

could be taken into account for each night by scaling the moonlit sky surface brightness by this fraction to give a weighted background for the night, but on balance it is considered better to partition telescope time solely in terms of the *worst case* sky surface brightness computed $\sim 90^\circ$ from the Moon.

The predicted ranges in the zenith V sky surface brightness at high galactic and ecliptic latitudes, and solar minimum, and at an angular distance from the Moon of $\sim 90^\circ$, are 21.2–21.9 mag/arcsec² for dark time, and 19.9–21.2 and 18.0–19.9 mag/arcsec² respectively for the *moonlit parts* of grey and bright time. For the mean sky, i.e. over all latitudes $\sim 90^\circ$ from the Moon, these ranges are ~ 0.5 mag/arcsec² *brighter* because of the larger contributions of airglow, zodiacal light and starlight.

This definition of dark, grey and bright time will be used in constructing the ING schedules from Semester 2002B onward. The exposure time calculator,

SIGNAL, has been modified to offer an option specifying 'typical' sky surface brightnesses for dark, grey and bright time, corresponding to $V_{sky}=21.50, 19.75$ and 18.50 mag/arcsec² respectively.

A longer version of this article is available as *ING Technical Note No. 127*, available at URL http://www.ing.iac.es/Astronomy/observing/manuals/man_tn.html

Acknowledgements

It is a pleasure to acknowledge discussions with Thomas Augusteijn, Steve Bell and Rob Jeffries. □

References:

- Benn, C. R. & Ellison, S. L., 1998, *ING Tech. Note*, 115.
 Krisciunas, K. & Schaefer, B. E., 1991, *PASP*, 103, 1033.

Ian Skillen (wji@ing.iac.es)

Important Dates

Deadlines for submitting applications

UK PATT:

15 March, 15 September

NL NFRA PC:

31 March, 30 September

SP CAT: **1 April, 1 October**

ITP: **30 June**

Semesters

Semester A:

1 February – 31 July

Semester B:

1 August – 31 January

Telescope Time Awards Semester 2002A

For observing schedules please visit this web page:
<http://lpss33.ing.iac.es:8080/cgi-bin/schedules.pl>

ITP Programmes on the ING Telescopes

- Doressoundiram (Paris), Multi-color taxonomy of trans-Neptunian objects. **ITP/2002/1**
- Ruiz-Lapuente (Barcelona), Supernova and the physics of supernova explosions. **ITP/2002/4**

William Herschel Telescope

UK PATT

- Axon (Hertfordshire), The Black Hole Mass-Velocity Dispersion Correlation. **W/2002A/38**
- Barcons (IF Cantabria), An XMM-Newton international survey (AXIS-II): unveiling the hard X-ray source populations. **ITP/2001/2 PB**
- Barnes (St Andrews), Starspot tracking on the W Ursae Majoris system BW Dra. **W/2002A/41**
- Benn, (ING), Adaptive-optics imaging of QSO host galaxies. **W/2002A/6**
- Bower (Durham), The Sauron Deep Survey. **W/2002A/50**
- Boyce (Bristol), K-band imaging of gas-rich low surface brightness galaxies found at 21cm. **W/2002A/52**
- Coggins (Nottingham), Mapping Elliptical Galaxy Mass Distributions using Gravitational Redshift. **W/2002A/35**
- Davies (Durham), Mapping Early Type Galaxies along the Hubble Sequence. **W/2002A/21**
- Dhillon (Sheffield), Coordinated optical and X-ray observations of the eclipsing polar HU Aqr. **W/2002A/9**
- Fitzsimmons (Belfast), The Size Distribution and Colours of Short-Period Comets. **W/2002A/67**
- Gledhill (Hertfordshire), AO imaging of post-AGB circumstellar envelopes. **W/2002A/11**
- Gray (Edinburgh), Combined X-ray and weak lensing mass profiles of the brightest cluster lenses. **W/2002A/80**

