The ING Service Programme

The ING Service Programme (on the William Herschel Telescope only) aims at providing astronomers with a rapid, flexible, versatile tool to obtain small sets of observations (up to 8 hours) on a number of nights set aside by the time allocating committees every semester. During these nights, an ING support astronomer performs the observations for several service requests in a queue. The ING Service Programme can be used to try new ideas or complement a regular observing programme allocated on the ING telescopes. Proposals from principal investigators working in an institution located in the United Kingdom, the Netherlands or Spain are accepted, but international proposals are also welcome. The deadline for applications is at midnight on the last day of each month. Proposals are generally withdrawn from the scheme after one year. More information here: http://www.ing.iac.es/astronomy/service/.

Time Allocation and Instrumentation

The nights allocated to service are distributed across dark, grey and bright time, and more or less equally across the semester to offer different instrument options (below is an overview of the available service instrumentation). Requests for other instrument options not shown here such as ISIS or LIRIS spectro or imaging polarimetry are not offered unless there is a strong scientific case and technical justification in the proposal. From time to time special announcements are issued to give the opportunity to use new or private instruments and modes (for example, NAOMI+GLAS in 2007; ULTRACAM in 2012).

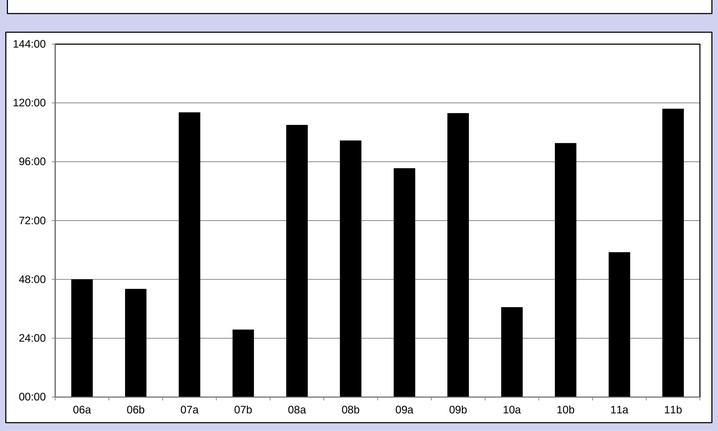
SPECTROSCOPY

Instrument	Wavelength range (Å)	Dispersion (Å/pixel)	Slit length	Detector	Focus	Comments
ISIS	3000-10000Å	0.26-1.81 (Red+) 0.11-1.63 (EEV12)	4'	Red: Red+ Blue: EEV12	Cassegrain	Long-slit spectroscopy.
ACAM	3500-9400Å	R~400	6'	AUXCAM	Folded Cassegrain (permanently mounted)	Long-slit spectroscopy. Imaging allowed.
AF2/ WYFFOS	3500-10000Å	R=100-3000 (ref.) R=9500 (ech.)	1.6" fibres	2EEV	Prime (WYFFOS at GHRIL)	Multi-object fibre optics spectrograph. Up to 150 objects.
NAOMI/ OASIS	4000-10000 Å	1000 < R < 4000	2.7x3.7" to 7.4x10.3" field imaged onto 1100 lenslets	MIT/LL (2048x4096)	Nasmyth (GRACE)	IFS, available with and without AO
LIRIS	9000-24000Å	R=1000-3000	4.2'	HgCdTe (1024x1024)	Cassegrain	Long-slit and multi-object spectroscopy.

IMAGING

Instrument	Detector	Filters	Scale ("/pixel)	Field-of-View	Focus
PFIP	2EEV	Broad- and narrow-band	0.24	16'.2 x 16'.2	Prime
ACAM	AUXCAM	UBVRIZ + narrow-band	0.25	8'.3	Folded Cassegrain (permanently mounted)
NAOMI/ INGRID	HgCdTe(1024x1024)	ZJHKK_s and 10 narrow-band	0.04	42"	Nasmyth (GRACE)
NAOMI/ INGRID/OSCA	HgCdTe(1024x1024)	ZJHKK_s and 10 narrow-band	0.04	27"	Nasmyth (GRACE)
LIRIS	HgCdTe(1024x1024)	ZJHK_s and 8 narrow-band	0.25	4'.27	Cassegrain

Oversubscription factors (observing time demanded/allocated). The demand from communities other than UK, ES and ES has been equally split between the 3 communities.



