

# V&V Summary Report

## L2 ASCDS Version : 10

Observation 14654 - L2 Version 3  
Chandra X-Ray Center

L2 Processing Date : Dec 4 2014

See axaff14654N003\_VV002\_vvref2.pdf for the full report

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2015.05.01
V&V Edition	2
V&V Disposition and Status	OK
V&V Charge Time	47.057600701213

## Comments

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 dispersed spectral arm, rather than using a centroid position of the source. The findzero results are more accurate than source centroid in this case. ===

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. --- 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. === Only 4 CCD chips were used in this observation. The softest X-ray portion of the dispersed spectrum was not on an active chip.

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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.

seq_num	401487	Sequence number
obs_id	14654	Observation id
title	X-raying the Stellar Wind and Atmosphere of Vela X-1	Proposal titl
observer	Prof. Masao Sako	Principal investigator
object	Vela X-1	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	135.52875	Observer's specified target RA [deg]
dec_targ	-40.554694	Observer's specified target Dec [deg]
ra_nom	135.52699284383	Nominal RA [deg]
dec_nom	-40.557412577912	Nominal Dec [deg]
roll_nom	186.39874629833	Nominal Roll [deg]
revision	3	Processing version of data
ontime	47057.600701213	Sum of GTIs [s]
livetime	45880.759227039	Livetime [s]
ontime5	47057.600701213	Sum of GTIs [s]
ontime6	47057.600701213	Sum of GTIs [s]
ontime7	47057.600701213	Sum of GTIs [s]
ontime8	47057.600701213	Sum of GTIs [s]
l2events	450610	Number of level 2 events