- Jeffries (Keele), Low mass stellar populations in the most massive OB associations. **W/2002A/72**
- Kleyna (IoA, Cambridge), Dark matter in the UMi dwarf spheroidal. **W/2002A/46**
- Kodama (Tokyo), History of Galaxy Mass Assembly in the Hierarchical Universe at $z \sim 1$. **W/2002A/58**
- Marsh (Southampton), Magnetic braking and solar cycles in detached binary stars. **W/2002A/7**
- McMahon (IoA, Cambridge), Constraining the contribution to the UV background from $z=3$ and $z=5$ quasars. **W/2002A/78**
- Meikle (Imperial College), Detection and Study of Supernovae in Nuclear Starburst Regions. **W/2001B/34 (Long term)**
- Meikle (Imperial College), Detailed study of the physics of nearby Type Ia Supernovae. **W/2002A/49**
- Merrifield (Nottingham), Determining the Dynamics of Round Elliptical Galaxies. **W/2002A/20**
- Miller (Oxford University), A Survey for wide-separation gravitational lenses from the 2dF QSO Redshift Survey. **W/2002A/33**
- Page (Mullard Space Science Lab/UCL), Optical identification of faint X-ray sources in a deep XMM-Newton/Chandra survey. **W/2002A/43**
- Peroux (IoA, Cambridge), Tracing Galactic Haloes at $3.0 < z < 4.5$ using CIV Absorption. **W/2002A/14**
- Pettini (IoA, Cambridge), CORALS II: Assessing the Dust Bias in Damped Lyman- α Systems at Intermediate Redshifts. **W/2002A/10**
- Rolfe (Leicester), The Orbital Velocities and Stellar Masses in the Dwarf Nova IY UMa. **W/2002A/28**
- Ryan (Open University), Carbon nucleosynthesis in the first stars. **W/2002A/1**
- Shanks (Durham), A 2dF QSO Lensing Estimate of Ω_m via Faint QSO Number Counts. **W/2002A/76**
- Smail (Durham), Testing Photometric Redshifts using Cluster Lenses. **W/2002A/5**
- Smith (Durham), Probing the Formation Epoch of Massive Elliptical Galaxies. **W/2002A/56**
- Steeghs (Southampton), The structure of AM CVn binaries and their discs. **W/2002A/31**
- Tanvir (Hertfordshire), Rapid imaging of GRB error boxes and spectroscopy of GRB-related optical/IR transients. **W/2002A/65**
- Unda Sanzana (Southampton), A new structure on U Gem? **W/2002A/51**

NL NFRA PC

- Förster Schreiber (Leiden), Near-infrared Snapshot Survey for Bright Lensed Red High-redshift Galaxies. **w02an002**
- Groot (Nijmegen), Spectroscopic Identification of Old White Dwarf Candidates in the Faint Sky Variability Survey. **w02an001**
- Habing (Leiden), Asymptotic Giant Branch stars in northern Local Group galaxies. **w02an003**
- Kuijken (Groningen), Determining the Dynamics of Round Elliptical Galaxies Using the Planetary Nebula Spectrograph. **w02an005**
- Romanowsky (Groningen), Globular Cluster Kinematics at Large Radii in M49. **w02an006**
- Salamanca (Amsterdam), Rapid imaging of GRB error boxes and spectroscopy of GRB-related optical/IR transients. **w02an008**
- de Zeeuw (Leiden), Mapping Early-Type Galaxies along the Hubble Sequence. **w02an007**

