sp_partial

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Abstract

This task uses information from the spectral fit of a limited region of the detector and from the full field-of-view to scale the fitted SP normalization of the limited region to be appropriate for the full FOV. This is useful for the case where bright diffuse emission in part of the FOV may be affecting the SP spectral fit, many clusters of galaxies for example.

1 Instruments/Modes

Instrument	Mode
EPIC	Imaging

2 Use

pipeline processing	no
interactive analysis	yes

3 Description

sp_partial uses information from the spectral fit of a limited region of the detector and from the full field-of-view to scale the fitted SP normalization of the limited region to be appropriate for the full FOV. This is useful for the case where bright diffuse emission in part of the FOV may be affecting the SP spectral fit, many clusters of galaxies for example.

Warning and requirements: *sp_partial* is part of the *esas* package integrated into SAS, but it is limited to work within the *esas* data reduction scheme. This is specially true wrt the structure and names of the input files. In particular, *sp_partial* assumes that other tasks from the package, *mos-spectra* or *pn-spectra* have been successfully run twice, once for the full field of view, once for a limited source-free region. This requires a number of files to be renamed or else they will be overwritten (the spectra and soft proton template files).

4 Parameters

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

Parameter	Mand	Type	Default	Constraints
caldb	yes	string	1S001	

Directory containing the ESAS calibration files.

detector	yes	int	1	

Detector to be processed 1-MOS1, 2-MOS2, and 3-PN.

fullimage	yes	string	mos1S001-sp-ps.fits	

Image from the full field of view.

fullspec	yes	string	mos1S001-obj-ps.pi	

Spectrum from the full field of view.

regionimage	yes	string	mos1S001-sp-nps.fits	

Image from the selected region.

regionspec	yes	string	mos1S001-obj-nps.pi	

Spectrum from the selected region.

rnorm	yes	real	0.05	

Xspec normalization of the SP component.

5 Input Files

The detector map, product from running `mos_spectra`, following the particular nomenclature used in the esas package.

6 Output Files

Scaled value for the SP normalization.

7 Algorithm

8 Comments

References