

TIRGO / 1999

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The 1.5m infrared telescope TIRGO is located in the Gornergrat North tower, at 3200m above sea level. The station is the national facility for infrared observations, open also to foreign scientists. Three focal plane instruments are usually available: the fast single-element photometer FIRT (1-5 micron), the two-dimensional array camera ARNICA (1-2.5 mic) and the long-slit spectrometer LONGSP (1-2.5 micron). A new mid-IR camera (5-20 mic), TIRCAM-II, was tested in December at the telescope and is supposed to be ready for scientific observations next spring. This instrument will make full use of the unique environmental properties of the Gornergrat site, with very cold temperatures and dry air. The main TIRGO focal-plane instrument, ARNICA, has been in use at the Italian 3.5m telescope TNG since October 1998; as a consequence, the total amount of used nights at the TIRGO telescope reduced to about 100, less than half of the last years. ARNICA is supposed to come back to TIRGO in January 2000.

Most of the observations were carried out with LONGSP and FIRT on many different topics. Such observations have now contributed to a large and qualified amount of papers, 16 this year, 15 of them appearing in refereed journals. Among the most important issues in 1999, we note the extensive use of TIRGO for lunar occultations using FIRT. As an example of this scientific work, we show in the figure xx the calibration of the temperature scale of the stars toward cold classes by A. Richichi, L. Fabbroni, S. Ragland (Florence), and M. Sholz (Heidelberg). This calibration was based on precise measurements of the stellar radii by lunar occultations and stellar fluxes by photometry. Totally, more than 200 lunar occultations were obtained at TIRGO.



