NAME

aperture – generalized aperture program

SYNOPSIS

aperture *parameters*

DESCRIPTION

aperture is a generalized aperture program designed to simulate the effects on the incident ray stream of apertures in physical obstructions (such as the X–ray and thermal baffles). It can handle a wide variety of aperture shapes, and has provisions to allow alteration of the rays by the apertures. The philosophy behind **aperture** is that a geometrically complicated aperture may be modeled by a combination of geometrically simpler apertures. Rather than modeling each complex aperture with a separate program, if a flexible means of specifying the combinations of simple apertures were devised, a single program could model a wide range of shapes.

For more information, see the reference manual.

ARGUMENTS

aperture uses an IRAF-compatible parameter interface.

The following parameters are available:

aperture

The filename of the **lua** program which defines the aperture.

override

Lua code that will be made available to the **Lua** definition program as the function *override()*. This can either by actual code, for example

```
aperture override='energy=1.49; shell=3'
```

or it may be the name of a file containing the **Lua** code. In the latter, the first character should be the @ character:

```
aperture override=@code.lua
```

input

The name of the input ray stream. If it is the string stdin, **aperture** will read from the standard input stream.

output

The name of the output ray stream. If it is the string stdout, **aperture** will write to the standard output stream.

loop

A Boolean variable indicating that rays that have been redirected by an assembly should be checked against that assembly first, rather than being checked against the next assembly.

statfname

The filename to output the accumulated statistics of the apertures. See "OUTPUT STATISTICS" for more information

help

Print some documentation and exit.

version

Print the version and exit.

OUTPUT STATISTICS

The output file is an RDB table containing a column for the name of the aperture and columns for all possible outcome of the interaction of the ray with the aperture. The prefix n and w (for example nblocked and wblocked) stands for the number and weight respectively.

COPYRIGHT & LICENSE

−−8<−−8<−−8<−−8<−−

−−>8−−>8−−>8−−>8−−

VERSION

This documents version 2.0.1 of **genphot**.

AUTHORS

Diab Jerius <djerius@cfa.harvard.edu>

Dan Nguyen

Ivan Stern

David Grumm