

V&V Summary Report

L2 ASCDS Version : 10.7.1

Observation 22189 - L2 Version 1
Chandra X-Ray Center

L2 Processing Date : Apr 25 2019

See axaff22189N001_VV001_vvref2.pdf for the full report

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2019.04.25
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	30.063800231338

Comments

Two optional chips were dropped.

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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	801783	Sequence number
obs_id	22189	Observation id
title	Localizing the Position of an Ultraluminous X-ray Flare in an Extragalactic Globular Cluster	Proposal title
observer	Jimmy Irwin	Principal investigator
object	NGC5128 Flare	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	201.469583	Observer's specified target RA [deg]
dec_targ	-43.096111	Observer's specified target Dec [deg]
ra_nom	201.47432892219	Nominal RA [deg]
dec_nom	-43.093377081683	Nominal Dec [deg]
roll_nom	340.15986120067	Nominal Roll [deg]
revision	1	Processing version of data
ontime	30063.800231338	Sum of GTIs [s]
livetime	29670.994548667	Livetime [s]
ontime3	30063.800231338	Sum of GTIs [s]
ontime6	30063.800231338	Sum of GTIs [s]
ontime7	30063.800231338	Sum of GTIs [s]
ontime8	30063.800231338	Sum of GTIs [s]
l2events	292638	Number of level 2 events

