

V&V Summary Report

L2 ASCDS Version : 10.7.1

Observation 20771 - L2 Version 1
Chandra X-Ray Center

L2 Processing Date : Mar 8 2019

See axaff20771N001_VV001_vvref2.pdf for the full report

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2019.03.08
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	15.062900115967

Comments

Optional chip I2 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 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	703636	Sequence number
obs_id	20771	Observation id
title	A Chandra Survey of Nearby Optical AGN Candidates in Dwarf Galaxies	
observer	Ralph Kraft	Principal investigator
object	NGC 4282	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	185.10125	Observer's specified target RA [deg]
dec_targ	5.572833	Observer's specified target Dec [deg]
ra_nom	185.09724889649	Nominal RA [deg]
dec_nom	5.5750432443918	Nominal Dec [deg]
roll_nom	94.1570188691	Nominal Roll [deg]
revision	1	Processing version of data
ontime	15062.900115967	Sum of GTIs [s]
livetime	14866.092236806	Livetime [s]
ontime3	15056.6179353	Sum of GTIs [s]
ontime6	15059.759035826	Sum of GTIs [s]
ontime7	15062.900115967	Sum of GTIs [s]
ontime8	15059.759035826	Sum of GTIs [s]
l2events	98606	Number of level 2 events

