AHELP for CIAO 3.4 **tgidselectsrc** Context: tools

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Synopsis

Filter an input source list based upon a SNR threshold.

Syntax

```
tgidselectsrc infile outfile snr_ratio_limit [setsrcid] [clobber]
[verbose]
```

Description

Filter an input source list based upon a SNR ratio threshold. `tgidselectsrc' filters the input file based upon a comparison of the ratio of each sources SNR to the first sources SNR with a threshold input by the user. It is expected that the source file is sorted on SNR, so that the source with the highest SNR is the first. The format of the output file is defined by that of the input file. In addition, if the input file had a TG_SRCID column, or if the user sets setsrcid to yes, then source ids will be calculated for each source and written to the output file. If the input file had a TG_SRCID column the source ids will be reset even if the user set setsrcid to no.

The input file must contain a column labelled SNR. The output file name will have an extension name of SRCLIST.

This tool is called by tgdetect and is not normally run independently.

To detect multiple sources with tgdetect, the snr_ratio_limit must be set below 1.0.

If there are any errors the task will return −1 and print the errors that occurred to the screen. Otherwise zero will be returned.

ALGORITHMS:

SNR Ratio filtering:

```
if SNR[i]/SNR[1] >= SNR ratio limit then the source[i] is good
```

This is done for all sources, 1 −> N. Obviously, the first source will always pass, as the maximum allowed value

of the SNR limit is 1.0.

Example

```
tgidselectsrc $INDATA/tgselectsrc_src.fits . 0.95 setsrcid=yes
clobber=yes verbose=4
```

Process the sources in tgselectsrc_src.fits and use the infile as template for outfile name, set the limit to find sources down to half the SNR of the brightest source.

Parameters

name	type	ftype	def	min	max	reqd	autoname
infile	file	input				yes	
outfile	file	output				yes	yes
snr_ratio_limit	real		1.0	0.0	1.0	yes	
setsrcid	boolean		yes				
clobber	boolean		no				
verbose	integer		0				

Detailed Parameter Descriptions

Parameter=infile `(file required filetype=input default=)`

Name of input source table.

Parameter=outfile `(file required filetype=output default= autoname=yes)`

Name of output filtered source file

Parameter=snr_ratio_limit `(real required default=1.0 min=0.0 max=1.0)`

Value of SNR ratio to use as lower limit for sources output.

Parameter=setsrcid `(boolean default=yes)`

Flag to specify whether to assign sequential integer source identifiers to sources selected. (primarily for source–matching between observation intervals by tgdetect).

Parameter=clobber `(boolean default=no)`

Overwrite existing output file, or don't.

Parameter=verbose `(integer default=0)`

Control amount of diagnostic chatter from none (0) to most (5).

CHANGES IN CIAO 3.3

Parameter File

The kernel parameter has been removed.

Bugs

See the bugs page for this tool on the CIAO website for an up−to−date listing of known bugs.

See Also

tools

celldetect, dmtype2split, tg_create_mask, tg_resolve_events, tgdetect, tgextract, tgmatchsrc, vtpdetect, wavdetect, wrecon, wtransform

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Parameter=verbose (integer default=0)