V&V Summary Report
L2 ASCDS Version : 10.5.2

Observation 19939 - L2 Version 1
Chandra X-Ray Center

L2 Processing Date : Nov 12 2016

See axaff19939N001_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	28.04880021584

Comments

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Optional chip S2 was 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
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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	801501	Sequence number
obs_id	19939	Observation id
title	Chandra mapping of the cosmic web converging on the virialization region of Abell 1795	Proposal title
observer	Dr Alexey Vikhlinin	Principal investigator
object	Abell 1795 outskirts	Source name
dtycycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	206.816287	Observer's specified target RA [deg]
dec_targ	26.767794	Observer's specified target Dec [deg]
ra_nom	206.82048560393	Nominal RA [deg]
dec_nom	26.7717863589	Nominal Dec [deg]
roll_nom	23.206812998182	Nominal Roll [deg]
revision	1	Processing version of data
ontime	28048.80021584	Sum of GTIs [s]
livetime	27682.321991794	Livetime [s]
ontime0	28048.80021584	Sum of GTIs [s]
ontime1	28045.659175515	Sum of GTIs [s]
ontime2	28048.80021584	Sum of GTIs [s]
ontime3	28048.80021584	Sum of GTIs [s]
ontime6	28042.518364906	Sum of GTIs [s]
l2events	92388	Number of level 2 events