V&V Summary Report
L2 ASCDS Version : 10.8

Observation 21380 - L2 Version 1
Chandra X-Ray Center

L2 Processing Date : Jul 14 2019

See axaff21380N001_VV001_vvref2.pdf for the full report

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2019.07.14
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	9.5747605499029

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., -111.0 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

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
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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	601432	Sequence number
obs_id	21380	Observation id
title	MISSING BARYONS AND THE WARM-HOT CIRCUMGALACTIC MEDIUM OF THE MILKY WAY	Proposal title
observer	Anjali Gupta	Principal investigator
object	Off-field3	Source name
dtycycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	339.556667	Observer's specified target RA [deg]
dec_targ	30.567361	Observer's specified target Dec [deg]
ra_nom	339.55176163041	Nominal RA [deg]
dec_nom	30.569045207081	Nominal Dec [deg]
roll_nom	128.21115548829	Nominal Roll [deg]
revision	1	Processing version of data
ontime	9574.7605499029	Sum of GTIs [s]
livetime	9449.6592544823	Livetime [s]
ontime0	9574.6374299526	Sum of GTIs [s]
ontime1	9574.6784698963	Sum of GTIs [s]
ontime2	9574.7195099592	Sum of GTIs [s]
ontime3	9574.7605499029	Sum of GTIs [s]
l2events	26467	Number of level 2 events