

# V&V Summary Report

## L2 ASCDS Version : 8.4.4

Observation 9858 - L2 Version 2  
Chandra X-Ray Center

L2 Processing Date : May 16 2012

See axaff09858N002\_VV001\_vvref2.pdf for the full report

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.05.17
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	82.1881994

## Comments

Grating spectra are faintly visible in an image of bad-events, which means that the dispersed spectra are slightly piled.

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Source is extended with complex emission structure. There are several localized enhanced emission regions as well as at least one piled up emission region. The spectral extraction uses a zeroth order position determined with findzero as described below. This zeroth order position is near the center of the extended emission structure. The position does not exactly coincide with any specific enhanced emission feature. Users will want to determine if the zeroth order position used in this extraction is appropriate for their science, or whether they need to select another zeroth order position coincident with a specific emission region, then re-extract the spectrum.

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Standard data processing software did not correctly locate the zeroth order due to extended source emission and pileup. Manual intervention was used to input the correct sky coordinates (x=4101.15, y=4024.97) 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 meg 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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WARNING: there are no standard ciao tools for analysis of grating spectra from extended sources. The shape of an emission 'line' will be the shape of the zero order spatial structure convolved with the instrumental LSF. Grating extractions can be used, but need to be combined with custom spatial-spectral analysis, since wavelength is multi-valued at any particular diffraction angle.

seq_num	400927	Sequence number
obs_id	9858	Observation id
title	HETG Observations of the Accretion Disk Corona Source X1822-371	Pr
observer	Prof Claude Canizares	Principal investigator
object	X1822-371	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	276.444583	Observer's specified target RA [deg]
dec_targ	-37.10525	Observer's specified target Dec [deg]
ra_nom	276.44591623665	Nominal RA [deg]
dec_nom	-37.095354283262	Nominal Dec [deg]
roll_nom	69.157434963142	Nominal Roll [deg]
revision	2	Processing version of data
ontime	82188.19942373	Sum of GTIs [s]
livetime	80250.849503941	Livetime [s]
ontime4	82188.19942373	Sum of GTIs [s]
ontime5	82188.19942373	Sum of GTIs [s]
ontime6	82188.19942373	Sum of GTIs [s]
ontime7	82188.19942373	Sum of GTIs [s]
ontime8	82186.458393633	Sum of GTIs [s]
ontime9	82182.976313293	Sum of GTIs [s]
l2events	1264391	Number of level 2 events

