V&V Summary Report
L2 ASCDS Version : 10.6

Observation 20517 - L2 Version 1
Chandra X-Ray Center

L2 Processing Date : Oct 2 2017

See axaff20517N001_VV002_vvref2.pdf for the full report

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2018.03.07
V&V Edition	2
V&V Disposition and Status	OK
V&V Charge Time	10.077768400192

Comments

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Optional chip S2 not included.
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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
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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	801731	Sequence number
obs_id	20517	Observation id
title	Enabling precision cosmology with optically selected galaxy clusters	
observer	Roger Morris	Principal investigator
object	ClG J225656+244547	Source name
dtycycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	344.209583	Observer's specified target RA [deg]
dec_targ	24.800944	Observer's specified target Dec [deg]
ra_nom	344.18050530457	Nominal RA [deg]
dec_nom	24.768456460177	Nominal Dec [deg]
roll_nom	225.2209108236	Nominal Roll [deg]
revision	1	Processing version of data
ontime	10077.768400192	Sum of GTIs [s]
livetime	9946.0949368986	Livetime [s]
ontime0	10080.786350489	Sum of GTIs [s]
ontime1	10077.686310172	Sum of GTIs [s]
ontime2	10077.727340221	Sum of GTIs [s]
ontime3	10077.768400192	Sum of GTIs [s]
l2events	24611	Number of level 2 events