

# V&V Summary Report

## L2 ASCDS Version : 8.4.5

Observation 1800 - L2 Version 6  
Chandra X-Ray Center

L2 Processing Date : Aug 31 2012

See axaff01800N003\_VV001\_vvref2.pdf for the full report

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.09.12
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	19.863

## Comments

Source is placed about 12 arcmin off-axis toward the corner of the detector. Due to the off-axis position, the negative spectral order is truncated at about 30 A and the positive spectral order extends to about 115 A.

===

The point spread function is significantly extended by this off-axis position.

Standard software processing technique using the tool `tgdetect` failed to determine an accurate position for the zeroth order for this observation. The source is extended and asymmetric. The processing software defaulted to the coordinates supplied by the user for the position of the zeroth order for the grating spectral extraction.

===

Off-axis source gratings observation: 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. WARNING: The user will need to deconvolve the PSF of the off-axis source to get an accurate determination of the zeroth order position, then use

software tools such as CIAO to specify the coordinates of the zeroth order before running the tools to resolve the dispersed events. The spectral data supplied in this processing are only energy-calibrated for the results of tgdetect, which uses the user-supplied coordinates for the zeroth order position.

seq_num	390018	Sequence number
obs_id	1800	Observation id
title	GRATINGS CALIBRATION OBSERVATIONS OF PKS2155-304	Proposal title
observer	Dr. CXC Calibration	Principal investigator
object	PKS2155-304	Source name
ra_targ	329.716667	Observer's specified target RA [deg]
dec_targ	-30.225556	Observer's specified target Dec [deg]
ra_nom	329.52126693271	Nominal RA [deg]
dec_nom	-30.324957453	Nominal Dec [deg]
roll_nom	29.854841550756	Nominal Roll [deg]
revision	6	Processing version of data
ontime	19869.881991237	[s]
livetime	19783.852309582	Ontime multiplied by DTCOR
l2events	463755	Number of level 2 events

