G Astronomy from La Palma: Developments and future directions

Time: **Tuesday 4th April, 16.00**
Location: **Bennett 2**
Chair: **Danny Lennon**

G.1 Introduction: ING over-view and status

Dr Daniel Lennon (Isaac Newton Group) - Oral presentation

G.2 Adaptive Optics and Laser Guide Star developments

Dr Dr Chris Benn (Isaac Newton Group) - Oral presentation

G.3 Observing Statistics

Dr Ian Skillen (Isaac Newton Group) - Oral presentation

G.4 The GTC, preparing First Light

Dr Jose Miguel Rodriguez-Espinosa (Instituto de Astrofisica de Canarias) - Oral presentation
The GTC is now testing its drives, and in short the GTC control software will be installed. After a period of tests, the optics will begin being put in place and First Light will hopefully happen by November this year. In my talk I will present the current status of the GTC and the calendar of activities for next year.

I will also discuss the opportunities opened, at the GTC, for the British community after Spain joins ESO.

G.5 Instrumentation for the GTC

Dr Peter Hammersley (Instituto de Astrofisica de Canarias) - Oral presentation

G.6 AO assisted Integral Field Spectroscopy: P-Cygni

Dr Daniel Lennon (Isaac Newton Group) - Poster presentation
R. Parker [1,2], S. Rix [1], D. Lennon [1] [1] ING, [2] Sheffield University
Adaptive optics assisted integral field spectroscopy is a new and important addition to the capabilities of the WHT using NAOMI and OASIS. We demonstrate one application of this facility as applied to the close circumstellar environment of the LBV, P-Cygni.

G.7 Unusual BAL radio quasar 1624+3758

Dr Chris Benn (Isaac Newton Group) - Poster presentation
R. Carballo [1], J. Holt [2], M. Vigotti [3], I. Gonzalez-Serrano [1], K.-H. Mack [3], R. Perley [4] ([1] Univ. Cantabria, Spain, [2] Univ. Sheffield, [3] Ist. Radioastronomia, Bologna, [4] NRAO, Socorro, USA
1624+3758, at $z = 3.377$, is the most radio-luminous BAL quasar known. It has several unusual properties: (1) The radio rotation measure, 18350 rad/m^2, is the second-highest known for any quasar. (2) The FeII UV191 1787-A emission line is very prominent. (3) The BAL trough (BALnicity index 2990 km/s) is detached by 21000 km/s. It may be a good example of an object which is accreting both at a very high rate, and near the Eddington limit.

G.8 New PNe discovered from IPHAS

Dr Daniel Lennon (Isaac Newton Group) - Poster presentation
L. Sabin [1,2], R. Corradi [1], R. Greimel [1], D. Lennon [1 1] ING, [2] Manchester University
We show how the northern galactic plane Halpha survey (IPHAS) is greatly enhancing our knowledge of PNe in the Milky Way, giving examples of newly discovered systems.

G.9 L3 WFS developments

Dr Chris Benn (Isaac Newton Group) - Poster presentation
Simon Tulloch [1] ([1] Isaac Newton Group, Spain)
The current natural-guide-star wavefront sensor at the WHT is based on a conventional CCD39. The read noise of the detector limits the overall AO performance of the system. Simulations have shown that L3 technology could offer a 1-2 mag improvement in guide-star limit, so we have constructed a new WFS head around an L3 CCD60 detector and integrated it into the NAOMI AO instrument on the William Herschel Telescope. The head will also find application in the upcoming Rayleigh laser AO system ('GLAS') where it will be used as a natural-guide-star tip-tilt sensor.

G.10 WHT Observing Statistics

Dr Ian Skillen (Isaac Newton Group) - Poster presentation
R. Rutten, Isaac Newton Group
We present a survey of recent trends in telescope allocations on the WHT. ISIS remains the workhorse instrument, scheduled for 40% of the time. The use of visitor instruments which accounts for more than 20% of telescope time, highlights the strategic importance of the WHT as a platform for innovative privately-built instruments. With oversubscription factors consistently in the range of 3-4 the WHT remains one of the most competitive telescopes to which the UK community has direct access.

G.11 Eclipsing Binaries in Local Group Galaxies

Dr Ian Skillen (Isaac Newton Group) - Poster presentation
Don Pollacco [1], Ian Todd [1], Dan Bramich [2], Steve Bell [3] and Thomas Augusteijn [4] ([1] Queen's University Belfast, [2] IoA Cambridge, [3] Rutherford Appleton Laboratory, [4] Nordic Optical Telescope)

We present a survey programme to detect eclipsing binaries in local group galaxies. This programme has the aim of providing an independent and largely geometrical calibration of the Cepheid Period-Luminosity relationship from distances derived from eclipsing binaries.

G.12 LIRIS: the Long-Slit Intermediate Resolution Infrared Spectrograph

Dr Ian Skillen (Isaac Newton Group) - Poster presentation
Mischa Schirmer [1], Javier Licandro [1] ([1] Isaac Newton Group)
LIRIS is a near-IR imager/spectrograph built and developed at the IAC, and mounted at the Cassegrain focus of the WHT. It is a common-user instrument available openly to all the ING communities. We present its impressive range of imaging, spectroscopic and polarimetric capabilities.

G.13 GLAS/NAOMI - AO with a Rayleigh laser guide star at the WHT

Dr Chris Benn (Isaac Newton Group) - Poster presentation
R. Rutten [1] ([1] Isaac Newton Group, La Palma, Spain)
The NAOMI adaptive-optics system on the 4.2-m WHT has been in operation for several years and has achieved good PSF improvement at infrared and optical wavelengths. The scientific instruments include an imaging system for the near-IR (INGRID) and an optical integral-field spectrograph (OASIS). The scientific capability of NAOMI will be greatly extended with the completion later this year of the GLAS Rayleigh laser beacon, which will enhance sky coverage from $\sim 1\%$ to nearly 100%. To maximise the scientific impact, special opportunities will be created for large observing programmes.