V&V Summary Report
L2 ASCDS Version : 8.4.3

Observation 13418 - L2 Version 2
Chandra X-Ray Center

L2 Processing Date : Feb 10 2012

See axaff13418N002_VV001_vvref2.pdf for the full report

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2012.02.13
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10.04005782491

Comments

```
The data for this observation have been processed using the 'EDSER'
sub-pixel event-repositioning algorithm of Li et al. (2004, ApJ, 610,
1204). Small-scale features should become sharper for sources near the
aim point. The improvement will be less noticeable for off-axis sources
where the size of the point-spread function is comparable to or larger
than the size of an ACIS pixel. To take full advantage of the
improvement, images should be binned on spatial scales smaller than the
size of an ACIS pixel. Note that, at present, the point-spread function
has not been calibrated for data to which the EDSER algorithm has been
applied. If dither was disabled for the observation, then the algorithm
can introduce artificial aliasing effects on spatial scales smaller than
a pixel. If you would prefer to use no sub-pixel adjustment or to apply
a coordinate randomization, then use acis_process_events to reprocess
the data with the parameter pix_adj=NONE or RANDOMIZE, respectively.
======

Chip I2 has an enhanced region in the upper left corner. This region is
also in the bad pixel image and is not present in the level 2 data.
======
The problem seems to be confined to frame EXPNO = 616 of CCD_ID = 2.
There are about 2640 events in the affected region during this frame.
```

These events have GRADE = 7, which is why they do not appear in the
Level 2 file. There is no problem with the bias. Nor is there a
bias-parity error or a problem with the overclock values. For these
reasons, I think that the events are associated with a charged particle
that interacted with the CCD at that particular time. Since the events
are excluded from the Level 2 file, I think that nothing more needs to
be done to the pipeline-produced products. The anomaly is confined to a
single exposure frame of CCD_I2 and has the characteristics of a charged
particle traveling parallel to the CCD gates, depositing mucho charge
across the image store. There were so many event candidates that the FEP
was forced to skip the next frame but it had fully recovered by the
following one, EXPNO=618. Subsequent exposures in that run, and in the
next I2 bias map (OBSID 12431), show no evidence of permanent damage.

seq_num	702581	Sequence number
obs_id	13418	Observation id
title	Chandra Follow-up of an Exceptional GALEX+PS1 Tidal Disruption Event Candidate	Proposal title
observer	Dr. Suvi Gezari	Principal investigator
object	TDE_PS1_DDT_C12	Source name
dtycycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	242.367917	Observer's specified target RA [deg]
dec_targ	53.673389	Observer's specified target Dec [deg]
ra_nom	242.36079901984	Nominal RA [deg]
dec_nom	53.671044507647	Nominal Dec [deg]
roll_nom	177.08321552034	Nominal Roll [deg]
revision	2	Processing version of data
ontime	10040.057825744	Sum of GTIs [s]
livetime	9908.8770788678	Livetime [s]
ontime2	10036.752675354	Sum of GTIs [s]
ontime3	10039.975745738	Sum of GTIs [s]
ontime6	10033.734864831	Sum of GTIs [s]
ontime7	10040.057825744	Sum of GTIs [s]
ontime8	10039.934705734	Sum of GTIs [s]
l2events	62611	Number of level 2 events