

# ISAAC Moved to a New Home

Linda Schmidtbreick<sup>1</sup>  
Pedro Mardones<sup>1</sup>  
Roberto Castillo<sup>1</sup>

<sup>1</sup> ESO

In August 2009, ISAAC was relocated from UT1 to UT3 to adjust the difference in the pressure factor of the two telescopes. The move went more smoothly than expected and the instrument was delivered in a very good state. A short report on the event is presented.

ISAAC (Infrared Spectrometer And Array Camera) was one of the first instruments to be operated on Paranal and used to be located at the Nasmyth B focus of the VLT Unit Telescope 1 (UT1). It is still highly in demand, as are the other UT1 instruments, FORS2 and CRIRES, and so the requested number of hours on UT1 reached a record value of 5405 in Period 83. In contrast, UT3 was in rather low demand, as can be seen from the statistics in Figure 1. It was hence proposed that ISAAC should be relocated to UT3 to balance the pressure factors on the two telescopes better, and after an initial feasibility check the decision was made in favour of the move.

Planning started with the involvement of the Instrument Operation Team and various engineering groups in Paranal and Garching, but it was not at all clear if the move would go smoothly. One major problem that was anticipated was the retrieval of the co-rotator unit. This is the part that connects the instrument to the control electronics cabinets. It is responsible for keeping the cables and hoses untwisted when the instrument rotates in order to compensate for the rotation of the image field. This co-rotator unit was attached in a way that seemed to make it impossible to remove simply. Instead, plans were made for a complete dismantling of this unit and subsequent re-assembly at UT3. It seemed like sheer luck that on the day when ISAAC was taken off, it was found that the co-rotator unit could be removed as a whole. With a bit of tilting and pushing it was actually possible to remove it and hence a full

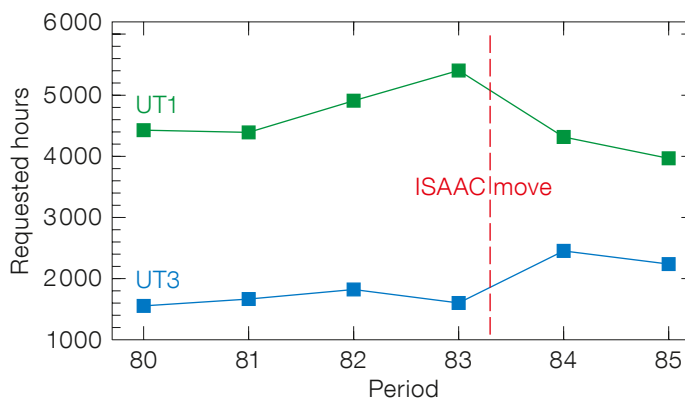


Figure 1. The number of hours requested for VLT UT1 and UT3 in recent observing periods (since October 2007).

week of work was saved and a great weight was lifted from the minds of everyone involved. A good team spirit and the dedication and vigilance of all the people involved resulted in a swift and successful conclusion of the work. Two weeks ahead of schedule, ISAAC was attached to UT3, the Hawaii detector cleaned, all technical functions tested, and the instrument handed over to the instrument scientists for the re-commissioning.

All tests were performed without encountering major problems, but there were some positive surprises instead. The big flakes on the Hawaii detector that had previously been interfering with observa-

tions had disappeared; hence all restrictions concerning offsets, nod-throw and jittering boxes could be removed. The image quality seems to have improved, i.e. the elongation of point source images is now considerably reduced. Four weeks after the instrument was taken off UT1, the first science observations were made with ISAAC: a time-critical transient of a planet was monitored in the fast photometry mode. All in all, we consider the move a complete success, not least because the original motive, the adjustment of the pressure factors, was achieved as well, as the statistics in Figure 1 show.

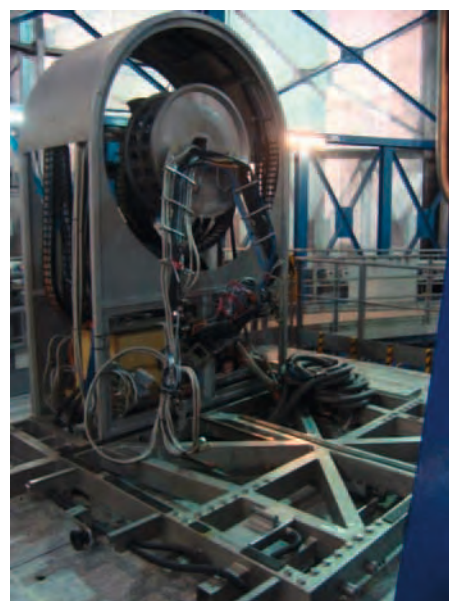


Figure 2. ISAAC, the silver round box in the upper part of the left image, is being taken out from its place at UT1. The right photo shows the co-rotator unit.