V&V Summary Report
L2 ASCDS Version : 10.6

Observation 20814 - L2 Version 1
Chandra X-Ray Center

L2 Processing Date : Oct 17 2017

See axaff20814N001_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	15.080887522578

Comments

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Optional chip S2 not included.
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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	801669	Sequence number
obs_id	20814	Observation id
title	Determining the Universality of f_gas at High Redshift	Proposal ti
observer	Mark Brodwin	Principal investigator
object	MOO J0319-0025	Source name
dtycycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	49.851667	Observer's specified target RA [deg]
dec_targ	-0.4225	Observer's specified target Dec [deg]
ra_nom	49.871068727068	Nominal RA [deg]
dec_nom	-0.36824068815319	Nominal Dec [deg]
roll_nom	66.70879694714	Nominal Roll [deg]
revision	1	Processing version of data
ontime	15080.887522578	Sum of GTIs [s]
livetime	14883.844624708	Livetime [s]
ontime0	15080.764402628	Sum of GTIs [s]
ontime1	15080.805442572	Sum of GTIs [s]
ontime2	15080.846482635	Sum of GTIs [s]
ontime3	15080.887522578	Sum of GTIs [s]
l2events	36441	Number of level 2 events