SWCX

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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

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:
`mos`*prefix*`-swcx-im-det-`*elow*-*ehigh*`.fits` – The SWCX image in detector coordinates.
Where PN data are processed:
`pn`*prefix*`-swcx-im-det-`*elow*-*ehigh*`.fits` – The SWCX image in detector coordinates.

7 Algorithm

8 Comments

References