V&V Summary Report
L2 ASCDS Version : 10.8.1

Observation 22880 - L2 Version 1
Chandra X-Ray Center

L2 Processing Date : Oct 25 2019

See axaff22880N001_VV001_vvref2.pdf for the full report

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2019.10.27
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	20.848

Comments

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The focal plane temperature during the interval 688397911.32 -
688399239.32 (MET s) 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.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	703940	Sequence number
obs_id	22880	Observation id
title	Mapping NGC 1194: a Compton Thick AGN in the nearby Universe	Propo
observer	Tracey Turner	Principal investigator
object	NGC 1194	Source name
dtycycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	45.954583	Observer's specified target RA [deg]
dec_targ	-1.103608	Observer's specified target Dec [deg]
ra_nom	45.952795342461	Nominal RA [deg]
dec_nom	-1.099729697415	Nominal Dec [deg]
roll_nom	54.156585403714	Nominal Roll [deg]
revision	1	Processing version of data
ontime	20848.0	Sum of GTIs [s]
livetime	20026.127718435	Livetime [s]
ontime5	20847.976680875	Sum of GTIs [s]
ontime6	20847.935640812	Sum of GTIs [s]
ontime7	20848.0	Sum of GTIs [s]
ontime8	20847.894600868	Sum of GTIs [s]
l2events	65168	Number of level 2 events