roughtweak May97 ing

NAME

roughtweak -- find telescope tweak parameters from an image taken WITHOUT a mask

USAGE

roughtweak image catfile setfile holesize

PARAMETERS

image

Name of the (windowed) image taken WITHOUT a mask.

catfile

Name of the LEXT catalogue file.

setfile

Name of the LEXT.SET file.

holesize

The diameter of the fiducial holes in arcsec. This only affects the size of the RED circles to be drawn on the image display.

DESCRIPTION

This routine reads your LEXT catalog file, and transforms the (RA,DEC) coordinates of the fiducial stars into (X,Y) coordinates on the detector.

It then compares these with the coordinates of the fiducial stars as measured from an on-sky image. This image can be taken without a mask. To measure the pixel coordinates on the image the interactive task 'imexamine' is used.

The difference in the computed and measured positions are then transformed into telescope tweak parameters: offsets and rotation. Ask the TO to apply this tweak, which should bring the fiducial stars in the fiducial holes of the mask. Then, take an image with the mask and find a more exact tweak using task 'finetweak'.

EXAMPLES

Take an image (RUN, not GLANCE) without the mask, at the required telescope position and rotator angle, and do

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roughtweak r222401 mycat.cat
```

Ask the TO to apply the recommended tweak (first the offset, then the rotation). This tweak should ensure that your fiducial stars end up inside the mask holes.

THE INTERACTIVE PART OF THE TASK

This task will display the section of the image that contains the fiducial stars; the stars are marked by a circle. The user is advised to adjust the colour scale of the image display tool such that the fiducial stars are clearly visible.

The user has to point the cursor at the fiducial star marked by a BLUE circle, and has to press key -a- to activate the centroid algorithm.

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If key -a- is pressed more than once, the final press will be
evaluated.  Each press will be acknowledged by statistics appearing on
the terminal that runs IRAF.  To advance to the next star, press -q-.
To avoid a particular star to take part in the tweak fit, press -q-
WITHOUT pressing -a- first.

On the image display the centroid positions of the stars will be
marked by a RED circle. These circles have the same size as the
fiducial holes.

When all fiducial stars have been marked by the user, the tweak will
be computed.

If one of the centroid positions of the stars seems wrong (judging
from the RED circles), the task can be run again with the user
discarding the star in the way described above.

A good tweak fit needs no less than 3 stars. Nevertheless, a tweak can
be computed on only 2 stars.


TIME REQUIREMENTS
A lot less than doing it by hand.


BUGS
email John Telting, jht@ing.iac.es,
for bug reports and constructive remarks


SEE ALSO
ldsstweak, findwindow, finetweak
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