk(20,*)), $
ulong( hk(21,*)), $
ulong( hk(22,*)), $
ulong( hk(23,*)), $
ulong( hk(24,*)), $
ulong( hk(25,*)), $
```

```

ulong( hk(26,*)), $
ulong( hk(27,*)), $
ulong( hk(28,*)), $
ulong( hk(29,*)), $
fxbfinish, unit

```

Using the following header :

```

1 | XTENSION= 'BINTABLE'           /Written by IDL: Wed Jun 14 15:44:52 2017
2 | BITPIX =                8 /
3 | NAXIS =                  2 /Binary table
4 | NAXIS1 =                 124 /Number of bytes per row
5 | NAXIS2 =                 490 /Number of rows
6 | PCOUNT =                 0 /Random parameter count
7 | GCOUNT =                 1 /Group count
8 | TFIELDS =                30 /Number of columns
9 | CONTENT = 'HOUSEKEEPING'      / Content of this HDU

```

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.
.
.

```

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45 | TFORM1 = '1D'              /Real*8 (double precision)
46 | TTYPE1 = 'Timestamp_Offset' / Seconds since J2000.0
47 | TFORM2 = '1J'              /Unsigned Integer*4 (long integer)
48 | TTYPE2 = 'OnChipRef'       /
49 | TSCAL2 =                   1 /Scale parameter for column 2
50 | TZERO2 = 2147483648.00 /Zero offset for column 2
51 | TFORM3 = '1J'              /Unsigned Integer*4 (long integer)
52 | TTYPE3 = 'RefTemp'        /
53 | TSCAL3 =                   1 /Scale parameter for column 3
54 | TZERO3 = 2147483648.00 /Zero offset for column 3
55 | TFORM4 = '1J'              /Unsigned Integer*4 (long integer)
56 | TTYPE4 = 'VRef2V5'        /
57 | TSCAL4 =                   1 /Scale parameter for column 4
58 | TZERO4 = 2147483648.00 /Zero offset for column 4
59 | TFORM5 = '1J'              /Unsigned Integer*4 (long integer)
60 | TTYPE5 = 'AD7710Temp'     /
61 | TSCAL5 =                   1 /Scale parameter for column 5
62 | TZERO5 = 2147483648.00 /Zero offset for column 5
63 | TFORM6 = '1J'              /Unsigned Integer*4 (long integer)
64 | TTYPE6 = 'FrameTemp'      /
65 | TSCAL6 =                   1 /Scale parameter for column 6
66 | TZERO6 = 2147483648.00 /Zero offset for column 6
67 | TFORM7 = '1J'              /Unsigned Integer*4 (long integer)