Total observed time per semester. On average, a total of 81 hours are observed every semester.

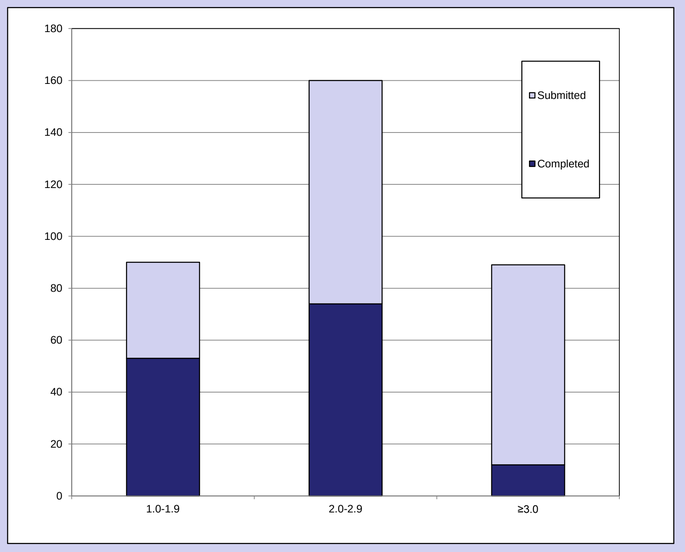
How to Apply

To apply for ING service time please visit http://www.ing.iac.es/astronomy/service/. Here you will find the links to the phase-1 forms of every instrument. If your case requires an urgent assessment (before the monthly deadline) then you can indicate this in the form. After being accepted, your proposal will be scientifically assessed by an anonymous referee and a scientific grade assigned that will be the main criterion when prioritising the queue for the night.

After scientific assessment, the applicant submits a phase-2 form containing the observing details. After this, the proposal is technically assessed by the relevant instrument specialist, and eventually activated for observing.

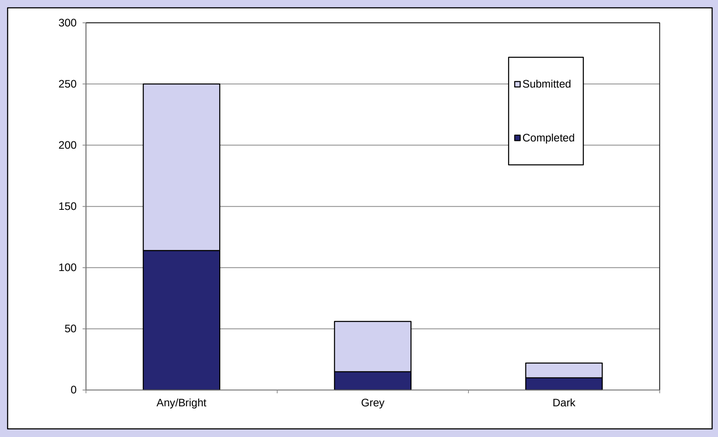
Observing Follow-up

Every service night an observing queue is drawn up from the existing active proposals and observed under the requested observing conditions. Usually service programmes are scheduled together with discretionary tasks and sometimes triggered override programmes. Observational data are provided the following morning and a feedback form provided by the applicant allows efficient follow-up of the proposal. Below are some statistics about the rate of proposal completion according to the assigned scientific grades sky brightness and seeing demanded.

