

V&V Summary Report

L2 ASCDS Version : 8.4.3

Observation 13097 - L2 Version 2
Chandra X-Ray Center

L2 Processing Date : Feb 7 2012

See axaff13097N002_VV001_vvref2.pdf for the full report

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.02.10
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	30.064801194668

Comments

Standard data processing software did not correctly locate the zeroth order. Manual intervention was used to input the correct sky coordinates (x=4217.080, y=4187.50) into the *src1a.fits file table. These corrected coordinates were determined using a software tool developed by CXC called findzero, which is expected to be released in CIAO (currently in ISIS). The tool calculates the point of intersection of the readout streak and the left spectral arm. The zeroth order source position determined by the standard pipeline processing using the tool tgdetect was not used in this processing. The newly determined zeroth order coordinates have been placed in the *src1a.fits file, replacing the coordinates determined by tgdetect. Note that these corrected coordinates of the zeroth order cannot be reproduced by running tgdetect on the data.

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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	790227	Sequence number
obs_id	13097	Observation id
title	AO-12 Calibration Observations of Mkn421	Proposal title
observer	Dr. CXC Calibration	Principal investigator
object	MKN421	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	166.113333	Observer's specified target RA [deg]
dec_targ	38.208806	Observer's specified target Dec [deg]
ra_nom	166.13498569188	Nominal RA [deg]
dec_nom	38.196442992923	Nominal Dec [deg]
roll_nom	151.14325917384	Nominal Roll [deg]
revision	2	Processing version of data
ontime	30064.801194668	Sum of GTIs [s]
livetime	28140.023581681	Livetime [s]
ontime4	30064.160154521	Sum of GTIs [s]
ontime5	30064.801194668	Sum of GTIs [s]
ontime6	30064.801194668	Sum of GTIs [s]
ontime7	30064.801194668	Sum of GTIs [s]
ontime8	30064.801194668	Sum of GTIs [s]
ontime9	30064.801194668	Sum of GTIs [s]
l2events	90939	Number of level 2 events