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68 | TTYPE7 = 'PwmRef' /
69 | TSCAL7 = 1 /Scale parameter for column 7
70 | TZERO7 = 2147483648.00 /Zero offset for column 7
71 | TFORM8 = '1J' /Unsigned Integer*4 (long integer)
72 | TTYPE8 = 'VRef5V' /
73 | TSCAL8 = 1 /Scale parameter for column 8
74 | TZERO8 = 2147483648.00 /Zero offset for column 8
75 | TFORM9 = '1J' /Unsigned Integer*4 (long integer)
76 | TTYPE9 = 'AnalogGround' /
77 | TSCAL9 = 1 /Scale parameter for column 9
78 | TZERO9 = 2147483648.00 /Zero offset for column 9
79 | TFORM10 = '1J' /Unsigned Integer*4 (long integer)
80 | TTYPE10 = 'FShieldTemp' /
81 | TSCAL10 = 1 /Scale parameter for column 10
82 | TZERO10 = 2147483648.00 /Zero offset for column 10
83 | TFORM11 = '1J' /Unsigned Integer*4 (long integer)
84 | TTYPE11 = 'CShieldTemp' /
85 | TSCAL11 = 1 /Scale parameter for column 11
86 | TZERO11 = 2147483648.00 /Zero offset for column 11
87 | TFORM12 = '1J' /Unsigned Integer*4 (long integer)
88 | TTYPE12 = 'HeatSinkTemp' /
89 | TSCAL12 = 1 /Scale parameter for column 12
90 | TZERO12 = 2147483648.00 /Zero offset for column 12
91 | TFORM13 = '1J' /Unsigned Integer*4 (long integer)
92 | TTYPE13 = 'MotorTemp' /
93 | TSCAL13 = 1 /Scale parameter for column 13
94 | TZERO13 = 2147483648.00 /Zero offset for column 13
95 | TFORM14 = '1J' /Unsigned Integer*4 (long integer)
96 | TTYPE14 = 'TB1' /
97 | TSCAL14 = 1 /Scale parameter for column 14
98 | TZERO14 = 2147483648.00 /Zero offset for column 14
99 | TFORM15 = '1J' /Unsigned Integer*4 (long integer)
100 | TTYPE15 = 'CavityPCBTemp' /
101 | TSCAL15 = 1 /Scale parameter for column 15
102 | TZERO15 = 2147483648.00 /Zero offset for column 15
103 | TFORM16 = '1J' /Unsigned Integer*4 (long integer)
104 | TTYPE16 = 'MotorPCBTemp' /
105 | TSCAL16 = 1 /Scale parameter for column 16
106 | TZERO16 = 2147483648.00 /Zero offset for column 16
107 | TFORM17 = '1J' /Unsigned Integer*4 (long integer)
108 | TTYPE17 = 'QSensorA' /
109 | TSCAL17 = 1 /Scale parameter for column 17
110 | TZERO17 = 2147483648.00 /Zero offset for column 17
111 | TFORM18 = '1J' /Unsigned Integer*4 (long integer)
112 | TTYPE18 = 'QSensorB' /
113 | TSCAL18 = 1 /Scale parameter for column 18
114 | TZERO18 = 2147483648.00 /Zero offset for column 18
115 | TFORM19 = '1J' /Unsigned Integer*4 (long integer)

```

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116 | TTYPE19 = 'QSensorC'      /
117 | TSCAL19 =                1 /Scale parameter for column 19
118 | TZERO19 = 2147483648.00 /Zero offset for column 19
119 | TFORM20 = '1J'          /Unsigned Integer*4 (long integer)
120 | TTYPE20 = 'QSensorD'    /
121 | TSCAL20 =                1 /Scale parameter for column 20
122 | TZERO20 = 2147483648.00 /Zero offset for column 20
123 | TFORM21 = '1J'          /Unsigned Integer*4 (long integer)
124 | TTYPE21 = 'Current5VPos' /
125 | TSCAL21 =                1 /Scale parameter for column 21
126 | TZERO21 = 2147483648.00 /Zero offset for column 21
127 | TFORM22 = '1J'          /Unsigned Integer*4 (long integer)
128 | TTYPE22 = 'Current12VPos' /
129 | TSCAL22 =                1 /Scale parameter for column 22
130 | TZERO22 = 2147483648.00 /Zero offset for column 22
131 | TFORM23 = '1J'          /Unsigned Integer*4 (long integer)
132 | TTYPE23 = 'Current12VNeg' /
133 | TSCAL23 =                1 /Scale parameter for column 23
134 | TZERO23 = 2147483648.00 /Zero offset for column 23
135 | TFORM24 = '1J'          /Unsigned Integer*4 (long integer)
136 | TTYPE24 = 'PrimCurrent' /
137 | TSCAL24 =                1 /Scale parameter for column 24
138 | TZERO24 = 2147483648.00 /Zero offset for column 24
139 | TFORM25 = '1J'          /Unsigned Integer*4 (long integer)
140 | TTYPE25 = 'TB2RefTemp'  /
141 | TSCAL25 =                1 /Scale parameter for column 25
142 | TZERO25 = 2147483648.00 /Zero offset for column 25
143 | TFORM26 = '1J'          /Unsigned Integer*4 (long integer)
144 | TTYPE26 = 'Voltage5VPos' /
145 | TSCAL26 =                1 /Scale parameter for column 26
146 | TZERO26 = 2147483648.00 /Zero offset for column 26
147 | TFORM27 = '1J'          /Unsigned Integer*4 (long integer)
148 | TTYPE27 = 'Voltage12VPos' /
149 | TSCAL27 =                1 /Scale parameter for column 27
150 | TZERO27 = 2147483648.00 /Zero offset for column 27
151 | TFORM28 = '1J'          /Unsigned Integer*4 (long integer)
152 | TTYPE28 = 'Voltage12VNeg' /
153 | TSCAL28 =                1 /Scale parameter for column 28
154 | TZERO28 = 2147483648.00 /Zero offset for column 28
155 | TFORM29 = '1J'          /Unsigned Integer*4 (long integer)
156 | TTYPE29 = 'DCDCTemp'    /
157 | TSCAL29 =                1 /Scale parameter for column 29
158 | TZERO29 = 2147483648.00 /Zero offset for column 29
159 | TFORM30 = '1J'          /Unsigned Integer*4 (long integer)
160 | TTYPE30 = 'TB2'         /
161 | TSCAL30 =                1 /Scale parameter for column 30
162 | TZERO30 = 2147483648.00 /Zero offset for column 30
163 | END

```

163 header keywords

(30 columns x 490 rows)

Col#	Name (Units)	Format
1	Timestamp_Offset	1D
2	OnChipRef	1J
3	RefTemp	1J
4	VRef2V5	1J
5	AD7710Temp	1J
6	FrameTemp	1J
7	PwmRef	1J
8	VRef5V	1J
9	AnalogGround	1J
10	FShieldTemp	1J
11	CShieldTemp	1J
12	HeatSinkTemp	1J
13	MotorTemp	1J
14	TB1	1J
15	CavityPCBTemp	1J
16	MotorPCBTemp	1J
17	QSensorA	1J
18	QSensorB	1J
19	QSensorC	1J
20	QSensorD	1J
21	Current5VPos	1J
22	Current12VPos	1J
23	Current12VNeg	1J
24	PrimCurrent	1J
25	TB2RefTemp	1J
26	Voltage5VPos	1J
27	Voltage12VPos	1J
28	Voltage12VNeg	1J
29	DCDCTemp	1J
30	TB2	1J

+++++ Error Summary +++++

HDU#	Name (version)	Type	Warnings	Errors
1	Primary Array	0	0	
2	Binary Table	0	0	
3	Binary Table	0	0	
4	Binary Table	0	0	
5	Binary Table	0	1	

Thanks in advance ...

Subject: Re: *** Error: checking data fill: tried to move past end of file

Posted by [wlandsman](#) on Thu, 15 Jun 2017 14:00:50 GMT

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This is a longshot, but code you show has a mistake at the end.

```
>  ulong( hk(28,*)), $  
>  ulong( hk(29,*)), $  
>  fxbfinish, unit
```

The last continuation symbol should not be there, and "fxbfinish,unit" should be a separate command, rather than a continuation of the previous fxbwritm command. fxbfinish adds the padding bytes at the end of the FITS file, so if it is not called you could get the error about trying to move past the end of file. --Wayne

Subject: Re: *** Error: checking data fill: tried to move past end of file

Posted by [Craig Markwardt](#) on Fri, 16 Jun 2017 08:47:50 GMT

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On Thursday, June 15, 2017 at 10:00:53 AM UTC-4, wlandsman wrote:

```
> This is a longshot, but code you show has a mistake at the end.
```

Ooo, nice catch
