rot_det_sky

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Abstract

This task uses information from the previously created count image in sky coordinates to rotate the detector coordinate model particle background images produced by *mos_back* and model soft proton images produced by *proton* into images in sky coordinates. *rot_det_sky* is called by the perl script *rot-im-det-sky* which obtains the DETX,DETY and X,Y reference coordinates.

1 Instruments/Modes

Instrument	Mode
EPIC	Imaging

2 Use

pipeline processing	no
interactive analysis	yes

3 Description

rot_det_sky uses information from the previously created count image in sky coordinates to rotate the detector coordinate model particle background images produced by *mos_back* and model soft proton images produced by *proton* into images in sky coordinates. *rot_det_sky* is called by the perl script *rot-im-det-sky* which obtains the DETX,DETY and X,Y reference coordinates.

Warning and requirements: *rot_det_sky* 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, *rot_det_sky* assumes that other tasks from the package, *mos-spectra/pn-spectra* and *mos_back/pn_back* have been successfully run for the recasting of the particle background, as well as *proton* for the recasting of the soft proton background.

4 Parameters

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

Parameter	Mand	Type	Default	Constraints

mode	yes	int	1	

Selection on particle (1), soft proton (2), SWCX (3) backgrounds, (4) MASK, (5) MASKIT.

prefix	yes	string	1S001	

Detector and exposure identifiers (eg. "1S001") for the MOS exposure S001) to be processed.

elow	yes	int	350	

The low energy for the band in eV

ehigh	yes	int	800	

The high energy for the band in eV

detx	yes	int	0	

The DETX reference pixel location

dety	yes	int	0	

The DETY reference pixel location

skyx	yes	int	0	

The X location of the reference pixel

skyy	yes	int	0	

The Y location of the reference pixel location

maskfile	yes	string		

The file name for an image to provide additional masking if desired. If left blank then there will be no additional masking. The mask images must be the same size and projection of the other images.

clobber	no	boolean	yes	T/F

Clobber existing files?

5 Input Files

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

6 Output Files

- *prefix*-`back-im-sky`-*elow*-*ehigh*`.fits` – The model particle background count image in sky coordinates.

- *prefix*-`prot-im-sky`-*elow*-*ehigh*`.fits` – The model soft proton background count image in sky coordinates.

7 Algorithm

8 Comments

References