rot-im-det-sky

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Abstract

This task controls the recasting of images from detector coordinates into sky coordinates. It is used to reproject both the model particle background and model soft proton images. It extracts the central pixel values and coordinates from a template image and uses a call to *esky2det* to determine the detector coordinates for that location. *rot-im-det-sky* the calls the task *rot_det_sky* to do the reprojection.

1 Instruments/Modes

Instrument	Mode
EPIC	Imaging

2 Use

pipeline processing	no
interactive analysis	yes

3 Description

rot-im-det-sky controls the recasting of images from detector coordinates into sky coordinates. It is used to reproject both the model particle background and model soft proton images. It extracts the central pixel values and coordinates from a template image and uses a call to *esky2det* to determine the detector coordinates for that location. *rot-im-det-sky* the calls the task *rot_det_sky* to do the reprojection.

Warning and requirements: *rot-im-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 if the input files. In particular, `rot-im-det-sky` assumes that other tasks from the package, *mos-spectra* and *mos_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
prefix	yes	string	1S001	

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

mask	yes	string	none	

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.

elow	yes	int	400	

The low energy for the band in eV

ehigh	yes	int	1250	

The high energy for the band in eV

mode	yes	int	1	

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

clobber	no	boolean	yes	T/F

Clobber existing files?

5 Input Files

6 Output Files

- mode=1 - *prefix*-`back-im-sky-`*elow*-*ehigh*`.fits` – The model particle background count image in sky coordinates.

- mode=2 - *prefix*-`prot-im-sky-`*elow*-*ehigh*`.fits` – The model soft proton background count image in sky coordinates.

- mode=3 - *prefix*-`swcx-im-sky-`*elow*-*ehigh*`.fits` – The model SWCX background count image in sky coordinates.

7 Algorithm

8 Comments

References