SP CAT

- Balcells (IAC), Estudio de galaxias con formación estelar extrema a alto corrimiento al rojo. **W23/2002A**
- Battaner (Granada), Rotación del sistema estelar en la periferia de galaxias espirales. **W6/2002A**
- Béjar (IAC), La función de masas subestelar en Orión y Praesepe. **W28/2002A**
- Cairós (IAC), Multiwavelength studies of metal-poor Blue Compact Dwarf Galaxies. **W4/2002A**
- Carrera (IAC), Determinación de la relación en cúmulos globulares en destrucción por marea. **W26/2002A**
- Casares (IAC), Optical reprocessing lines as tracers of companion stars in LMXBs. **W19/2002A**
- Castro-Tirado (IAA-CSIC, LAEFF), La naturaleza de las explosiones cósmicas de rayos gamma GRBs. **W27/2002A**
- Colina (IF Cantabria), Integral field spectroscopy of ultraluminous infrared galaxies. **W1/2002A**
- Manchado (IAC), Near infrared imaging of galaxy fields. **W21/2002A**
- Martínez-Delgado (IAC), Destrucción de galaxias enanas en el halo Galactico: cinemática de la corriente Norte de Sagitario. **W25/2002A**
- Mediavilla (IAC), Curvas de extinción en galaxias con redshift intermedios. **W20/2002A**
- Pérez (Madrid Complutense), Spatial analysis of populations in local star-forming galaxies. **W5/2002A**
- Rebolo (IAC), Did very massive stars produce r-elements? **W11/2002A**
- Rebolo (IAC), JOVIAN: detección directa de planetas gigantes alrededor de estrellas y aislados. **W32/2002B [sic]**
- Ruiz-Lapuente (Barcelona), Estrellas compañeras de supernovas. **W14/2002A**
- Ruiz-Lapuente (Barcelona), Supernovas a $z = 0.35$. **W15/2002A**

INSTRUMENT BUILDERS' GUARANTEED TIME

- Packham (Florida), The initial conditions to star formation. **GT/2002A/1**

Isaac Newton Telescope

UK PATT

- Boyce (Bristol), CCD imaging of gas-rich low surface brightness galaxies found at 21cm. **I/2002A/15**
- Feltzing (Lund Observatory), Metallicity distribution functions in Local Group dwarf spheroidal galaxies. **I/2002A/18**
- Fitzsimmons (Belfast), Rapid-response astrometry of potentially hazardous asteroids. **I/2002A/26**
- Gilmore (IoA, Cambridge), Eclipsing K/M Dwarfs and the Low-Mass Stellar M/L Ratio. **I/2002A/20**
- Hilditch (St. Andrews), Accretion Hot Spots in Near-Contact Binaries. **I/2002A/13**
- James (Liverpool), Star formation in the local Universe: H α imaging of the Virgo cluster. **I/2002A/25**
- Jameson (Leicester), Rigorous limits on the bottom end of the Coma open cluster mass-function. **I/2002A/29**
- Jeffries (Keele), Low mass stellar populations in the most massive OB associations. **I/2002A/32**
- Marsh (Southampton), Subdwarf-B stars: tracers of binary evolution. **I/2002A/4**
- Meikle (Imperial College), Detailed study of the physics of nearby Type Ia Supernovae. **I/2002A/14**
- Oliver (Sussex), The INT SIRTf-Legacy: Extra-galactic Survey (ISLES). **I/2002A/40**
- Tanvir (Hertfordshire), Rapid imaging of GRB error boxes and spectroscopy of GRB-related optical/IR transients. **I/2002A/27**

NL NFRA PC

- Beijersbergen (Groningen), UBR imaging of the Coma cluster periphery. **i02an003**

- Kuijken (Groningen), Sloan standard fields for the photometric calibration of OmegaCAM images. **i02an002**
- Mack (ASTRON/NFRA), Constraining the BL Lac Luminosity Function. **i02an001**
- Salamanca (Amsterdam), Rapid imaging of GRB error boxes and spectroscopy of GRB-related optical/IR transients. **w02an008 [sic]**

UK/NL WFS Programmes

- Dalton (Oxford), The Oxford Deep WFC Survey. **WFS/2002A/6**
- Davies (Cardiff), Multi-coloured large area survey of the Virgo cluster. **WFS/2002A/2**
- van den Heuvel (Amsterdam), The Faint Sky Variability Survey II. **WFS/2002A/1**
- McMahon (IoA), The INT Wide Angle Survey. **WFS/2002A/8**
- Walton (ING), The Local Group Census. **WFS/2002A/4**
- Watson (Leicester), An Imaging Programme for the XMM-Newton Serendipitous X-ray Sky Survey. **WFS/2002A/3**

