

British Astronomical Association

Radio Astronomy Group

November 2010 Update

I'm pleased to say that we have had eight new joiners to the baa-rag list since the last Update. Unfortunately there have also been three Unsubscribers, but this is perhaps understandable given the minimal volume of traffic on the list. It is always good to hear what people are doing in this area, even if it is only the sort of dabblings that I pursue, but more of that later.

BAA RAG General Meeting

It has been a long time since RAG held a general meeting for members so I'm very pleased to say that we will be having one next year, again in Northampton. We have two confirmed speakers: Prof. Paul Alexander is Head of Astrophysics Group at the Cavendish Laboratory and project leader for the UK contribution to the Square Kilometre Array project. Dr Ben Stappers is a senior lecturer in the Jodrell Bank Centre for Astrophysics and head of the pulsar science working group for the LOFAR telescope.

We would now like to hear from those of you out there who are prepared to give a 15 minute presentation (with 5 minutes for questions afterwards) on the work that you are doing, or will be doing over the next nine months or so. The idea is to theme the event around observing, so contributions that describe methodology and/or results would be preferred, but please don't let this stop you from making an offer!

The date is still to be confirmed but will be on a Saturday in the Autumn, tentatively 10:30 till 17:00. During the lunch interval we will have space available for attendees to display their work, whether in the form of results or displaying the equipment used.

I'd like to thank Karen Holland for organising this event. Karen was the major force behind the last Northampton meeting which was very successful with a good turnout. The aim is to repeat that and then move on to holding these events on an annual basis.

We are also looking at having an event dedicated to more practical aspects of building equipment. I hope to be able to provide more information in the next Update.

BAA RAG Website

Martyn Kinder has been gradually updating the website which now carries the full archive of John Cook's VLF reports. He has also added a Projects section where people can describe any work that they are doing on radio astronomy. The aim is to give others ideas of what is possible and hopefully provoke feedback on results and further development.

If you do have anything that you are prepared to share, please get in touch with Martyn at martyn@czd.org.uk. If you have any thoughts on how you would like to see the website developed, please contact either Martyn or myself.

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VLF Observing

UKRAA has now sold more than 50 VLF receivers, to places as far afield as the USA and Australia. However John Cook has not seen much of an increase in the number of monthly reports that he receives. As noted above, the full archive of past observations is available on the RAG website, along with details of how you can submit reports. You do not need to use a specialised receiver for this – some observers use simple wire loop antennnas and ‘freeware’ applications such as Spectrum Lab.

If you wish to contribute observations please contact John Cook directly.

Other Activities

I thought it would be worth giving a few details of the work being carried out by Group members, or at least the work that I’m aware of!

Several people are experimenting with TV tuner units, inspired by the work done at ETH Zurich on the CALLISTO and e-CALLISTO projects. These projects couple commercial tuners with microcontroller based software to produce ‘scanning’ receivers for 80 to 800MHz. There is potentially a lot to see here as solar emissions have complex structures when viewed over a broad spectrum. There is a lot of interference from television and radio transmitters of course, but such emissions are at fixed frequencies which can easily be distinguished from the varying and broadband frequency solar emissions.

Another popular subject is that of antenna positioning systems

At our last meeting we had an interesting demonstration of using a direct conversion kit receiver (the TenTec 1056, selling at \$32 in the US) combined with the freeware Spectran spectral analysis program to look for Jupiter emissions. There are several receiver designs available for observing these signals but

and the signal levels are high enough to see that there is even a Blog site for

We had a numAs always, any comments or queries on the above are welcome!

It is always good to hear of experiences in these and other RA-related areas.

Best wishes to all,

Paul Hyde
g4csd@yahoo.co.uk

BAA RAG Coordinator