

V&V Summary Report

L2 ASCDS Version : 7.6.9

Observation 4148 - L2 Version 001
Chandra X-Ray Center

L2 Processing Date : Dec 8 2006

See [axaff04148N001_VV001_vvref2.pdf](#) for the full report

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2006.12.13
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	96.844

Comments

Standard data processing software did not correctly locate the zeroth order due to pileup. Manual intervention was used to input the correct sky coordinates (x=4003.59; y=4219.72 in sky coordinates; ra=11:04:27.319, dec=+38:12:31.88) into the *src1a.fits file. These corrected coordinates were determined using the software tool `finndzero.sl` in ISIS, an MIT software package for data analysis. The tool calculates the angle between the readout streak and the meg arm (preferred position), and the readout streak and the heg arm. The zeroth order source position determined by the standard pipeline processing using the tool `tgdetect` was not used in the extraction of the spectrum because it found a zeroth order position on the wings of the PSF due to the piled up profile. The *pha2.fits file has the extracted spectral data based on the corrected zeroth order position. Note that these corrected coordinates of the zeroth order cannot be reproduced by running `tgdetect` with the default parameters on the data.

Focal plane temperature is warmer than -118.7 C degrees during the first approximately 1.5 ksec of this observation. The ACIS spectral response calibration for the front-illuminated chips is less accurate at these

warmer

temperatures than it is at -119.7 C. The back-illuminated chips are not affected at the focal plane temperatures recorded for this observation. Users whose science objectives depend on the most accurate spectral response (i.e.: fitting line-rich spectra) may notice an effect. Users whose science objectives do not depend on the most accurate spectral response should not notice an effect.

An increase in count rate of about a factor of 2 occurs between 30 and 45 ksec into the observation. No evidence is seen that this increase is instrumental.

seq_num	700827
obs_id	4148
title	HIGH RESOLUTION SPECTROSCOPY OF A BLAZAR IN OUTBURST: JET ENVIRONMENT AND THE INTERGALACTIC MEDIUM
observer	Dr. Fabrizio Nicastro
object	MRK 421
dtcycle	0
cycle	P
ra_targ	166.11375
dec_targ	38.208833
ra_nom	166.09766991223
dec_nom	38.192017649108
roll_nom	48.657280517336
revision	2
ontime	96844.298350751
livedtime	91480.903656383
ontime4	96844.298350751
ontime5	96844.298350751
ontime6	96844.298350751
ontime7	96844.298350751
ontime8	96844.298350751
ontime9	96844.298350751
l2events	6636894

