V&V Summary Report
L2 ASCDS Version : 10.4.3.1

Observation 17659 - L2 Version 1
Chandra X-Ray Center

L2 Processing Date : Feb 23 2016

See axaff17659N001_VV002_vvref2.pdf for the full report

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2018.03.06
V&V Edition	2
V&V Disposition and Status	OK
V&V Charge Time	10.056400077462

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	502480	Sequence number
obs_id	17659	Observation id
title	Studying the transient magnetar 3XMMJ185246.6+003317 close to SNR Kes 79	Proposal title
observer	Dr. Stephen Murray	Principal investigator
object	Kes 79	Source name
dtycycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	283.160417	Observer's specified target RA [deg]
dec_targ	0.610083	Observer's specified target Dec [deg]
ra_nom	283.15940065985	Nominal RA [deg]
dec_nom	0.6172853681355	Nominal Dec [deg]
roll_nom	77.191776659534	Nominal Roll [deg]
revision	1	Processing version of data
ontime	10056.400077462	Sum of GTIs [s]
livetime	9925.0058070361	Livetime [s]
ontime0	10046.977026463	Sum of GTIs [s]
ontime1	10056.400077462	Sum of GTIs [s]
ontime2	10056.400077462	Sum of GTIs [s]
ontime3	10056.400077462	Sum of GTIs [s]
ontime6	10053.259067059	Sum of GTIs [s]
l2events	45145	Number of level 2 events