

V&V Summary Report

L2 ASCDS Version : 8.3.2.1

Observation 1 - L2 Version 6
Chandra X-Ray Center

L2 Processing Date : Sep 20 2010

See axaff00001N003_VV001_vvref2.pdf for the full report

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2010.09.22
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	19.318

Comments

This observation was taken with the spacecraft pointed at a single position and the image of Jupiter allowed to trail across the detector. In order to analyze the data, the events need to be put back in the appropriate position based on the ephemeris of Jupiter at that time and the time stamp of each event. The Chandra data processing system has a tool for restoring the events to the their correct position. The tool is called sso_freeze.
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The focal plane temperature is approximately -110 C during this observation. This reprocessing of the data applies no CTI correction because none is available for this temperature at present.

The ACIS CTI correction has not been calibrated at this temperature, because it was early in the mission, and ACIS had not yet been lowered to the standard -119.7 C. Both front and back illuminated chips are affected. However a T_GAIN correction has been applied to the BI chips (ACIS-5 and ACIS-7) data included here.

The ACIS spectral response calibration is less accurate at these warmer temperatures than it is at -119.7 C. Users whose science objectives depend on the most accurate spectral response (ie: 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.

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A spatial region of the original bias map for CCD = 7 suffered from anomalously high data values. Pixels in the event data that were bias-corrected by one of the original affected bias pixels may have an apparent energy shift. While the change in energy is expected to be small (~20 eV), it depends on many parameters that have not yet been fully explored for this bias anomaly. The bias map for CCD = 7 has been reconstructed for this processing to remove this anomaly using scaled data from a comparable bias map from another observation. The pixels affected by the anomaly are bounded by sky
coords: (24.77899,8.72290), (24.76503,8.75485), (24.68898,8.72236), (24.70295,8.69041)

seq_num	100000	Sequence number
obs_id	1	Observation id
title	ACIS OBSERVATION OF JUPITER AND THE GALILEAN SATELLITES	Proposal t
observer	Prof. Gordon Garmire	Principal investigator
object	JUPITER	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	24.7263	Observer's specified target RA
dec_targ	8.72658	Observer's specified target Dec
ra_nom	24.739600730332	Nominal RA
dec_nom	8.7005476424575	Nominal Dec
roll_nom	293.3434549387	Nominal Roll
revision	6	Processing version of data
ontime	19315.200017989	Sum of GTIs [s]
lvetime	19070.619325144	Livetime [s]
ontime0	19315.195760675	Sum of GTIs [s]
ontime1	19315.154720679	Sum of GTIs [s]
ontime2	19315.113680676	Sum of GTIs [s]
ontime3	19315.07264068	Sum of GTIs [s]
ontime7	19315.200017989	Sum of GTIs [s]
l2events	147026	Number of level 2 events

