

RADIONET3

TRIPS OF NA-QUESERA

SUBJECT **RadioNet3 Special Session at EWASS2013**

DATE **08-11 July 2013**

PLACE **Turku, Finland**

PARTICIPANTS **Franco Mantovani**

BACKGROUND:

RadioNet3 was invited by EAS to organize a Special Session at the EWASS2013. The EWASS is the annual meeting of the [EAS](#) and was held on 8 - 13 July 2013 in Turku, Finland.

The Special Session Sp2 entitled "RadioNet: The role of modern radio observatories in black hole and jet studies" took place on 8 July.

A further reason for attending the EWASS meeting was to inform a wide audience about the RadioNet3 project; RadioNet3 outreach material was posted and distributed during the conference.

HIGHLIGHTS:

The aims of the session "The role of modern radio observatories in black hole and jet studies" were the following:

A long-standing goal in relativistic astrophysics is to directly observe the immediate environment of a black hole with angular resolution comparable to the event horizon. Upcoming mm-VLBI arrays as well as the currently flying RadioAstron space-VLBI mission are bringing us closer to that goal. We plan to discuss the latest developments of this endeavour in the special session.

Intimately linked to the accreting supermassive black holes are powerful jets of active galactic nuclei - a spectacular and still in many ways enigmatic phenomenon. Understanding their launching, acceleration and collimation is both a major theoretical and observational challenge, being a field where polarimetric radio/mm imaging plays a central role. Another major topic in the jet studies is related to the energy dissipation in them and especially to the production of high energy gamma-rays. Again here radio astronomy with its unsurpassed angular resolution and its ability to image the non-thermal particle population provides an important complement to the high energy observations. We plan to review the recent advances in understanding the relativistic outflows from black holes and what has been learned from for example combining radio and gamma-ray studies during the past few years. We will discuss how these results should influence the future research programs.

The European astronomical community has an access to a wide range of modern and versatile radio astronomical instruments to address these open questions in AGN studies. RadioNet is a program funded by EC to support the astronomers in their fascinating research by providing the wide access to Europe's radio astronomical facilities, pooling expertise, and stimulating technology development.

The organizers of the Radionet3 session were Franco Mantovani, Tuomas Savolainen, Merja Tornikoski. The Sp2 lasted 3 x 1.5 hours. Invited speakers were Prof. Andreas Eckart (University of Cologne), Prof. Heino Falcke (IMAPP, Radboud Universiteit, Nijmegen), Dr. Mikhail Popov (Astro Space Centre, Moscow), and Prof. Eduardo Ros (Max-Planck-Institut für Radioastronomie, Bonn).

38 people subscribed for the participation to Sp2. Most of the people actually attended the session. Not all the people listed showed up. However, several people, who did not previously inform the organizers about their participation, joined the session. The room assigned was full all over the three sub-sessions. The participation was lively. The presentations gave rise to discussions. Clearly the audience appreciated the high level of the presentations. Most of the participants were not radio astronomers. They have been told about the observing facilities that are made available with the RadioNet3 TNA programme and about the main aims of Networking Activities and Join Research Activities.

NEXT STEPS:

It is worth to consider if RadioNet3 should present itself in the EWASS2014 in the same way.