

V&V Summary Report

L2 ASCDS Version : 10.6.3

Observation 20722 - L2 Version 2
Chandra X-Ray Center

L2 Processing Date : Jun 20 2018

See [axaff20722N002_VV001_vvref2.pdf](#) for the full report

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2018.06.21
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	55.601701205254

Comments

Custom dither parameters.

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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 meg or 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.

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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.

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Special processing steps were taken to manually improve the proper-motion corrected positions of three of the guide stars used in this observation (stars with AGASC ids 394530152, 394546720, and 394527560). Each had an incomplete record of the proper motion in the star catalog (AGASC 1.6)

and had no proper motion corrections applied automatically by the aspect pipeline. The positions were fixed manually using the available data in AGASC 1.6 to ensure high quality absolute astrometry, and the corrected positions are now reasonable compared to the observed star positions.

seq_num	790320	Sequence number
obs_id	20722	Observation id
title	AO-19 Big Dither Observation of Mkn421	Proposal title
observer	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	166.12536266554	Nominal RA [deg]
dec_nom	38.225048083621	Nominal Dec [deg]
roll_nom	255.19680735629	Nominal Roll [deg]
revision	2	Processing version of data
ontime	55601.701205254	Sum of GTIs [s]
livetime	53601.864374412	Livetime [s]
ontime5	55601.701205254	Sum of GTIs [s]
ontime6	55601.701205254	Sum of GTIs [s]
ontime7	55601.701205254	Sum of GTIs [s]
ontime8	55601.701205254	Sum of GTIs [s]
ontime9	55601.701205254	Sum of GTIs [s]
l2events	831425	Number of level 2 events

