

# V&V Summary Report

## L2 ASCDS Version : 10.2.1

Observation 16474 - L2 Version 2  
Chandra X-Ray Center

L2 Processing Date : Dec 10 2014

See axaff16474N002\_VV001\_vvref2.pdf for the full report

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2015.11.05
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	60.067701301932

## Comments

These data have been reprocessed with new aspect alignment calibration files that correct small mean offsets (up to 0.4 arcsecs) and improve overall astrometric accuracy. The new calibration was determined using data from the time period being reprocessed and was performed using cross-correlation of X-ray sources with radio and optical counterparts.

=====

Zeroth order piled up. The zeroth order sky position was determined using a software tool developed by CXC called findzero, which is available in CIAO as part of the tgdetect2 tool. The tool calculates the point of intersection of the readout streak on the ACIS CCD and the LEG dispersed spectral arm, rather than using a centroid position of the source. The findzero results are more accurate than source centroid in this case.

=====

Gain and CTI correction are not well calibrated on CCD\_ID 5 (ACIS-S1). Default order sorting can clip some regions, particularly longward of 30A (first order). User-specified custom processing parameters may be required in tg\_resolve\_events (osipfile=none, osort\_lo, osort\_hi ~0.5) though this can allow more zeroth order background at short wavelengths.

=====

Faint grating spectra can be seen in an image of bad events. This is probably due to pileup in the spectrum, causing migration to bad grades. This should be considered in analysis.

seq_num	790273	Sequence number
obs_id	16474	Observation id
title	AO-15 Calibration Observations of Mkn421	Proposal title
observer	Dr. Chandra Calibration	Principal investigator
object	MKN421	Source name
dtcycle	0	&#160
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	166.13978597893	Nominal RA [deg]
dec_nom	38.205742259859	Nominal Dec [deg]
roll_nom	178.16201906678	Nominal Roll [deg]
revision	2	Processing version of data
ontime	60067.701301932	Sum of GTIs [s]
livetime	57907.23500677	Livetime [s]
ontime5	60067.701301932	Sum of GTIs [s]
ontime6	60067.701301932	Sum of GTIs [s]
ontime7	60067.701301932	Sum of GTIs [s]
ontime8	60067.701301932	Sum of GTIs [s]
ontime9	60067.701301932	Sum of GTIs [s]
l2events	2811827	Number of level 2 events

