

V&V Summary Report

L2 ASCDS Version : 7.6.8.1

Observation 2743 - L2 Version 001
Chandra X-Ray Center

L2 Processing Date : Sep 26 2006

See [axaff02743N001_VV001_vvref2.pdf](#) for the full report

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2006.09.28
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	5.231

Comments

Zeroth order piled up. Standard data processing software did not correctly locate the zeroth order due to pileup. Manual intervention was used in the tool `tg_create_mask` to input the correct sky coordinates: `x=4167.81, y=4093.48`, using the user-supplied coordinate option (see CIAO description of this tool). The zeroth order source position determined by the software in the tool `tgdetect` were not used in this processing, although the `*scria.fits` file contains the erroneous coordinates determined by `tgdetect`. The `*evt1a.fits` file has the corrected coordinates, which were used to produce the extracted spectral data.

Charge time for this ObsId remains at original value of 5.231 ks, although with the current processing the charge time would have been 2.480 ksec due to telemetry saturation and dropped exposures on some chips.

The temperature-dependent gain calibration is applied to this graded mode observation, although the gain is not well-calibrated for front-illuminated chips with no CTI correction applied. Graded mode observations do not have a CTI correction applied. The result is that the order sorting algorithm is not as precise as it is in other modes.

Charge time:

New charge time is less than existing charge time used in previously distributed version

NEW CHARGE TIME = 2.480311 ks, 1 Obis

EXISTING CHARGE TIME = 5.231000 ks, 1 Obis.

Variation in Chips > 15% threshold.

Low Chip 6, ONTIME=1602.712447 seconds

High Chip 4, ONTIME=4643.672241 seconds

Chip 8, ONTIME=1949.963874 seconds is less than 80% of scheduled time=5000.000000 seconds

Chip 7, ONTIME=2480.310934 seconds is less than 80% of scheduled time=5000.000000 seconds

Chip 6, ONTIME=1602.712447 seconds is less than 80% of scheduled time=5000.000000 seconds

ONTIME of 2480.3109337986 seconds is less than 85% of expected scheduled time of 5000 seconds

seq_num	400223
obs_id	2743
title	PHASE RESOLVED HIGH ENERGY RESOLUTION SPECTROSCOPY OF THE BLACK HOLE X-RAY BAINARY CYGNUS X-1
observer	Prof. Shuang Nan Zhang
object	CYG X-1
dtcycle	0
cycle	P
ra_targ	299.590417
dec_targ	35.201611
ra_nom	299.59176268742
dec_nom	35.211250366095
roll_nom	93.367001896581
revision	3
ontime	2480.3109337986
lifetime	2421.8447522501
ontime4	4643.6722413301
ontime5	4490.4653247297
ontime6	1602.7124467194
ontime7	2480.3109337986
ontime8	1949.9638735652
ontime9	4236.2780794799
l2events	1589199

