



ISAAC NEWTON GROUP OF TELESCOPES
Roque de Los Muchachos Observatory, La Palma

**ANNOUNCEMENT OF OPPORTUNITY FOR OBSERVING TIME
IN SEMESTER 2014A: 1st February – 31st July, 2014**

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1. Proposal submission and deadlines

Information about applying for time on the 4.2-m William Herschel Telescope (WHT) and the 2.5-m Isaac Newton Telescope (INT) can be found on:

http://www.ing.iac.es/astronomy/observing/INGinfo_home.html

Each observing proposal should be submitted to the time-allocation committee (TAC) of one of the three operating countries: the Netherlands, Spain or the United Kingdom. Proposers who qualify for OPTICON trans-national access time are encouraged to submit their proposals directly to OPTICON. Advice on how to submit proposals, and submission deadlines, are given on the web pages of each TAC:

Netherlands (PC) <http://www.nwo.nl/financiering/onze-financieringsinstrumenten/ew/isaac-newton-group-of-telescopes/isaac-newton-group-of-telescopes.html>

Spain (CAT) <http://www.iac.es/cat/pages/cat-nocturno/en/requesting-time.php?lang=EN>

UK (PATT) <http://www.stfc.ac.uk/1506>
PATT form: http://www.ing.iac.es/astronomy/observing/patt/PATT_Appl.html

OPTICON <http://www.astro-opticon.org/fp7/tna/>

Principal Investigators (PIs) employed or studying in a Dutch, Spanish or UK institution at the time of submission should submit their proposal(s) to the Dutch, Spanish or UK TAC respectively. Proposals submitted to a national TAC by a PI employed or studying in one of the other partner countries may be assessed by that TAC or, at its discretion, may be passed on to the appropriate national TAC.

The Spanish and UK TACs will also accept proposals from a PI based in countries other than the partner countries. Such international proposals (which must be written in English) may be assessed by that TAC, or at its discretion may be passed to an international TAC comprising members of the national TACs.

For both the WHT and INT, applicants are encouraged to submit proposals for large time allocations. This applies particularly to the INT, where ING can only support a small number of instrument changes.

The OPTICON scheme fosters pan-European access to the ING telescopes, under the auspices of the EC-funded Research Infrastructure Programme. OPTICON time is available to eligible astronomers based in EU member states and associated states, and EC funding may be available to cover travel, accommodation and subsistence costs. Applications from new users and young researchers, and astronomers based in countries without similar research facilities, are strongly encouraged. International proposals which meet OPTICON's criteria of eligibility, but which are submitted to and awarded telescope time by the national TACs, do not qualify for OPTICON financial support.

2. Common-user instruments (WHT and INT)

The instruments available on the WHT and INT are listed below:

WHT:

Instrument	Description
ISIS	Medium-resolution long-slit spectroscopy, polarimetry
ISIS/QUCAMs	Spectroscopy with high time resolution and/or of faint objects (L3 CCDs)
LIRIS	Near-IR imaging (4-arcmin field) and long-slit spectroscopy, multi-object (slit masks) spectroscopy, spectropolarimetry and imaging polarimetry
ACAM	High-throughput imaging (8-arcmin field) and low-resolution long-slit spectroscopy
AF2	Multi-object (150 fibres) medium-resolution spectroscopy over a 40-arcmin field
Prime-focus imager	Imaging over an 18-arcmin field
NAOMI/INGRID	Near-IR imaging (40-arcsec field) with or without natural-guide-star adaptive optics (AO), and with or without coronagraphy (OSCA)
NAOMI/OASIS	Integral-field (up to 10 arcsec) spectroscopy with or without natural-guide-star AO

INT:

Instrument	Description
IDS	Low-resolution long-slit spectroscopy
WFC	Imaging over a 33-arcmin field

Notes on individual instruments:

ISIS. The default CCDs for ISIS are a thinned, blue-sensitive 4kx2k e2v detector (EEV12) on the blue arm, and a deep-depletion, high quantum efficiency, exceptionally low-fringing 4kx2k e2v detector (Red+) on the red arm. In addition, low-light-level CCDs (commonly known as L3-CCDs or EMCCDs) are available for each arm of ISIS. These 1024x1024 cameras, QUCAM2 and QUCAM3, provide high-speed spectroscopic capability (to about 10Hz) with very little dead time and essentially zero read noise. EMCCDs have distinctive features and optimising their use depends critically on the scientific goals.

LIRIS. The process of slit-mask preparation, manufacture and installation takes a minimum of eleven weeks, and the last step requires the LIRIS cryostat to be warm. PIs awarded time in multi-slit mode are strongly encouraged to initiate the design of their slit masks on publication of the telescope schedules. Information about slit-mask preparation is available on:

http://www.ing.iac.es/astrophysics/instruments/liris/public_liris_mos.pdf

ING staff will help with the setup for LIRIS spectropolarimetry runs, but cannot advise about the planning and execution of these observations.

ACAM. ACAM has a 2kx4k deep-depletion, low-fringing, high-QE CCD, and provides high-throughput imaging with a wide range of filters over a field 8.3 arcmin in diameter, and low-resolution spectroscopy with a VPH disperser. Most of ING's optical filters can be mounted in ACAM. ACAM is available permanently except when an instrument is mounted at prime focus.

