

Appendix B

Observation log for June-July 2003 observations at the NOT

A substantial amount of observational data from a wide range of targets was obtained at the NOT on the nights of 2003 June 27 to 2003 July 4. The optical filters used for these observing runs provided a range of different bandpasses between 600 *nm* and 1 μm . Table B.1 lists the general properties of these filters. The runs are summarised in Tables B.2 to B.9 for the benefit future researchers. For many of the runs the aperture diameter was stopped down in a re-imaged pupil plane. The aperture diameter was usually chosen to match $7r_0$ at the observing wavelength, although experiments with different apertures sizes were performed for a few of the runs.

Filter name	Centroid of observing band	Filter description
Coherent R	650 <i>nm</i>	Top hat filter with 72 <i>nm</i> FWHM
H α	656 <i>nm</i>	Filter with 11 <i>nm</i> FWHM
HiRac I	810 <i>nm</i>	Top hat filter with 125 <i>nm</i> FWHM
715 edge	~ 820 <i>nm</i>	Long-pass filter (long wavelength cutoff set by limit of the CCD detector)
780 edge and HiRac I	~ 830 <i>nm</i>	Filter pair gives bandpass with 90 <i>nm</i> FWHM
780 edge	~ 860 <i>nm</i>	Long-pass filter (long wavelength cutoff set by limit of the CCD detector)
850 edge and HiRac I	860 <i>nm</i>	Filter pair gives bandpass with 20 <i>nm</i> FWHM
850 edge	~ 890 <i>nm</i>	Long-pass filter (long wavelength cutoff set by limit of the CCD detector)

Table B.1: Filters used in observations at the NOT

Target	Object type	Filter	Aperture diameter	Image size (pixels)
100 Herculis	Binary	HiRac I	1.89 <i>m</i>	552 × 104
BD +193457C	Binary	HiRac I	1.89 <i>m</i>	552 × 176
M13 core	Globular cluster	HiRac I	1.89 <i>m</i>	552 × 176
M13 core	Globular cluster	HiRac I	1.32 <i>m</i>	552 × 176
CVS 97A	Gravitational lens	HiRac I	1.89 <i>m</i>	552 × 176
PNG 0456	Planetary nebula progenitor	HiRac I	1.89 <i>m</i>	552 × 176
M15 core	Globular cluster	HiRac I	1.89 <i>m</i>	552 × 264
M15 core	Globular cluster	HiRac I	1.89 <i>m</i>	552 × 528
M15 core	Globular cluster	HiRac I	1.32 <i>m</i>	552 × 528
Neptune and Triton	Solar system	HiRac I	1.32 <i>m</i>	552 × 528
Neptune and Triton	Solar system	HiRac I	2.56 <i>m</i>	552 × 528
BD +064730	Star	HiRac I	2.56 <i>m</i>	552 × 528
BD +064730	Star	850 edge	2.56 <i>m</i>	552 × 528
BD +064730	Star	780 edge	2.56 <i>m</i>	552 × 528
BD +064730	Star	715 edge	2.56 <i>m</i>	552 × 528
BD +064730	Star	H α	2.56 <i>m</i>	552 × 528
BD +064730	Star	Coherent R	2.56 <i>m</i>	552 × 528

Table B.2: Log of observations on night of 2003 June 27 at the NOT.

Target	Object type	Filter	Aperture diameter	Image size (pixels)
Gliese 569	Multiple brown dwarf	HiRac I	2.56 <i>m</i>	552 × 104
3C 294	Active galactic nucleus	HiRac I	2.56 <i>m</i>	552 × 104
M13 core	Globular cluster	780 edge	2.56 <i>m</i>	552 × 528
M13 core	Globular cluster	780 edge	2.56 <i>m</i>	552 × 104
M13 core	Globular cluster	780 edge	2.56 <i>m</i>	552 × 176
M13 core	Globular cluster	850 edge	2.56 <i>m</i>	552 × 176
100 Herculis	Binary	850 edge and HiRac I	2.56 <i>m</i>	552 × 80
UU Sagittae	Eclipsing binary	780 edge	2.56 <i>m</i>	552 × 176
SN2002hh	Supernova	780 edge	2.56 <i>m</i>	552 × 528
WR 140	Wolf Rayet binary system	850 edge and HiRac I	2.56 <i>m</i>	552 × 104
NGC7469	Active galactic nucleus	780 edge	2.56 <i>m</i>	552 × 176

Table B.3: Log of observations on night of 2003 June 28 at the NOT.

Target	Object type	Filter	Aperture diameter	Image size (pixels)
NGC 5548	Active galactic nucleus	780 edge	2.56 <i>m</i>	552 × 176
M13 core	Globular cluster	780 edge	2.56 <i>m</i>	552 × 104 ^a
M13 mosaic	Globular cluster	780 edge	2.56 <i>m</i>	552 × 528
100 Herculis	binary	850 edge and HiRac I	2.56 <i>m</i>	184 × 104
V536 Aquilae	Variable star	780 edge	2.56 <i>m</i>	552 × 104
WR 140	Wolf Rayet binary system	850 edge and HiRac I	2.56 <i>m</i>	112 × 104
M15 core	Globular cluster	780 edge	2.56 <i>m</i>	552 × 528
M15 core	Globular cluster	780 edge	2.56 <i>m</i>	552 × 176

^aObservational results from this run are presented in Chapter 5.5.5

Table B.4: Log of observations on night of 2003 June 29 at the NOT.

