

Palomar Adaptive Optics Test Plan

Title	Acquisition camera sensitivity
Date	10/11/06
Lead	A. Bouchez
Time requested	1 hr
Required conditions	Photometric

Purpose

Measure the limiting magnitude of the AO acquisition camera.

Target fields

Davis cluster sequences:

1	NGC 2264	06 37 54.6	+09 23 53.5	1950
2	NGC 2419	07 34 52.3	+39 03 04.8	1950
3	NGC 4147	12 07 32.4	+18 47 17.6	1950
4	M 92	17 15 31.4	+43 05 13.2	1950
5	NGC 7006	20 59 01.1	+15 59 36.7	1950
6	NGC 7790	23 65 16.1	+60 55 51.7	1950

Starlist is located at: `/export/home/pharo/lgs/davis.lst`

Finder charts and magnitude tables can be found [here](#).

Test procedure

1. Slew to first Davis cluster sequence field.
2. Center a $V \sim 16$ star on a clear part of the acquisition camera field.
3. Determine integration time t for which star is easily visible above the noise.
4. Save 4 acquisition camera frames (dither $5''$ between 2 sets of 2) with integration time t . Record star magnitude and save names.
5. Repeat with integration times $t/2$ and $t/4$.
6. Repeat steps 2-5 for $V \sim 17, 18, 19$ stars.
7. Image 3 Landolt stars at varying airmass between 1.2 and 2.5, 4 images of each dithered as above. Set integration time to get ~ 150 peak counts in image.

Results and conclusions