AF2. Recent improvements in the target-acquisition procedure, and a better characterisation of field distortion at WHT prime focus, have significantly increased the accuracy of fibre positioning on targets. Details can be found on the AF2 web pages.

A new 4k x 4k CCD, RED+4, has been commissioned for use with AF2/WYFFOS. The main advantages of RED+4 over the WHTWFC 2-CCD mosaic are: higher QE in the red; much-reduced amplitude of fringing; and no inter-CCD gap. The default detector for WYFFOS is now RED+4. The WHTWFC detector can still be requested, but its use should be justified in the proposal.

Prime-focus imager. The new 4k x 4k RED+4 camera is scheduled to be commissioned with the PF imager in September 2013, and we expect RED+4 to become the default imaging detector on PFIP in 2014A. The advantages of RED+4 over the WHTWFC 2-CCD mosaic are mentioned in the above notes on AF2. The

imaging field of view with RED+4 is 18 arcmin x 18 arcmin. The WHTWFC detector can still be requested, but its use should be justified in the proposal.

Adaptive Optics. The WHT's natural-guide-star AO module, NAOMI, can be used with either the integral-field spectrograph OASIS or the near-IR imager INGRID. An un-cooled coronagraph, OSCA, can be deployed in the light path to INGRID. AO observations are carried out in service mode by ING staff.

IDS. The IDS 235-mm camera is offered with a choice of two detectors: the deep-depletion, low-fringing e2v RED+2 CCD (the default) and the EEV10 CCD. A request for use of the EEV10 CCD should be justified in the proposal.

WFC. The WFC is offered at the default rotator position angle of 180 degrees. When compelling scientific justification is provided in the observing proposal, other rotator angles (0, 90 or 270 degrees) can be offered for the duration of the run only. Changes to rotator angle during a run are not permitted.

Significant ellipticity (several tenths of an arcsec) of images in WFC data obtained over the last year has now been traced to bad tracking due to an irregularity in a drive gear. This has been addressed via a periodic correction in the telescope-control software, and on-sky tests suggest a substantial improvement in tracking, both for WFC and IDS.

For an overview of the instrumentation currently available on the WHT and INT, including links to the instrument home pages and contact email addresses of the instrument specialists, see:

<http://www.ing.iac.es/astrophysics/observing/instruments.html>

3. Visitor instruments (WHT)

Applicants wishing to submit proposals to use an established visitor instrument on the WHT should in the first instance contact the relevant person listed below:

Instrument	Contact
GHaFaS	John Beckman, jeb@iac.es
INTEGRAL	Evencio Mediavilla, emg@iac.es
PN.S	Magda Arnaboldi, marnabol@eso.org
SAURON	SAURON Team, sauron_webmaster@strw.leidenuniv.nl
Ultracam	Vik Dhillon, Vik.Dhillon@sheffield.ac.uk Tom Marsh, t.r.marsh@warwick.ac.uk

PIs considering a proposal to deploy a visitor instrument which is new to the WHT should email the ING Director (Marc Balcells, balcells@ing.iac.es) well in advance of the proposal deadlines stating their intent, and should also submit a Technical Appraisal form. Further information on the protocol to be followed for submitting proposals to deploy new visitor instruments, and a link to the Technical Appraisal form, are available on:

<http://www.ing.iac.es/astrophysics/observing/NewVisitorInstruments.html>

4. Observer support at the telescope

A summary of the observer support available at the telescope can be found on:

<http://www.ing.iac.es/astrophysics/planning/support.html>

Astronomical support will be provided during the first evening, and part of the first night, of each WHT and INT run (apart from runs with established visiting instruments), and will include an introduction to the telescope, instrumentation and data-acquisition systems, and safety issues. The support astronomer (SA) will be on-call at the Residencia throughout the first night. The WHT Observing Support Assistant (OSA) provides all-night, year-round operator and engineering support at the telescope.

Manual changes to the configuration of an instrument during an observing run (e.g. installation of a filter, dichroic or grating) will be accommodated if they were explicitly specified in the observing proposal, and confirmed with the SA well in advance of the run. These changes will be made by ING staff, and must not be made by visiting observers at either the WHT or INT. At the WHT, such changes can be made during the night by the OSA (but may incur significant observing overheads). At the INT, such changes can only be

made during normal working days, when appropriately-trained staff are available. Requests for configuration changes not specified in the telescope proposal will be handled on a best-efforts basis.

5. Observer experience

Inexperienced WHT and INT observers must be accompanied by an experienced observer. 'Inexperienced' here means unable, alone, to make efficient (and safe) use of the observing night, whether from general lack of observing experience, or from lack of experience with the specific techniques to be used. This lack of experience will not adequately be compensated by the start-of-run training provided by observatory support staff.

In addition, it is essential that INT observers have considerable end-to-end observing experience with medium-sized telescopes. INT observers are responsible for all aspects of operation, from opening the dome in the evening, and operating the telescope and instrumentation throughout the night, to parking the telescope and closing the dome at the end of the night or in the event of deteriorating weather conditions.

ING relies on student supervisors, and experienced members of proposing teams, to ensure that less-experienced observers prepare adequately for their observing runs, before travelling to La Palma.

Chris Benn (Head of Astronomy; crb@ing.iac.es)
15th August 2013