emosaic_prep

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Abstract

emosaic_prep is a task to separate processed calibrated event files (as output from epproc and emproc) for EPIC PN and MOS observations in EPIC Mosaic mode into several pseudo-exposures corresponding to the different pointings of the mosaic observation.

1   Instruments/Modes

Instrument	Mode
EPIC	Imaging

2   Use

pipeline processing	no
interactive analysis	yes

3   Description

emosaic_prep is a task to separate processed calibrated event files (as output from epproc and emproc) for EPIC PN and MOS observations in EPIC Mosaic mode into several pseudo-exposures corresponding to the different pointings of the mosaic observation.

The corresponding calibrated event lists are separated per pointing using the information contained in the ODF Attitude History File. Directories for each pointing are created directly above the working directory with fix names ¡my-working-dir¿/prep_mosaic_001, ¡my-working-dir¿/prep_mosaic_002, ... In each of the directories a reduced calibrated event list will be located, containing only the events corresponding to that pointing. The nomenclature of those files is $RRRR\_OOOOOOOOOOOO\_E¡inst¿\_EEEE\_$ImagingEvts_P¡pos¿.ds with RRRR = revolution, OOO... for observation ID, ¡inst¿ more EPN, EMOS1 or EMOS2 and ¡pos¿ for position of the pointing in the sequence. The calibrated event files get pseudo-exposures ID, so that the processing software (see emosaicproc) can handle them as separated exposures. By default they start by 11 counting upwards (controlled by parameter *pseudoexpid.*.

GTI cuts can be applied to any of the original full event files.

4 Parameters

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

Parameter	Mand	Type	Default	Constraints

pnevtfile	no	dataset		

PN event file corresponding to the whole multi-pointing ODF, as derived with `epproc`

pngtifile	no	dataset		

Eventual GTI file applying to PN data

mos1evtfile	no	dataset		

MOS1 event file corresponding to the whole multi-pointing ODF, as derived with `emproc`

mos1gtifile	no	dataset		

Eventual GTI file applying to MOS1 data

mos2evtfile	no	dataset		

MOS2 event file corresponding to the whole multi-pointing ODF, as derived with `emproc`

mos2gtifile	no	dataset		

Eventual GTI file applying to PN data

pseudoexpid	no	int	10	

Basis for giving every pointing derived pseudo-exposure a pseudo-exposure ID.

atthkfile	yes	dataset		

`atthkgen` output file (eg. *ATttHK.ds)

5 Errors

This section documents warnings and errors generated by this task (if any). Note that warnings and errors can also be generated in the SAS infrastructure libraries, in which case they would not be documented here. Refer to the index of all errors and warnings available in the HTML version of the SAS documentation.

label *(error)*
        explanation

label *(warning)*
        explanantion
        corrective action: this is the corrective action

6 Input Files

1. EPIC MOSAIC mode event list per instrument (as obtained from SAS tasks `emproc` and `epproc` or from their incarnations in the official PPS).

2. GTI files

7 Output Files

The output is located in different directories, *prep_mosaic_xxx*, with *xxx* running from 001 to the maximum of pointings allowed within one observation (≈ 070). In each directory, an event file per EPIC instrument used is created containing the events corresponding to the given pointing in the sequence. On top of that, several links to the input event files as well as to SAS summary file and attitude information file are created.

8 Algorithm

9 Comments

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References