V&V Summary Report
L2 ASCDS Version : 10.4.3.1

Observation 18807 - L2 Version 1
Chandra X-Ray Center

L2 Processing Date : Mar 24 2016

See axaff18807N001_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	29.078000223756

Comments

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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
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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	801453	Sequence number
obs_id	18807	Observation id
title	Low mach number shocks reaccelerating particles in the Intra-cluster Medium: the unique case of PLCKG287.0 +32.9	Proposal title
observer	Dr Annalisa Bonafede	Principal investigator
object	PLCKG287+.0 +32.9	Source name
dtycycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	177.705	Observer's specified target RA [deg]
dec_targ	-28.077	Observer's specified target Dec [deg]
ra_nom	177.66489648491	Nominal RA [deg]
dec_nom	-28.06759642862	Nominal Dec [deg]
roll_nom	348.18982020213	Nominal Roll [deg]
revision	1	Processing version of data
ontime	29078.000223756	Sum of GTIs [s]
livetime	28698.07474392	Livetime [s]
ontime0	29078.000223756	Sum of GTIs [s]
ontime1	29071.71807313	Sum of GTIs [s]
ontime2	29078.000223756	Sum of GTIs [s]
ontime3	29078.000223756	Sum of GTIs [s]
l2events	79475	Number of level 2 events