

V&V Summary Report

L2 ASCDS Version : 8.4.3

Observation 14052 - L2 Version 2
Chandra X-Ray Center

L2 Processing Date : Feb 29 2012

See axaff14052N002_VV002_vvref2.pdf for the full report

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2018.03.06
V&V Edition	2
V&V Disposition and Status	OK
V&V Charge Time	14.956799944341

Comments

Joint proposal with HST.

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The focal plane temperature during part of this observation was warmer than the upper limit for optimum calibration of the ACIS gain and spectral resolution (i.e., -114.0 C for ACIS-I and -112.0 C for ACIS-S).

The Chandra calibration team calibrates the ACIS gain and spectral resolution using data from the external calibration source (ECS). ECS data show that the frontside-illuminated (FI) CCDs are more temperature sensitive than the backside-illuminated (BI) CCDs.

A summary of the current calibration status of the ACIS gain and spectral resolution can be found at:

http://asc.harvard.edu/cal/Acis/Cal_prods/Gain_and_Spectral_Resolution/A_CIS_response_summary.html

The main points are:

- 1) The gain on BI chips remains within 0.3% (i.e., the systematic uncertainty in the ACIS gain quoted on the Chandra Calibration Status Summary web page) at all measured temperatures.
- 2) The gain on FI chips remains within 0.3% below row 600 at all

measured temperatures.

3) The gain on FI chips above row 600 can be underestimated by as much as 1% for focal plane temperatures exceeding -116 C.

4) The spectral resolution (i.e., FWHM) on BI chips is insensitive to the focal plane temperature.

5) Warmer focal plane temperatures increase the FWHM on FI chips by up to 30 eV near row 512 and by up to 70 eV near the top of the chips.

In summary, the user should be cautious in the spectral analysis of high S/N emission lines detected on the top half of FI chips in this observation. Default processing with the current version of the CALDB will underestimate photon energies by up to 1% and broaden emission lines by up to 70 eV.

seq_num	901018	Sequence number
obs_id	14052	Observation id
title	The demographics of dark gamma-ray bursts	Proposal title
observer	Dr Andrew Levan	Principal investigator
object	GRB111215A	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	349.555375	Observer's specified target RA [deg]
dec_targ	32.494	Observer's specified target Dec [deg]
ra_nom	349.55892839938	Nominal RA [deg]
dec_nom	32.493770606248	Nominal Dec [deg]
roll_nom	298.65479631413	Nominal Roll [deg]
revision	2	Processing version of data
ontime	14956.799944341	Sum of GTIs [s]
livetime	14767.407937542	Livetime [s]
ontime2	14956.799944341	Sum of GTIs [s]
ontime3	14956.799944341	Sum of GTIs [s]
ontime5	14956.799944341	Sum of GTIs [s]
ontime6	14956.799944341	Sum of GTIs [s]
ontime7	14956.799944341	Sum of GTIs [s]
ontime8	14956.799944341	Sum of GTIs [s]
l2events	155581	Number of level 2 events

