V&V Summary Report
L2 ASCDS Version : 10.5.2

Observation 18992 - L2 Version 1
Chandra X-Ray Center

L2 Processing Date : Apr 5 2017

See axaff18992N001_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	1.555643756628

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	401860	Sequence number
obs_id	18992	Observation id
title	Accurate localization of hard X-ray sources in the Galactic Center region. Search for HMXBs in the bulge	Proposal title
observer	Alexander Lutovinov	Principal investigator
object	IGR J17315-3221	Source name
dtycycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	262.8075	Observer's specified target RA [deg]
dec_targ	-32.368972	Observer's specified target Dec [deg]
ra_nom	262.80473488393	Nominal RA [deg]
dec_nom	-32.362804235704	Nominal Dec [deg]
roll_nom	83.774335971594	Nominal Roll [deg]
revision	1	Processing version of data
ontime	1555.643756628	Sum of GTIs [s]
livetime	1535.3181256994	Livetime [s]
ontime0	1555.5206366777	Sum of GTIs [s]
ontime1	1555.5616766214	Sum of GTIs [s]
ontime2	1555.6027166843	Sum of GTIs [s]
ontime3	1555.643756628	Sum of GTIs [s]
ontime6	1555.4795966148	Sum of GTIs [s]
l2events	5484	Number of level 2 events