



## SWCX

May 4, 2016

**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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<b>prefix</b>	yes	string		
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Detector and exposure identifiers (eg. "1S001") for the MOS exposure S001) to be processed.

<b>caldb</b>	yes	string		
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Directory containing all the ESAS specific calibration files

<b>ccd[1-7]</b>	yes	string	1	
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Flag to include (1) or not (0) a CCD.

<b>elow</b>	yes	int	400	
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The low energy for the band in eV

<b>ehigh</b>	yes	int	1300	
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The high energy for the band in eV

<b>elinelist</b>	yes		1 2	
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Energies of SWCX lines to be included

<b>gnormlist</b>	yes		0.1 0.03	
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Gaussian normalizations from Xspec

<b>objrmf</b>	yes	string		
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RMF for the region

<b>objarf</b>	yes	string		
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ARF for the region

<b>objspec</b>	yes	string		
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Spectrum for the region

<b>clobber</b>	no	boolean	yes	T/F
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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*.

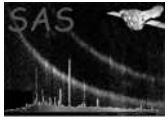
## 6 Output Files

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