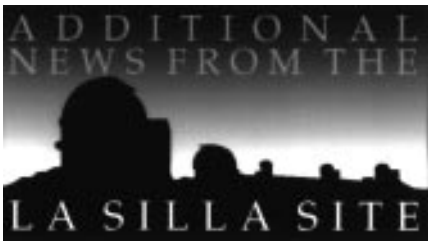

The La Silla News Page

The editors of the La Silla News Page would like to welcome readers of the seventh edition of a page devoted to reporting on technical updates and observational achievements at La Silla. We would like this page to inform the astronomical community of changes made to telescopes, instruments, operations, and of instrumental performances that cannot be reported conveniently elsewhere. Contributions and inquiries to this page from the community are most welcome. *(P. Bouchet, R. Gredel, C. Lidman)*

A New Fabry-Perot for IRAC2b

2.2-m AND IR TEAMS

During the next few months a new Fabry-Perot for IRAC2b will be tested and installed at the 2.2-m telescope. This Fabry-Perot replaces the current unit and promises improved performance. The new unit is flatter (λ/250 at 2 microns) than the current unit and covers a larger wavelength range (1.5 to 2.4 microns). Thus, in addition to what was possible with the old Fabry-Perot, observers will now be able to perform spectral line imaging with the new unit (together with the narrow-band filter, BP2) at 1.645 microns.

The new unit will become available during period 59. Observers who wish to use the new Fabry-Perot should check the IRAC2b home page http://www.ls.eso.org/lasilla/Telescopes/2p2T/E2p2M/IRAC2/irac2.html for test results as they become available. Alternatively, observers can contact the 2.2-m team at 2p2team@eso.org.

Load Cells Installed in the 3.6-m M1 Mirror Cell

R. GREDEL, S. GUISARD, G. IHLE

During two weeks of technical time in April, load cells were installed in the primary mirror cell of the 3.6-m telescope. This is the first major physical intervention in the mirror cell since the telescope became available. The aim is to improve the image quality of the 3.6-m telescope away from zenith, as described in the recent series of articles by Stephane Guisard in *The Messenger*.

On April 15, the mirror cell was removed from the telescope and then partly dismantled during the following days. All 30 astatic levers, the 3 axial fixed points and the lateral supports were removed from the cell.

The rubber of 18 pneumatic pads was replaced by material more commonly used for the production of pneumatic boats. The astatic levers and the lateral supports were modified in the workshop to house the load cells. That work was completed by April 28, when the mirror cell was re-installed at the telescope. Additionally, micrometers, which will allow the radial and axial displacement of the mirror within the cell to be measured, were installed. While work was done on the mirror cell, the mirror itself was taken to the aluminisation plant, where it was washed and freshly aluminised.

Image quality measurements were then performed during the following two nights. At the same time, all 30 astatic levers were checked. All but four levers were characterised by low hysteresis, of the order of 0.2 kg. Four levers showed huge hysteresis, up to 50 kg. At certain telescope positions, these levers were touching bolts of the cell structure or adjacent levers.

This problem may have existed for many years. The corresponding astatic levers were modified, and the hysteresis is now low for all of them. This ensures their proper functioning.

Direct images obtained with CCD#29 on April 29 resulted in some of the best images obtained so far with the 3.6-m telescope: 0.65–0.75 arcsec, with an outside seeing measured with DIMM2 of 0.5–0.7 arcsec.

The next major intervention is planned for September when the force distribution of the astatic levers upon the main mirror will be modified.

This requires us to measure simultaneously the aberrations away from zenith and the force on the load cells. These measurements will be carried out during forthcoming test nights allocated in June and August.