Target	Object type	Filter	Aperture diameter	Image size (pixels)
100 Herculis	Globular cluster	HiRac I	2.56 <i>m</i>	184 × 104 ^b
100 Herculis	Globular cluster	HiRac I	2.08 <i>m</i>	184 × 104 ^b
100 Herculis	Globular cluster	HiRac I	1.70 <i>m</i>	184 × 104 ^b
M13 core	Globular cluster	780 edge	2.56 <i>m</i>	552 × 176 ^b
V 653 Ophiuchii	T-Tauri star	780 edge	2.56 <i>m</i>	552 × 528 ^b
V 653 Ophiuchii	T-Tauri star	850 edge	2.56 <i>m</i>	552 × 528 ^b
V 536 Aquillae	Variable star	780 edge	2.56 <i>m</i>	552 × 176 ^b
SN2002hh	Supernova	780 edge	2.56 <i>m</i>	552 × 296
NGC 7008	Planetary nebula progenitor	780 edge	2.56 <i>m</i>	184 × 176
NGC 7008	Planetary nebula progenitor	Coherent R	2.08 <i>m</i>	184 × 176
M15 core	Globular cluster	780 edge	2.56 <i>m</i>	552 × 528
M15 core	Globular cluster	780 edge	1.89 <i>m</i>	552 × 528
M15 core	Globular cluster	780 edge	1.32 <i>m</i>	552 × 528
M15 core	Globular cluster	780 edge	2.56 <i>m</i>	552 × 176
M15 core	Globular cluster	780 edge	1.89 <i>m</i>	552 × 176
M15 core	Globular cluster	780 edge	1.32 <i>m</i>	552 × 176

^bObserving through patchy cloud

Table B.5: Log of observations on night of 2003 June 30 at the NOT.

Target	Object type	Filter	Aperture diameter	Image size (pixels)
NGC 4151	Active galactic nucleus	780 edge	2.56 <i>m</i>	552 × 176
NGC 4151	Active galactic nucleus	Coherent R	2.56 <i>m</i>	552 × 176
CVS 97A	Gravitational lens	780 edge	2.56 <i>m</i>	552 × 176
Target for P. Hewitt	Galaxy core	780 edge	2.56 <i>m</i>	552 × 176 ^b
M13 core	Globular cluster	780 edge	2.56 <i>m</i>	552 × 176
100 Hercules	binary	850 edge and HiRac I	2.56 <i>m</i>	184 × 104
Neptune and star	Solar system	780 edge	2.56 <i>m</i>	184 × 528
Neptune and star	Solar system	780 edge	2.08 <i>m</i>	184 × 528
Neptune and star	Solar system	780 edge	1.89 <i>m</i>	184 × 528
WR 140	Wolf Rayet binary system	780 edge and HiRac I	1.89 <i>m</i>	552 × 176
M15 core	Globular cluster	780 edge	2.56 <i>m</i>	552 × 528
M15 mosaic	Globular cluster	780 edge	2.08 <i>m</i>	552 × 528
M15 core	Globular cluster	780 edge	2.08 <i>m</i>	552 × 176

^bObserving through patchy cloud

Table B.6: Log of observations on night of 2003 July 1 at the NOT.

Target	Object type	Filter	Aperture diameter	Image size (pixels)
NGC 4151	Active galactic nucleus	780 edge	2.56 <i>m</i>	552 × 176
Gliese 569	Multiple brown dwarf	HiRac I	2.56 <i>m</i>	280 × 104
Q1518+58	Active galactic nucleus	780 edge	2.56 <i>m</i>	552 × 176
M13 core	Globular cluster	780 edge	2.56 <i>m</i>	552 × 176
M13 core	Globular cluster	780 edge	1.32 <i>m</i>	552 × 176
M13 core	Globular cluster	Coherent R	1.32 <i>m</i>	552 × 176
100 Hercules	binary	850 edge and HiRac I	2.56 <i>m</i>	184 × 104
WR 124	Wolf Rayet star	780 edge	2.56 <i>m</i>	552 × 176
WR 124	Wolf Rayet star	H α	2.56 <i>m</i>	552 × 176
UU Sagittae	Observations during eclipse of binary component	780 edge	2.56 <i>m</i>	552 × 176
M15 core	Globular cluster	780 edge	2.56 <i>m</i>	552 × 176

Table B.7: Log of observations on night of 2003 July 2 at the NOT.

Target	Object type	Filter	Aperture diameter	Image size (pixels)
Gliese 569	Multiple brown dwarf	780 edge	various	280×104
Gliese 623	Multiple brown dwarf	780 edge	2.56 <i>m</i>	552×176
Gliese 623	Multiple brown dwarf	780 edge	2.56 <i>m</i>	280×104
Mars and star	Solar system	850 edge	2.56 <i>m</i>	552×528
Mars and star	Solar system	Coherent R	2.56 <i>m</i>	552×528

Table B.8: Log of observations on night of 2003 July 3 at the NOT. The seeing was generally poor (1-3 *arcseconds*), and little useful data was obtained.

Target	Object type	Filter	Aperture diameter	Image size (pixels)
M13 field	Globular cluster	780 edge	various	552×528
M13 field	Globular cluster	780 edge	various	552×176
M13 core	Globular cluster	780 edge	2.56 <i>m</i>	552×176
Gliese 623	Multiple brown dwarf	780 edge	1.89 <i>m</i>	112×104
100 Hercules	binary	850 edge and HiRac I	various	184×104
WR 124	Wolf Rayet star	780 edge and HiRac I	2.56 <i>m</i>	552×176
WR 124	Wolf Rayet star	Coherent R	2.56 <i>m</i>	552×176
Mars	Solar system	850 edge	2.56 <i>m</i>	552×528
M15 mosaic	Globular cluster	780 edge	1.70 <i>m</i>	552×528

Table B.9: Log of observations on night of 2003 July 4 at the NOT.

