



British Astronomical Association

Radio Astronomy Group

Group Meeting 2011 November 12th 10:30am

The Humfrey Rooms, Castilian Terrace, Northampton, NN1 1LD

The Radio Astronomy Group of the British Astronomical Association will be holding an annual meeting on 12th November. The aim of the event is to provide exciting insights into the world of leading edge professional astronomy and enable amateur radio astronomers to share their work (and enthusiasm) with others.

Highlights of the day include:

- **Prof Paul Alexander, Head of Astrophysics at the Cavendish Laboratory**, will be talking about the impressive new radio telescopes that are currently under development, such as the Square Kilometre Array, and its precursors ASKAP and MeerKAT.
- **Dr Ben Stappers, Senior Lecturer at Jodrell Bank** will be talking about LOFAR - the first in a new generation of 'software telescopes' and will describe the technology that has gone into building the telescope and present new commissioning results showing the potential of the instrument.
- **Dr David Morgan** will give an introduction to radio sources, including a discussion of radio spectra and the physics of generation. A range of astronomical radio sources will be considered from the high level signals emitted by solar storms, through hydrogen line and other galactic emissions to extragalactic radio sources and pulsars.
- **Tony Abbey** will talk about his experiences of using the AMSAT-UK FUNcube Dongle - a software defined radio receiver which can be used as the heart of a radio telescope. Subject to orbital timings, he will be demonstrating reception from a satellite as it passes overhead using a simple hand held antenna and laptop.
- **Dr David Morgan** will describe how the FUNcube Dongle can be coupled with readily-available software applications to form the basis of a low-cost amateur radio telescope.
- **Noah Hardwick from the Monmouth Science Initiative** will talk about Project STEP (Solar Terrestrial Environment Physics) Detection of Solar X-ray flares by VLF Radio, describing the purpose of this Royal Society-supported project, how the students built the equipment and the observations that they have made. A poster and display will accompany the work.
- **Martyn Kinder** My life with a Magnetometer or two! Come and hear about Martyn's experiences of using the SAM magnetometer and the new UKRAA instrument.
- **Mark Edwards** will describe his derivation of a simple model for the ionosphere to explain the observed variation of received VLF signal strengths, both during normal daylight hours and during Sudden Ionospheric Disturbances.
- **Paul Hyde** will talk about using commercial short wave receivers to observe solar emissions, in particular his work at 38MHz.
- **John Cook** will talk about the VLF observing programme and the results obtained to date, plus the new work now being done in correlating SIDs against disturbances to the magnetosphere.

Builder/Observer Pairing Scheme

We are considering setting up a Pairing Scheme, in which amateurs who would like to make radio astronomy observations, but who do not want to actually build the equipment, are paired up with a 'builder'. Builders are that group of people who love building equipment, but who, as soon as they have finished, want to get on with building something even better! We'll be taking names of interested parties on the day, and if there is enough interest from both sides, then hope to facilitate the setting up of observer/builder teams.

As well as the above, there will be a variety of posters and demonstrations covering various aspects of amateur radio astronomy, including:

- Colin Clement's observational work at 81MHz
- John McKay's work in observing the Hydrogen Line
- UKRAA will be displaying their Magnetometer and VLF receiver products
- Monmouth Science Initiative, display from students in support of their talk above



