Telescope & Instruments

TNG is 3.58m Alt-Az telescope equipped with an active optics system. Its 2 Nasmyth foci host 5 instruments which are permanently mounted and operating. More...

Instruments

**GINO-B**

GINO-B is the near IR high resolution echelle spectrograph of the TNG. Its observing mode at R~ 50000 covers a spectral range between 0.95 microns to 2.45 microns. GINO-B can be operated simultaneously with HARPS-N in GIARPS mode.

**HARPS-N**

HARPS-N (High Accuracy Radial velocity Planet Searcher in North hemisphere) is an echelle spectrograph covering the wavelength range between 383 to 693 nm, with a spectral resolution R=115000. This instrument allows the measurement of radial velocities with the highest accuracy currently available in the north hemisphere and is designed to avoid spectral drift due to temperature and air pressure variations thanks to a very accurate control of pressure and temperature. The main scientific rationale of HARPS-N is the characterization and discovery of terrestrial planets by combining transits and Doppler measurements.

**NICS**

NICS (Near Infrared Camera Spectrometer) is the TNG infrared (0.9-2.5 µm) multimode instrument which is based on a HgCdTe Hawaii 1024x1024 array. Its observing capabilities include imaging (4.2' x 4.2' f.o.v.), high-throughput low resolution spectroscopy (RS=50-500), medium resolution spectoscopy (max-R=2500), imaging polarimetry, spectropolarimetry and, when coupled to the adaptive optics module, nearly diffraction limited imaging.

**DOLORES**

DOLORES (Device Optimized for the LOW RESolution) is a focal reducer instrument installed at the Nasmyth B focus of the TNG. The detector is a 2048 x 2048 E2V 4240 Thinned back-illuminated, deep-depleted, Astro-BB coated CCD with a pixel size of 13.5 µ. The scale is 0.252 arcsec/px which yields a field of view of about 8.6 x 8.6 arcmin. The instrument allows imaging through broad and narrow band filters as well as spectroscopic observations with resolving powers between RS=~500 and RS=~6000. A multi-slit mode, based on custom masks manufactured by a dedicated cutting machine, is also available. Please note that MOS programs are bound to strict constraints on the number of masks and on the time necessary to design and manufacture them. In particular, each program can request up to a maximum of 5 masks per night and 10 masks per observing run.

**Dismissed instruments**