V&V Summary Report
L2 ASCDS Version : 8.4.3

Observation 13219 - L2 Version 3
Chandra X-Ray Center

L2 Processing Date : Feb 6 2012

See axaff13219N003_VV002_vvref2.pdf for the full report

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.02.15
V&V Edition	2
V&V Disposition and Status	OK
V&V Charge Time	12

Comments

Due to significant telemetry saturation, the effective exposure time is substantially less than the duration of the observation and varies from chip-to-chip. This is expected for bright sources. Charge time is the same as scheduled time. ONTIME calculation is based on CCD chip 7, where the zeroth order is located. ==== Zeroth order (and spectral arms) piled up. Standard data processing software did not correctly locate the zeroth order due to pileup. Manual intervention was used during this processing to input the correct sky coordinates (x=4117.79, y=4066.89) into the *src1a.fits file table. These corrected coordinates were determined using a software tool developed by CXC called findzero (currently in ISIS). The tool calculates the point of intersection of the readout streak and the meg arm. Note that these corrected coordinates of the zeroth order cannot be reproduced by running tgdetect on the data. ====
The data for this observation have been processed using the 'EDSER' sub-pixel event-repositioning algorithm of Li et al. (2004, ApJ, 610, 1204). Small-scale features should become sharper for sources near the aim point. The improvement will be less noticeable for off-axis sources where the size of the point-spread function is comparable to or larger than the size of an ACIS pixel. To take full advantage of the improvement, images should be binned on spatial scales smaller than the

size of an ACIS pixel. Note that, at present, the point-spread function has not been calibrated for data to which the EDSER algorithm has been applied. If dither was disabled for the observation, then the algorithm can introduce artificial aliasing effects on spatial scales smaller than a pixel. If you would prefer to use no sub-pixel adjustment or to apply a coordinate randomization, then use acis_process_events to reprocess the data with the parameter pix_adj=NONE or RANDOMIZE, respectively.

seq_num	401292	Sequence number
obs_id	13219	Observation id
title	Measuring the Spin of the Black Hole Cgynus X-1, Phase 2	Proposal
observer	Dr. Jeffrey McClintock	Principal investigator
object	Cyg X-1	Source name
dtycycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	299.590417	Observer's specified target RA [deg]
dec_targ	35.201667	Observer's specified target Dec [deg]
ra_nom	299.59385796281	Nominal RA [deg]
dec_nom	35.205589670112	Nominal Dec [deg]
roll_nom	22.601437863111	Nominal Roll [deg]
revision	3	Processing version of data
ontime	4519.7511941195	Sum of GTIs [s]
livetime	4418.9980388341	Livetime [s]
ontime4	10021.094498336	Sum of GTIs [s]
ontime5	8410.1429908276	Sum of GTIs [s]
ontime6	3433.8276447058	Sum of GTIs [s]
ontime7	4519.7511941195	Sum of GTIs [s]
ontime8	4563.9351583123	Sum of GTIs [s]
ontime9	9245.8281525373	Sum of GTIs [s]
l2events	3678806	Number of level 2 events