SP CAT

- Balcells (IAC), Estudio de Galaxias con Formación Estelar Extrema a Alto Corrimiento al Rojo. **I8/2002A**
- Casares (IAC), Curva de velocidad radial y función de masa del microcuasar LS5039. **I5/2002A**
- Castro-Tirado (IAA-CSIC, LAEFF), La naturaleza de las explosiones cósmicas de rayos gamma GRBs. **W27/2002A**
- Deeg (IAC), Sample Definition for Exoplanet detection by the COROT SpaceCraft. **I10/2002A**
- Herrero (IAC), Espectroscopía cuantitativa de estrellas O ionizantes. **I11/2002A**
- Herrero (IAC), Preparándose para OSIRIS: población estelar joven de NGC 6946. **I20/2002B [sic]**
- Hidalgo (IAC), Estructuras a gran escala en galaxias irregulares. **I19/2002B [sic]**
- Lázaro (IAC), Fotometría infrarroja de sistemas Algol. **I14/2002A**
- López (Basel), Nebulosas planetarias intercumulares y estructura del cúmulo de Virgo. **I4/2002A**
- Marín (IAC), Sistemas de cúmulos globulares en galaxias elípticas. **I2/2002A**
- Martínez (IAC), Constraining the Milky Way dark halo shape from the Sagittarius tidal stream. **I12/2002A**
- Negueruela (Strasbourg), Estrellas pre-secuencia-principal de masas intermedias en cúmulos abiertos. **I15/2002A**
- Riera (Politécnica Cataluña), The fragmented wind-blown bubbles around intermediate and massive stars. **I7/2002A**
- Vilchez (IAA), A search for Abundance Gradients in Ring Galaxies. **I6/2002A**

Jacobus Kapteyn Telescope

UK PATT

- Boyce (Bristol), H α imaging of gas-rich low surface brightness galaxies found at 21cm. **J/2002A/10**
- Burleigh (Leicester), Asteroseismology of a pulsating helium-atmosphere white dwarf star. **J/2002A/16**
- Davies (Edinburgh), Lightcurves of Near Earth Objects. **J/2002A/8**
- Fitzsimmons (Belfast), Rapid-response astrometry of potentially hazardous asteroids. **J/2002A/12**
- Fitzsimmons (Belfast), The size and composition of Near-Earth Objects. **J/2002A/18**
- Green (Open University), Thermo-physical properties of a "cometary" NEO. **J/2002A/6**
- Hodgkin (IoA, Cambridge), Photometry of candidate halo white dwarfs. **J/2002A/17**
- Jeffery (Armagh Observatory), Time-resolved observations of the pulsating sdB star PG1605+072. **J/2002A/7**
- Keenan (Belfast), Four-colour photometry of stars from the Palomar-Green Survey. **J/2002A/1**
- Marsh (Southampton), Cataclysmic Variable Stars from the 2dF QSO survey. **J/2002A/4**
- Marsh (Southampton), Companions to sub-dwarf binary stars. **J/2002A/5**
- Morales-Rueda (Southampton), Measuring orbital periods of dwarf novae. **J/2002A/14**
- Norton (Open University), Multiwavelength Observations of SXTs: Black Hole Accretion Disk Outbursts. **J/2002A/2**
- Seigar (JAC, Hawaii), Optical properties of the disks of spiral galaxies. **J/2002A/3**
- Tanvir (Hertfordshire), Rapid imaging of GRB error boxes and spectroscopy of GRB-related optical/IR transients. **J/2002A/13**

NL NFRA PC

- Röttgering (Leiden), A catalogue of galaxies near bright stars: preparing for VLT-AO and VLTI. **j02an002**
- Salamanca (Amsterdam), Rapid imaging of GRB error boxes and spectroscopy of GRB-related optical/IR transients. **w02an008 [sic]**