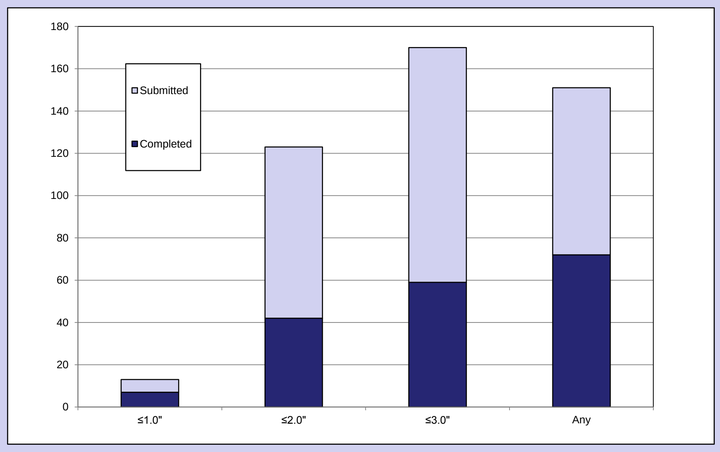


Number of proposals submitted and completed per scientific grade in the period 07A-10B (including special announcements). On average, the success rates are as follows: 60% (1.0-1.9), 45% (2.0-2.9) and 15% (≥3.0). A description of the grades follows.

Grade 1	top priority (fast-track)
Grade 2	high priority
Grade 3	priority backup status
Grade 4	backup status
Grade 5,6	reject



Number of proposals submitted and completed per requested sky brightness condition in the period 07A-10B (including special announcements). On average, the success rates are as follows: 45% (Any/Bright), 30% (Grey) and 45% (Dark).

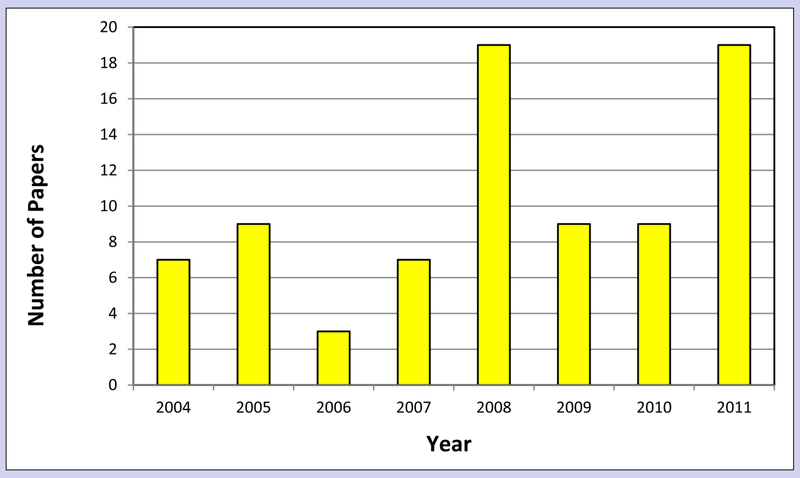


Number of proposals submitted and completed per demanded seeing in the period 07A-10B (including special announcements). On average, the success rates are as follows: 55% (≤1.0 arcsec), 35% (≤2.0 arcsec), 35% (≤3.0 arcsec) and 50% (any seeing).

Scientific Productivity

One way to measure the productivity of the Service Programme is by counting the research papers published that resulted from the service observations. The selection process identifies papers that make direct use of observations in order, either from the telescope or the ING archive. Papers that refer to data presented in earlier papers (derivative papers) are not counted. This bibliography was compiled from only the refereed journals *MNRAS*, *Astrophys J*, *Astrophys J Letters*, *Astrophys J Suppl*, *Astron J*, *PASP*, *Astron Astrophys*, *Nature* and *Science*, although many other publications have appeared elsewhere, notably in workshop, conference proceedings and PhD theses.

Number of papers published in refereed journals containing results derived from service observations. On average, 9 papers are published per year (or 10% the scientific productivity of the William Herschel Telescope).



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