



SWCX

November 4, 2014

Abstract

swcx uses the spectral fitting results from Xspec and model SWCX detector maps to create model SWCX contamination maps for a given observation.

1 Instruments/Modes

Instrument	Mode
EPIC	Imaging

2 Use

pipeline processing	no
interactive analysis	yes

3 Description

swcx uses the spectral fitting results from Xspec and model SWCX detector maps to create model SWCX contamination maps for a given observation.

Warning and requirements: *swcx* is part of the *esas* package, integrated into SAS, but (still) limited to work within the *esas* data reduction scheme. This is specially true wrt input files structure and names. In particular, *swcx* assumes that another task from the package, *mos-spectra* / *pn-spectra*, and *mos_back* / *pn_back*, have been successfully run for the mos / pn exposures to be used, and that spectral fitting has been done.

4 Parameters

This section documents the parameters recognized by this task (if any).

Parameter	Mand	Type	Default	Constraints
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prefix	yes	string		
Detector and exposure identifiers (eg. "1S001") for the MOS exposure S001) to be processed.				
caldb	yes	string		
Directory containing all the ESAS specific calibration files				
ccd[1-7]	yes	string	1	
Flag to include (1) or not (0) a CCD.				
elow	yes	int	400	
The low energy for the band in eV				
ehigh	yes	int	1300	
The high energy for the band in eV				
elinelist	yes		1 2	
Energies of SWCX lines to be included				
gnormlist	yes		0.1 0.03	
Gaussian normalizations from Xspec				
objrmf	yes	string		
RMF for the region				
objarf	yes	string		
ARF for the region				
objspec	yes	string		
Spectrum for the region				
clobber	no	boolean	yes	T/F
Clobber existing files?				

5 Input Files

The filtered event files, products from running *mos-filter* and *mos-back* or *pn-filter* and *pn-back*, following the particular nomenclature used in the esas package, eg.: *mos1S001-clean.fits* or *pnS003-clean.fits*.

6 Output Files

Where MOS data are processed:

mosprefix-swcx-im-det-elow-ehigh.fits – The SWCX image in detector coordinates.

Where PN data are processed:

pnprefix-swcx-im-det-elow-ehigh.fits – The SWCX image in detector coordinates.



7 Algorithm

8 Comments

References