

## ***RADIONET3***

## **TRIPS OF NA-QUESERA**

**SUBJECT**            **CESRA 2013 Workshop**

**DATE**                **24-29 June 2013**

**PLACE**              **Prague, CZ**

**PARTICIPANTS**    **Anita Richards**

## **BACKGROUND:**

The Solar community have traditionally used dedicated radio instruments such as radio spectrometers in space, STEREO/WAVES and Wind-WAVES, and existing and upgraded ground-based instruments like Nobeyama Radioheliograph, Nancay Radioheliograph, Ratan, SSRT, and many others. However, to quote the meeting introduction, "Solar cycle 24 has opened a new era in solar radio physics as we now have instruments that can probe solar processes from sub-millimeter to kilometer waves. ALMA and LOFAR are entering full-operation state and observations of the Sun will be made in the near future." Several other arrays e.g. EVN, e-MERLIN, have in the past been used for Solar-related observing, such as scintillation studies of the Solar wind, and there is increasing overlap between extra-Solar and Solar research, e.g. studying the Sun as one in a small sample of nearby G stars.

## **HIGHLIGHTS:**

The Community of European Solar Radio Astronomers (CESRA) meeting was attended by 115 people, about a quarter women, from Algeria, Austria, Belgium, Brazil, China, Croatia, Czech Republic, Finland, France, Germany, Greece, Hungary, Ireland, India, Japan, Korea, Latvia, Mexico, Netherlands, Norway, Russia, Switzerland, UK, Ukraine and USA.

Invited and contributed talks and posters will be published as peer-reviewed regular papers in a Topical Issue (TI) of Solar Physics, <http://link.springer.com/journal/11207/>  
The talks are not on-line so I attach CESRA\_AMSR\_RadioNet.pdf

### RadioNet

Growing sections of Solar community are currently aware that ALMA and LOFAR will be of great use, but the precise capabilities are not well-known (not least because Solar observing modes are still being developed. There were several talks regarding LOFAR, and a separate but linked meeting specifically on Solar observations with ALMA was held immediately prior to CESRA. A number of the RadioNet partners perform Solar research and one of the WP4 coordinators, Silja Pohjolainen, is also the President of CESRA. However, to date, the most noticeable contribution of RadioNet to Solar astronomy (at least, which I am aware of) is the presence of Solar PhD students and PDRAs at YERAC and the support of a CESRA school in 2010 (with the intention to hold another in 2014 or 2015). In my talk, I presented:

- \* The general work of RadioNet;
- \* Current and previous uses of RadioNet facilities for Solar research, especially topics not covered elsewhere at the meeting, such as high-resolution studies of the Solar wind and the serendipitous data obtained in PRIDE experiments;
- \* How to get TNA or MARCUs support to use RadioNet facilities, emphasising those likely to be of interest;
- \* RadioNet NA resources for supporting training and science meetings (financial and practical), and in particular the forthcoming YERAC;
- \* The role of RadioNet in coordinating radioastronomy policy and the possibility of Solar astronomers to get involved in planning the successor to RadioNet3.

## **NEXT STEPS:**

WP4 will support the 2014 or 2015 CESRA school and encourage 'young' Solar astronomers to attend YERAC. There may also be requests for support for events from WP3. There will naturally be more contact between Solar and extra-solar radio astronomers as the capabilities of LOFAR and ALMA increase, thus possibly use of TNA and MARCUs. From my experience in ALMA, there could be more exploration of the possibilities for sharing techniques between communities, e.g. for observing rapidly-varying or very large sources. From e-MERLIN and VLBI, there is potential for more high-resolution scintillation and Faraday rotation work. A smaller, more focussed session, to discuss synergies between Solar and extra-Solar techniques and reciprocal science, might be useful, e.g. at the forthcoming CESRA school.