SP CAT

- Baes (Viena), Tracing the dynamic interplay between the gas-dominated and star-dominated disk components in barred spirals. **J1/2002A**
- Calabresi (Rome), Photometry of Centaur Object Chariklo. **J2/2002A**
- Casares (IAC), Optical reprocessing lines as tracers of companion stars in LMXBs. **JW19/2002A**

- Castro-Tirado (IAA-CSIC, LAEFF), La naturaleza de las explosiones cósmicas de rayos gamma GRBs. **JW11/2002A**
- Kidger (IAC), Definition of an accurate 1-30 micron flux calibration system for the GTC and SIRTf. **J4/2002A, J4/2002B [sic]**
- López (Basel), ¿Hay barras lentas en galaxias interactuantes? **J3/2002A**
- Rosenberg (IAC), Calibración Homogénea de Cúmulos Globulares del Halo Externo. **J5/2002B [sic]**

Telescope Time Awards Semester 2002B

For observing schedules please visit this web page:

<http://lpss33.ing.iac.es:8080/cgi-bin/schedules.pl>

ITP Programmes on the ING Telescopes

- Doressoundiram (Paris), Multi-color taxonomy of trans-Neptunian objects. **ITP/2002/1**
- Ruiz-Lapuente (Barcelona), Supernova and the physics of supernova explosions. **ITP/2002/4**

William Herschel Telescope

UK PATT

- Blundell (Oxford), After the trigger: the time-resolved evolution of the hosts of powerful active galaxies. **W/2002B/68**
- Crowther (University College, London), Properties of Wolf-Rayet stars in the metal-rich environment of Andromeda (M31). **W/2002B/60**
- Crowther (University College, London), Direct constraints on the expansion velocity of hot, WN stars. **W/2002B/61**
- Dalton (Oxford), Near Infrared Coverage of the Oxford INT Deep Multicolour Imaging Survey. **W/2002B/32**
- Folha (Porto, Portugal), Excess Emission in T Tauri Stars: the Missing link. **W/2002B/54**
- Gray (Edinburgh University), Combined X-ray and weak lensing mass profiles of the brightest cluster lenses. **W/2002B/74**
- Harries (Exeter), A search for Zeeman polarization in the emission lines of classical T Tauri stars. **W/2002B/43**
- Jeffery (Armagh Observatory), Colorimetric mode identification in pulsating subdwarf B stars. **W/2002B/27**
- Longmore (Royal Observatory, Edinburgh), Structure of and star formation limits in isolated dark globules. **W/2002B/38**
- McLure (Edinburgh University), Black-hole mass measurement and the geometry of the broad-line region in AGN. **W/2002B/63**
- Meikle (Imperial College, London), Detailed study of the physics of nearby Type Ia Supernovae. **W/2002B/23 (Override, long term)**
- Meikle (Imperial College, London), Direct detection and study of supernovae in nuclear starbursts. **W/2002B/56 (Long term)**
- Merrifield (Nottingham), 2000 Planetary Nebulae in M31: A Deep Kinematic Survey. **W/2002B/64**
- Naylor (Exeter), Is there structure in the substellar mass function? **W/2002B/52**
- Nelemans (Cambridge), Testing common envelope theory and SN Ia progenitor models with double white dwarfs. **W/2002B/51**
- Page (MSSL-UCL), A pilot spectroscopic study of serendipitous hard spectrum XMM-Newton source. **W/2002B/47**
- Pettini (Cambridge), CORALS II: Assessing the Dust Bias in Damped Lyman α Systems at Intermediate Redshifts. **W/2002A/10 (Long term)**
- Poggianti (Padova Observatory, Italy), Star formation and morphological evolution of galaxies in nearby clusters with WYFFOS. **W/2002B/28 (Long term)**
- Royer (Leuven, Belgium), A complete survey of the Wolf-Rayet content of M33. **W/2002B/16**
- Smail (Durham), Testing Photometric Redshifts using Cluster Lenses. **W/2002B/7**
- Smith (Hertfordshire), Scattering geometries and the broad-line region in Radio-Quiet Quasars. **W/2002B/20**
- Tanvir (Hertfordshire), Gamma-Ray Bursts: Origin, Physics and use as Cosmological Probes. **W/2002B/62 Override**
- Vink (Imperial College), A search for evidence of accretion in Herbig Be stars. **W/2002B/4**
- Wilkinson (Cambridge), NGC2419 — a radial velocity survey of an unusual stellar cluster. **W/2002B/33**
- Willott (Oxford), The Fundamental Plane and black hole masses of $z=0.5$ radio galaxies. **W/2002B/49**