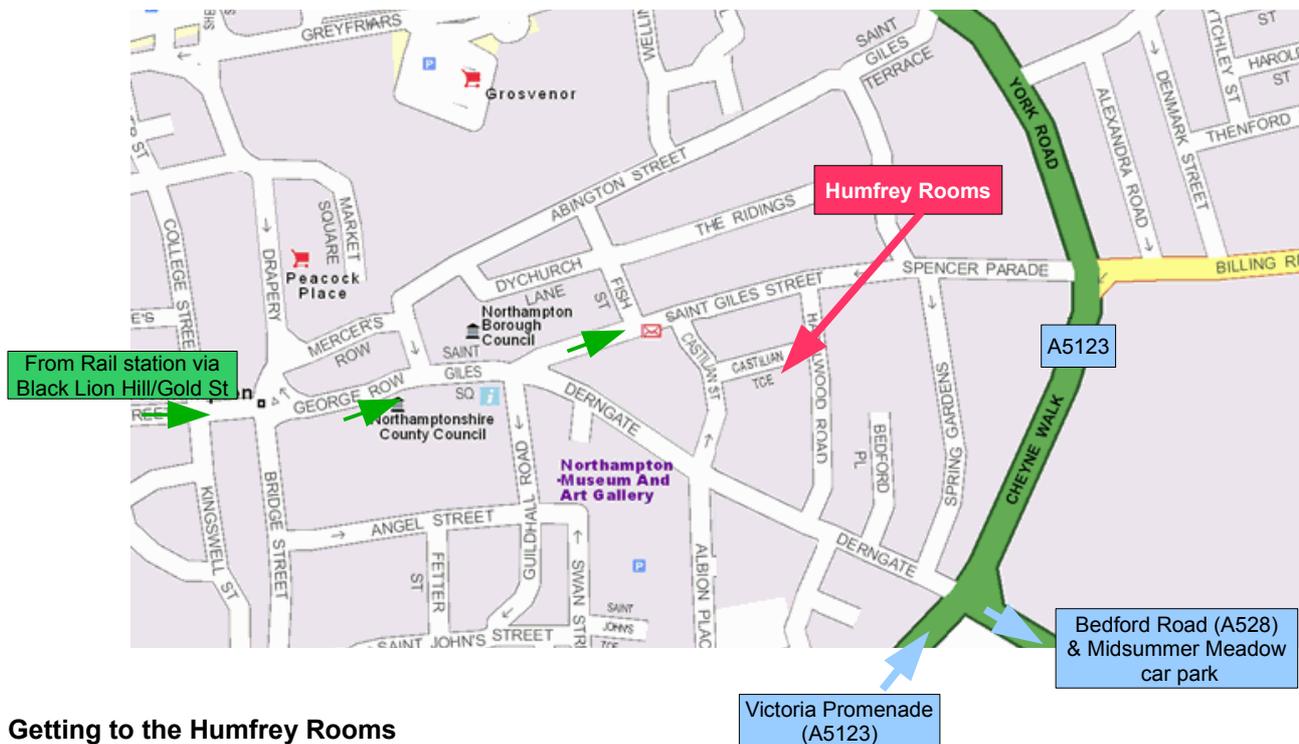
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Tickets

Please contact Karen.holland@xcam.co.uk to buy your ticket. Tickets are £15 (£12 for BAA members) and include buffet lunch and morning and afternoon tea and coffee. Corresponding tickets without lunch but with tea and coffee are also available at £10 and £7 respectively. Pre-booking is advised due to the limited capacity of the meeting room; potential attendees who do not have pre-booked tickets, should contact the meetings organiser to establish if space is available before setting out on their journeys.

Refreshments

Tea and coffee will be available to all from 9.30 to 10.15 and during the lunch and afternoon breaks. A buffet lunch comprising sandwiches, savouries, cake/chocolate and a soft drink will be provided for those who have previously purchased this option. There are also cafés and sandwich shops in St Giles Street but the hope is that attendees will leave plenty of time to look at the exhibits and demonstrations and meet the people behind the e-mail addresses.



Getting to the Humfrey Rooms

By rail

Northampton Station is just off the above map and is approximately ten minutes walk from the Humfrey Rooms. The recommended route is via Black Lion Hill, Gold Street, George Row and Saint Giles Street.

By road

There is a one way system in the streets around the venue – see the above map. The recommended route is via the A5123 York Road/Cheyne Walk (from the north and east) or Victoria Promenade (from the south and west) and then Dergate and Castilian Street. Castilian Terrace is only accessible from Castilian Street and difficult to turn around/exit from when busy.

Car parking

Parking in local streets is limited to one hour. Visitors are recommended to use the open air Midsummer Meadow car park which is approximately five minutes walk from the Humfrey Rooms and cost £5 for an all-day ticket. Other long-stay car parks are available in the area but charge £7 or more for the day.