# V&V Summary Report
# L2 ASCDS Version : 8.4.4

Observation 10130 - L2 Version 2
Chandra X-Ray Center

L2 Processing Date : May 28 2012

See axaff10130N002_VV001_vvref2.pdf for the full report

| | |
|---|---|
| V&V Scientist | Joy Nichols |
| V&V Date (YYYY-MM-DD) | 2012.06.08 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 20.1835 |

## Comments

```
Window constraint met.
====
The livetime for the CCD chip is about 6 ks instead of 20 ks
because the use of a 0.4 s frame time, based on the selection of the
number of rows in the subarray format used during the observation, is
shorter than the time it takes to read out one frame of data. The
formula in section 6.12.1 of the POG:

http://asc.harvard.edu/proposer/POG/html/chap6.html#tth_sEc6.12.1

indicates that the frame time must be at least 0.7 s to avoid 'flushing'
the
detector before each frame of data is collected. The time required to
flush
the detector is specified on p. 120 of the ACIS Science Instrument
Software
User's Guide:

http://acis.mit.edu/swuserA/swuser.pdf

Events that occur during such a flush are discarded onboard. The flush
```

time
is effectively 'dead time.' For this reason, most of the 20 ks of the observation was spent flushing the detectors instead of collecting data.
Had the frame time been 0.7 s or longer, there would have been about 20 ks
of exposure instead of only about 6 ks.

| | | |
|---|---|---|
| seq_num | 501057 | Sequence number |
| obs_id | 10130 | Observation id |
| title | Chandra Cycle 10 Spatial and Spectral Monitoring of SNR 1987A | Prop |
| observer | Prof. David Burrows | Principal investigator |
| object | SNR 1987A | Source name |
| dtycycle | 0 |   |
| cycle | P | events from which exps? Prim/Second/Both |
| ra_targ | 83.866667 | Observer's specified target RA [deg] |
| dec_targ | -69.26975 | Observer's specified target Dec [deg] |
| ra_nom | 83.880041121891 | Nominal RA [deg] |
| dec_nom | -69.268823923497 | Nominal Dec [deg] |
| roll_nom | 339.35737747659 | Nominal Roll [deg] |
| revision | 2 | Processing version of data |
| ontime | 20183.5 | Sum of GTIs [s] |
| livetime | 6024.2060649475 | Livetime [s] |
| ontime7 | 20183.5 | Sum of GTIs [s] |
| l2events | 14737 | Number of level 2 events |