

News from the Roque

Although for astronomical observations the weather last winter has been rather poor, this has not hampered fast progress in the construction of the various new facilities, which also continued over the summer. The dome and annex building of the 10-m GTC have made remarkable progress. The dome is nearly fully completed at the time of writing. The dome of this grand facility is now fully silhouetted against the horizon when seen from the ING telescopes site.

The construction of the MAGIC Cherenkov telescope has also been remarkably speedy. The open, unprotected telescope structure was erected in only a few weeks and will soon receive the mirror surface elements. This will most definitely add a bright sparkle to its appearance under the Canarian sunshine. You can't miss it when driving up from the Residencia!

Also the Liverpool Robotic Telescope is making good progress. Following completion of the ground works and foundations, the dome work is now at a very advanced stage. The telescope structure will be erected soon.

Maybe less noticeable but not less impressive are the developments in the Swedish Solar Telescope, where the original telescope has now been replaced by a new telescope within the existing tower. The new telescope's optics, with a 97 cm entrance pupil, is twice the size of the old telescope.


Looking towards the future potential of the ORM site, a site testing tower for solar observations has been erected not far from the WHT. This tower holds a solar DIMM (Differential Image Motion Monitor) and is operated by NOAO in support of a general site testing campaign for a future large solar telescope.

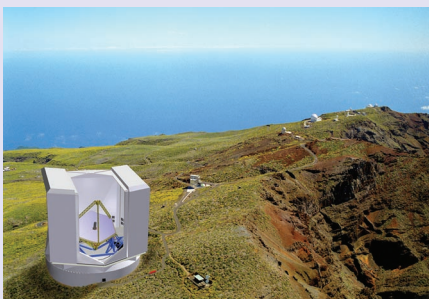
Also in the future plans for an extremely large telescope exist for the ORM. The EURO-50 project, proposing a 50-m optical/IR telescope, is one of several projects that are being studied world-wide. The artist's impression below shows the scale of such an installation in comparison with other facilities on site.


For readers who would like to see progress on some of these facilities for themselves, see the various live web cameras:

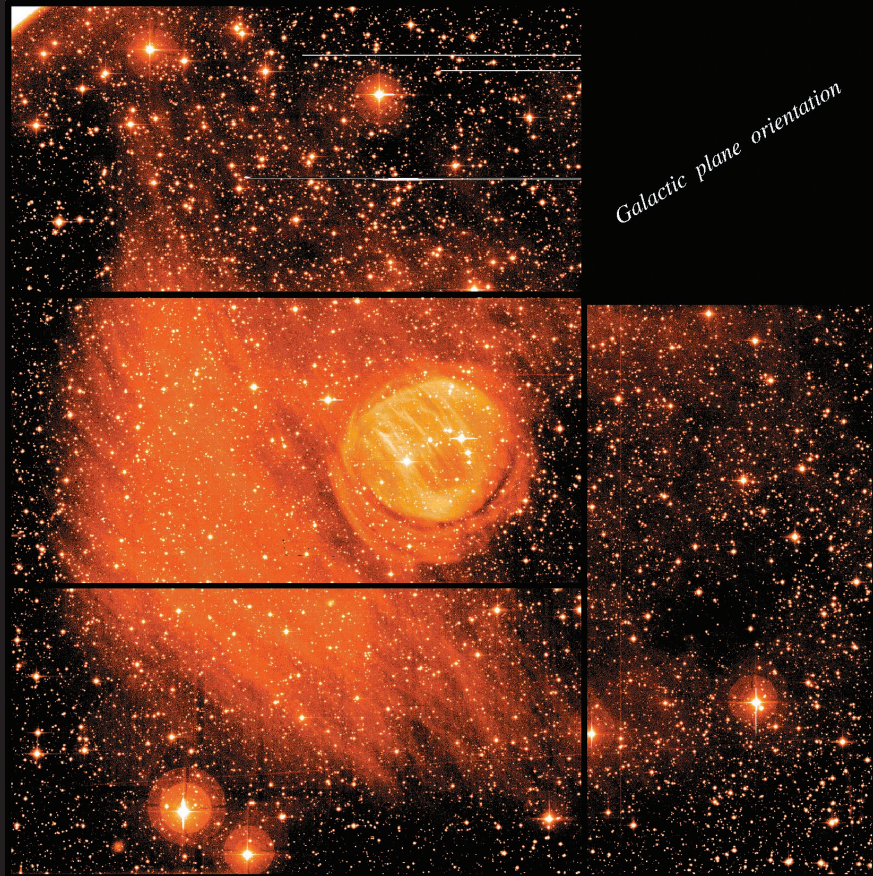
GTC: http://www.gtc.iac.es/webcam_s.asp

MAGIC: <http://mc5rq.hegra.iac.es/view/view.shtml>

Liverpool Telescope: <http://telescope.livjm.ac.uk/Webcam/> 



Haloës of Planetary Nebulae from the INT WFC. *The images of the three planetary nebulae displayed on the following page were obtained by Romano Corradi at the INT with the Wide Field Camera, that covers a field of view of 34×34 arcmin. They are very deep exposures (one to three hours exposure time) obtained through an $H\alpha + [NII]$ narrow-band filter, and were aimed at studying the faint haloës that are known to surround a large fraction of planetary nebulae. We believe that these haloës are the trace of the last episodes of mass loss from the stellar progenitors of the nebulae, occurred a few 10^4 years ago when they were in the pulsating red-giant phase that eventually leads to the complete ejection of the stellar envelope and the formation of a planetary nebula. In the case of two of the nebulae (Sh 2–200 and NGC 3242) displayed in the figure, however, the extended and structured emission revealed by the WFC images might not be material lost by the stars in the recent past, but simply interstellar gas located in the proximity of the planetary nebulae and ionized by the energetic radiation from their central stars.* 

