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AHELP for CIAO 3.4

hrc_build_badpix

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Synopsis

Create observation−specific bad pixel file for HRC

Syntax

```
hrc_build_badpix infile outfile obsfile degapfile [cfu1] [cfu2] [cfv1]
[cfv1] [logfile] [clobber] [verbose]
```

Description

hrc_build_badpix generates an observation−specific HRC bad pixel file by converting bad pixel regions in raw coordinates (typically obtained from a CALDB file) to chip coordinates, including only those time−dependent bad pixels which fall within the time range of the observation in question.

hrc_build_badpix is typically run as part of standard processing, but users may wish to re−run it if they identify new bad pixels not contained in the CALDB bad pixel list. Users should also run this tool if they have run hrc_process_events with a different degap solution from that used in standard processing, to insure consistency in the degap solution applied in hrc_process_events and hrc_build_badpix.

Example 1

```
hrc_build_badpix infile=CALDB outfile=hrcf06460_bpix1.fits
obsfile=hrcf06460_obs.par
degapfile=CALDB clobber=yes verbose=1
```

Generate bad pixel file for OBSID 6460 using standard CALDB input for bad pixel list and degap solution. The observation parameter file hrcf06460_obs.par is obtained by running the command

dmmakepar infile=hrcf06460N001_evt2.fits outfile=hrcf06460_obs.par

Example 2

```
hrc_build_badpix infile=my_badpix.fits outfile=hrcf06460_bpix1.fits
obsfile=hrcf06460_obs.par degapfile=CALDB clobber=yes verbose=1
```

Generate bad pixel file for OBSID 6460 using a user−specific bad pixel list.

Example 3

```
hrc_build_badpix infile=my_badpix.fits outfile=hrcf06460_bpix1.fits
obsfile=hrcf06460_obs.par degapfile=hrciD1999−07−22gaplookupN0001.fits
clobber=yes verbose=1
```

Generate bad pixel file for OBSID 6460 using a user−specific bad pixel list and degap corrections file. The user should verify that this degap solution is the same as that used in hrc_process_events.

Parameters

name	type	ftype	def	min	max	reqd
infile	file	ARD	CALDB			yes
outfile	file	output				yes
obsfile	file	input				yes
degapfile	file	ARD	CALDB			no
cfu1	float		1.0			
cfu2	float		0.0			
cfv1	float		1.0			
cfv2	float		0.0			
logfile	file	output	STDOUT			
clobber	boolean		no			
verbose	integer		0	0	5	

Detailed Parameter Descriptions

Parameter=infile (`file required filetype=ARD default=CALDB`)

HRC analysis reference bad pixel file.

FITS Binary Table file containing a list of rectangular pixel regions that describe bad or hot pixel regions. The file also contains temporal and status information on the bad pixel regions.

Parameter=outfile (file required filetype=output)

Output observation−specific bad pixel file.

FITS file containing bad pixel regions which apply to the observation interval specified in the obs.par file.

Parameter=obsfile (file required filetype=input)

Observation parameters file.

Parameter file containing information needed for processing of the bad pixel file. It may be generated from any FITS file whose header contains the TSTART, TSTOP, and DETNAM keywords for the observation, using DMMAKEPAR.

Parameter=degapfile (file not required filetype=ARD default=CALDB)

HRC degap correction factor table.

FITS Binary Table containing HRC degap corrections needed to convert the raw event positions into chip positions. A value of 'NONE' indicates that the values of cfu1, cfv1 are used for linear and cfu2,cfv2 are used for quadratic correction factors. These coefficients represent an early attempt at degap corrections and their use is discouraged if accurate, full−field image reconstruction is desired.

Parameter=cfu1 (float default=1.0)

Linear coarse u axis correction factor.

Floating point value used for linear degap corrections for the u axis when a degap file is not provided (degapfile = "NONE").

Parameter=cfu2 (float default=0.0)

Quadratic coarse u axis correction factor.

Floating point value used for quadratic degap corrections for the u axis when a degap file is not provided (degapfile = "NONE").

Parameter=cfv1 (float default=1.0)

Linear coarse v axis correction factor.

Floating point value used for linear degap corrections for the v axis when a degap file is not provided (degapfile = "NONE").

Parameter=cfv2 (float default=0.0)

Quadratic coarse v axis correction factor.

Floating point value used for quadratic degap corrections for the v axis when a degap file is not provided (degapfile = "NONE").

Parameter=logfile (file filetype=output default=STDOUT)

Output file to log tool processing.

Name of the output logfile that will be generated if the verbose parameter is set between 1−5. A value of 'STDOUT' indicates that the log text should be directed to standard output (typically, the user's screen).

Parameter=clobber (boolean default=no)

Flag to overwrite an existing output file.

Boolean flag that indicates whether the tool should overwrite an existing file with the same name when it attempts to create the output file. A value of 'yes' will cause the code to overwrite an existing file.

Parameter=verbose (integer default=0 min=0 max=5)

Level of output logging to perform.

An integer value between 0 and 5 inclusive. A value of zero indicates that no debug information should be output while a value of five indicates that as much information as possible should be logged.

See Also

chandra
level
tools
hrc_dtfstats, hrc_process_events

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