SWIFT-XRT-CALDB-08
Release Date: 24th April 2006
Prepared by Joe Hill, Lorella Angelini
Date Revised: 24th April 2006
Revision 1.0
Pages Changed: first release

SWIFT-XRT-CALDB-08:
Windowed timing offset columns

1. Component file

File name	Valid date	Release data	CALDB Version
swxwtcolum20010101v001.fits	1-Jan-2001	2006-04-24	001

2. Scope of this document

This document describes the content of the XRT calibration file that stores the Windowed Timing (WT) offset columns. The contents of this file are used in the ground software to correct the RAWX co-ordinate of the telemetered pixels and to mask out the correct bad columns.

3. Scientific impact of this update

The RAWX coordinates of the Windowed Timing (WT) mode is offset by 1 pixel compared with the Photon Counting (PC) mode. This offset was unknown until bad columns were loaded and masked in the on-board bad pixel map and bad pixel row.

The RAW coordinates were masked on board accounting for the two different coordinate systems, one for the WT and one for the PC mode. Whereas all the derived calibrations on the ground use a single coordinate system with the result that the ground software was masking the incorrect column in the WT mode and offset by 1 from the column masked on board.

This calibration file contains the appropriate pixel offset to align the bad columns in PC mode to the bad columns in the WT for each WT configuration and WT waveform defined and recorded in the telemetry. This re-alignment is done in the ground software that compares the WT configuration in the data with the configurations listed in this calibration file and corrects the RAWX value for each of the pixels.

This file will be updated for any new WT configuration and waveform loaded on board.