- Wills (Sheffield), Triggering the Activity in Giant Elliptical Galaxies. **W/2002B/9**

NL NFRA PC

- Förster Schreiber (Leiden), Near-infrared Snapshot Survey for Bright Lensed Red High-redshift Galaxies. **w02bn001**
- Ferguson (Groningen), A Search for Recent Massive Star Formation in Gas-Rich Ellipticals/SOs. **w02bn010**
- Hulleman (Utrecht), The nature of magnetars: UltraCam observations of the Anomalous X-Ray Pulsar 4U 0142+61. **w02bn007**
- Jarvis (Leiden), An unbiased view of the gaseous environments of high-redshift radio galaxies. **w02bn005**
- Kuijken (Groningen), M31 microlensing: checking Mira contamination with nIR AO imaging. **w02bn011**
- Kuijken (Groningen), 2000 Planetary Nebulae in M31: a Deep Kinematic Survey. **w02bn002**
- Mellema (Leiden), Polarization studies of the rings and haloes of Planetary Nebulae. **w02bn008**
- O'Brien (Amsterdam), Optical analogues of X-ray timing phenomena. **w02bn003**
- Van den Heuvel (Amsterdam), The Origin and Physics of Gamma-Ray Bursts. **w02bn004 Override**

ES CAT

- Barrado (LAEFF, Madrid), The Substellar Mass Function: Clues to the Star Formation Process. **W7/2002B**
- Esteban (IAC, Tenerife), Abundancias químicas a partir de líneas de recombinación en nebulosas ionizadas. **W3/2002B**
- Gallego (Complutense, Madrid), The evolution of the Star Formation Rate density of the Universe up to $z=0.8$. **W12/2002B**
- Gutiérrez (IAC, Tenerife), Búsqueda de galaxias de muy alto z a través del efecto lente gravitatoria en cúmulos. **W23/2002B**
- Gutiérrez (IAC, Tenerife), Fotometría en H α y espectroscopía de objetos con corrimientos al rojo anómalos. **WN13/2002B**
- Martínez (Valencia), La masa y la extensión de los halos en galaxias elípticas. **W24/2002B**
- Mathieu (IAA, Granada), Do S0 galaxies follow the Tully-Fisher relation? **W1/2002B**
- Negueruela (Alicante), La órbita de V0332+53. **W9/2002B**
- Paredes (Barcelona), Búsqueda de nuevos microcuásares: confirmación espectroscópica de candidatos. **W19/2002B**
- Prieto (IAC, Tenerife), Estudio de galaxias con formación estelar extrema a alto corrimiento al rojo. **W27/2002B**
- Shahbaz (IAC, Tenerife), High time resolution optical studies of quiescent black hole X-ray transients. **W25/2002B**
- Zapatero (LAEFF, Madrid), Compañeros de objetos ultra fríos de la vecindad solar. **W16/2002B**

IAC

- Cepa (IAC, Tenerife), El proyecto OTELO: Cartografiado profundo en B y R de SA68 y NOAO-2h. **W31/2002B**
- Rebolo (IAC, Tenerife), JOVIAN: detección directa de planetas gigantes alrededor de estrellas y aislados. **IW32/2002B**

TNG

- Fasano (Padova), Star formation and morphological evolution of galaxies in nearby clusters with WYFFOS. **T022**
- Mannucci (Arcetri), A critical test of cosmological models: tracing the elusive filaments of hot intergalactic gas. **T064**
- Moretti (Padova), Ages and metal abundances of star clusters in M33. **T083**