NAME

throttle - limit the number of rays in a ray stream

DESCRIPTION

throttle reads a ray stream in **bpipe** format and writes a specified number of rays to its output stream. In order to prevent UNIX pipe errors, it reads all of the rays in the input stream.

The number of rays to output may be drawn from a Poisson distribution of a given mean, or may be specified directly.

It writes out a **bpipe** formatted ray stream.

PARAMETERS

throttle uses an IRAF-compatible parameter interface.

input *file*

Input ray stream. If the filename is the string `stdin`, it reads **bpipe** format rays from the standard input stream.

output *file*

Output ray stream. If the filename is the string `stdout`, it writes **bpipe** format rays to the standard output stream.

n *unsigned int*

The number of rays to output.

poisson *boolean*

If true, the number of rays specified by the parameter **n** is modified to include Poisson noise. The number of rays to output is drawn from a Poisson distribution with a mean value given by the parameter **n**.

seed1 *unsigned int*

The first seed for the random number generator. (Needed if **poisson** is true.)

seed2 *unsigned int*

The second seed for the random number generator. (Needed if **poisson** is true.)

block *unsigned int*

The block in the random number sequence at which to start using random numbers. (There are 1,048,576 blocks of 1,073,741,824 random numbers each). (Needed if **poisson** is true.)

abort *string*

This parameter can be used to cause the program to exit with error depending upon the relationship between the number of rays requested and the number input. It can have the following values:

`lt`

Abort if the input number of rays is less than the number requested.

`gt`

Abort if the input number of rays is greater than the number requested.

`no, none`

Don't do anything special.

version *boolean*

Print out **throttle**'s version and exit.

help *boolean*

Print out help and exit.

debug *list*

A list of debug flags. None are presently defined.

COPYRIGHT & LICENSE

Copyright 2006 Smithsonian Astrophysical Observatory

This software is released under the GNU General Public License. You may find a copy at

```
http://www.fsf.org/copyleft/gpl.html
```

AUTHOR

D. Jerius <djerius@cfa.harvard.edu>