V&V Summary Report
L2 ASCDS Version : 10.8

Observation 21144 - L2 Version 1
Chandra X-Ray Center

L2 Processing Date : Aug 22 2019

See axaff21144N001_VV001_vvref2.pdf for the full report

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2019.08.22
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	3.1093000240326

Comments

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., -111.0 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

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
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	703684		Sequence number
obs_id	21144		Observation id
title	A Chandra view of Eddington-limited accretion in DOGs		Proposal tit
observer	Gordon Garmire		Principal investigator
object	J1324+4501		Source name
dtycycle	0		&#160
cycle	P		events from which exps? Prim/Second/Both
ra_targ	201.1675		Observer's specified target RA [deg]
dec_targ	45.026083		Observer's specified target Dec [deg]
ra_nom	201.17222594011		Nominal RA [deg]
dec_nom	45.025868013235		Nominal Dec [deg]
roll_nom	288.1532453191		Nominal Roll [deg]
revision	1		Processing version of data
ontime	3109.3000240326		Sum of GTIs [s]
livetime	3068.6747301852		Livetime [s]
ontime6	3109.3000240326		Sum of GTIs [s]
ontime7	3109.3000240326		Sum of GTIs [s]
ontime8	3109.3000240326		Sum of GTIs [s]
l2events	17881		Number of level 2 events