when replacing UES. During the construction phase several blocks (weighing a tonne each) were used to ensure that the removal of UES did not unbalance the telescope. These were progressively removed as GRACE was assembled. The opportunity was taken to brace the new platform extension to the telescope structure. Tests after GRACE installation was complete show this was effective in raising the natural frequency considerably, away from the telescope's azimuth locked rotor frequency, which was the required result.

During the time of restructuring for ING, the creation of GRACE is a major achievement, especially when set against the background of other project work not least adding the Universal Science Port to NAOMI to feed OASIS. Many, if not most ING staff have contributed to GRACE and in getting the AO suite installed and working. In the end —over the last months, then weeks— it's still hard to believe how much was done and how hard everyone worked.

Dr Annejet Meijler, the Director of the Council of Physical Sciences of the NWO, formally inaugurated GRACE on May 2nd, 2003. ING staff take pride in having a world class environment for AO which was, in the words of the plaque unveiled, 'conceived, designed and built' by them.¤

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OASIS at the WHT

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The optical integral-field spectrograph OASIS, formerly at the CFHT, has moved permanently to the WHT. It is now installed at one of the science ports of NAOMI, the WHT's adaptive-optics system. OASIS was successfully commissioned on-sky with NAOMI in July 2003, and it is offered to the community on a shared-risks basis in semester 2004A.

OASIS offers a range of spatial and spectral resolutions. An area of sky between 3 and 16 arcsec in diameter (4 enlarger options) can be imaged onto the array of 1100 lenslets in the focal plane. Six grisms provide spectral resolutions in the range $1000<\Re<4000$. The 1100 resulting spectra are imaged onto a deep-depletion MIT/LL CCD, with dispersion 1 to 4 Å/pixel (15 µ pixels). The CCD has high QE (0.9 at 0.75 microns) and low readout noise (2.3 electrons rms in slow mode). The fringing level is low, ~3% at 0.8 µ, and ~10% peak-to-peak at 1 µ. A version of CFHT's XOASIS data reduction package is available at ING for reduction of OASIS data. OASIS can also be used in imaging mode (primarily for target acquisition), with a field diameter of 38 arcsec. Further information about OASIS can be found on the web page:
`http://www.ing.iac.es/Astronomy/instruments/oasis/index.html`.

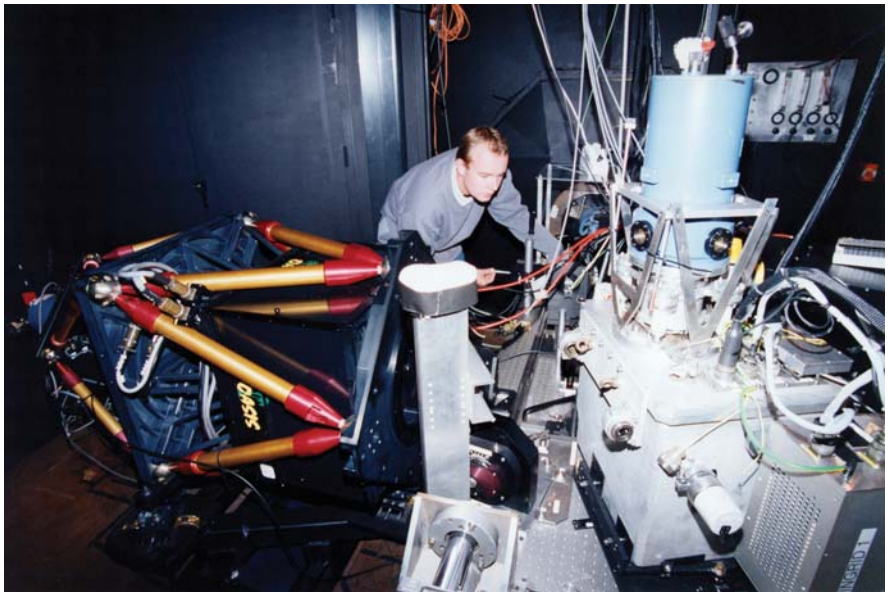

Figure 1. OASIS (left) joins NAOMI in the WHT's new AO-dedicated, temperature-controlled Nasmyth enclosure, GRACE. The IR camera INGRID is visible in the foreground on the right.

OASIS can be used with or without AO correction. NAOMI typically delivers a reduction in FWHM of a few tenths of an arcsec at wavelengths 0.6–1.0 µ. The best corrected seeing achieved during the July 2003 OASIS commissioning was 0.3 arcsec. Guide stars must currently be brighter than V~13. The guide object may also be a galaxy nucleus, if sufficiently compact. Some correction is achieved even when the science target lies several 10s of arcsec from the guide star. Performance and throughput are expected to be at least as good as achieved at CFHT. Information about NAOMI can be found on the web page:
`http://www.ing.iac.es/Astronomy/instruments/naomi/index.html`. ¤

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Figure 2. OASIS logo for joint operation with NAOMI.