V&V Summary Report
L2 ASCDS Version : 10.6.4

Observation 21725 - L2 Version 1
Chandra X-Ray Center

L2 Processing Date : Aug 30 2018

See axaff21725N001_VV001_vvref2.pdf for the full report

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2018.08.30
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	74.340711252451

Comments

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The focal plane temperature is warmer than -112.0 C during the interval
651953866.80 - 651965287.20 (MET s) of this observation, exceeding the
calibration limit for back-illuminated chips. 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	703573	Sequence number
obs_id	21725	Observation id
title	Did the first quasars come in pairs? Chandra/ALMA synergistic observations of quasars at z>6	Proposal title
observer	Eduardo Banados	Principal investigator
object	P308-21	Source name
dtycycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	308.0425	Observer's specified target RA [deg]
dec_targ	-21.234083	Observer's specified target Dec [deg]
ra_nom	308.04800325518	Nominal RA [deg]
dec_nom	-21.236103987931	Nominal Dec [deg]
roll_nom	288.15861929264	Nominal Roll [deg]
revision	1	Processing version of data
ontime	74340.711252451	Sum of GTIs [s]
livetime	73369.395131102	Livetime [s]
ontime3	74334.34691155	Sum of GTIs [s]
ontime6	74340.670212507	Sum of GTIs [s]
ontime7	74340.711252451	Sum of GTIs [s]
ontime8	74337.447011709	Sum of GTIs [s]
l2events	466340	Number of level 2 events