V&V Summary Report
L2 ASCDS Version : 10.7.1

Observation 22068 - L2 Version 2
Chandra X-Ray Center

L2 Processing Date : Feb 4 2019

See axaff22068N002_VV001_vvref2.pdf for the full report

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2019.02.04
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10.060500371575

Comments

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The guide star in slot 4 was removed from the aspect solution due to
poor data quality. The aspect solution is improved by the removal of
this slot from the solution.
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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
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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
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	703857	Sequence number
obs_id	22068	Observation id
title	C-BASS: A Chandra Legacy Survey of AGN at the Highest Spatial Resolutions	Proposal title
observer	Michael Koss	Principal investigator
object	HE0103-3447	Source name
dtycycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	16.444578	Observer's specified target RA [deg]
dec_targ	-34.528965	Observer's specified target Dec [deg]
ra_nom	16.448727577972	Nominal RA [deg]
dec_nom	-34.530674416292	Nominal Dec [deg]
roll_nom	269.23471487319	Nominal Roll [deg]
revision	2	Processing version of data
ontime	10060.500371575	Sum of GTIs [s]
livetime	9569.5808728007	Livetime [s]
ontime7	10060.500371575	Sum of GTIs [s]
l2events	15613	Number of level 2 events