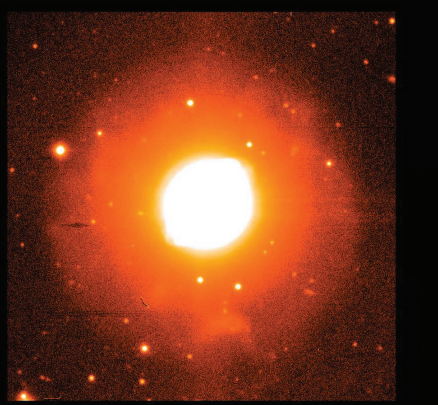
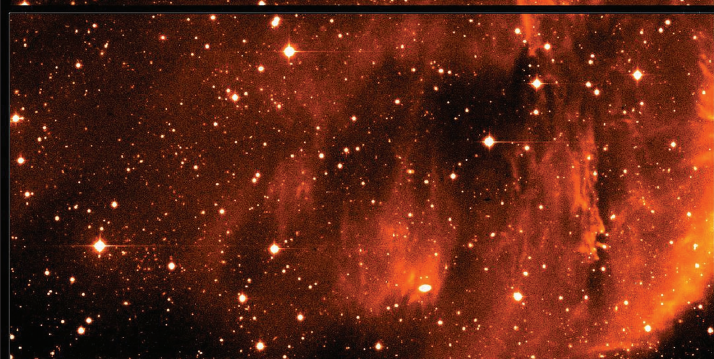
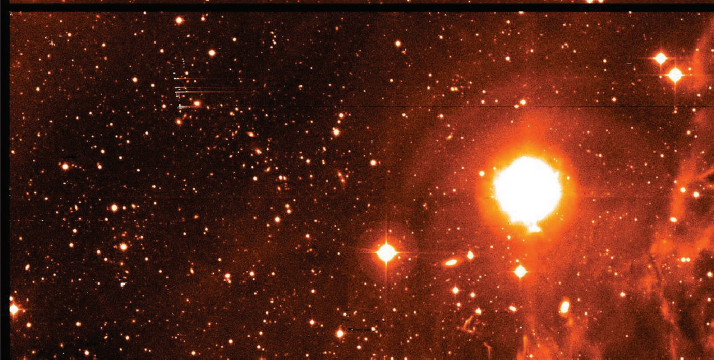
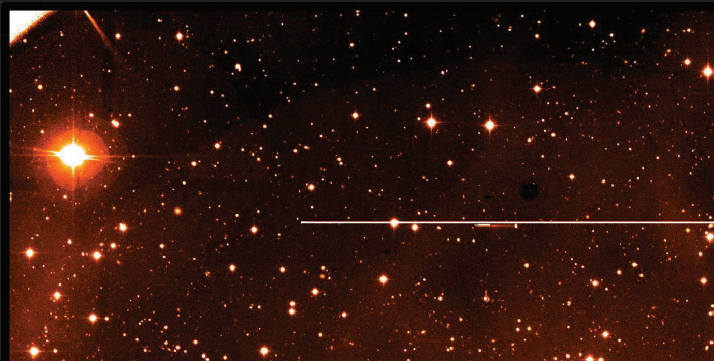
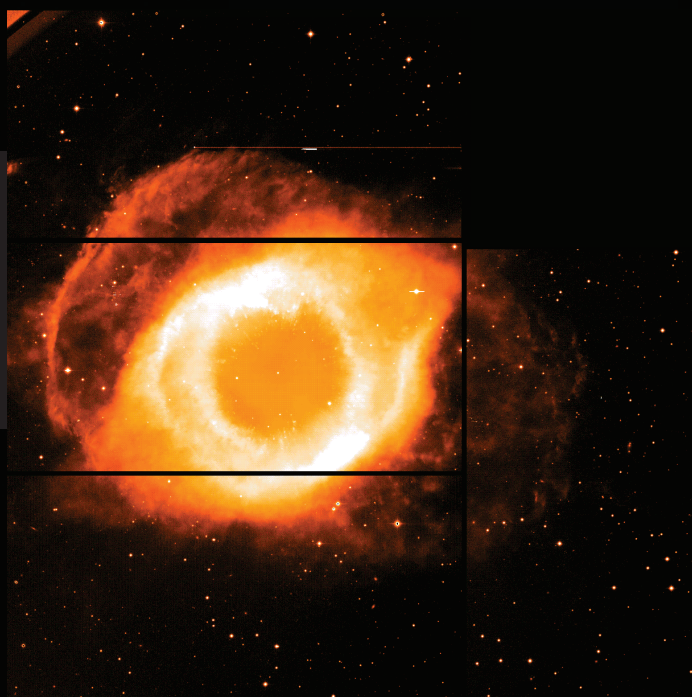


Galactic plane orientation



**Planetary Nebula
Sh 2 – 200**

**Helix Planetary Nebula
NGC 7293**



**Planetary Nebula
NGC 3242**