



Report from the event supported by RadioNet

TITLE *60TH MEETING OF CRAF, THE EXPERT COMMITTEE ON RADIO ASTRONOMY FREQUENCIES OF THE EUROPEAN SCIENCE FOUNDATION*

DATE: *3-5 MAY 2017*

LOCATION: *BONN AND EFFELSBERG, GERMANY*

MEETING WEBPAGE: *<https://www.craf.eu/annual-craf-meeting-in-bonn/>*

HOST INSTITUTE: *MAX PLANCK INSTITUT FÜR RADIO ASTRONOMIE*

**RADIONET
BENEFICIARY / NO:** *MPG / 1*

Report:

1. SUMMARY

This was not a scientific meeting in the customary sense of the word: it was the 60th plenary face-to-face meeting of CRAF, the Expert Committee on Radio Astronomy Frequencies of the European Science Foundation. At this meeting, experts in the field of protection of radio frequencies used by the European radio astronomical scientific community met to discuss their common strategy in achieving the mission of CRAF, which includes "to keep the frequency bands for radio astronomical observations free from interference".

As an organisation, CRAF is formally accredited to represent the interests of the Radio Astronomy Service in matters of frequency protection at international fora, specifically at a European level at the CEPT (Conference of European Post and Telecommunication agencies; 48 countries) and at a global level at the ITU (International Telecommunication Union). The individual expert members of CRAF participate in meetings of their national spectrum agencies. This link between international and national activities is crucial for CRAF's activities - at international meetings, national administrations (who have right to vote, if required) support us and at a national level it is important to show that the international radio astronomy community has a common strategy.

CRAF has representatives from all European countries in which radio telescopes are being operated, plus South Africa, and of a few other countries as well. Also represented on CRAF are a number of international organisations: ESA, IRAM, IVS and SKAO. This meeting was attended by 22 representatives from 15 different countries and three organisations.

CRAF welcomed new expert members from two countries, which were not yet represented on CRAF: Austria and the Ukraine.

CRAF employs a full-time Frequency Manager, and is financed at present by the annual contributions of ten institutional Members (observatories, national scientific academies and funding agencies).

At the meeting, the expert members gave reports on the RFI situation in their observatories and their interactions with their national spectrum authorities, the CRAF Frequency Manager reported on her activities of the last year, on issues of interest to the Radio Astronomy Service that are currently being discussed at CEPT and/or ITU, presented the planning of CRAF attendance at the 42 international meetings where we need to be represented, and gave an update on the preliminary CRAF positions on relevant Agenda Items for the 2019 World Radio communication Conference (WRC-19) of the ITU, a huge four-week meeting which is organized every 3 to 4 years. The CRAF chairman presented e.g., CRAF manpower and budget overviews, and lead the preparations for the meeting with directors on 5 May:

An item specific to this meeting was a discussion with directors of key Member Institutions of CRAF - the observatories, national scientific academies and funding agencies who pay for the annual operational budget of CRAF. The objective was a revision of the 2004 CRAF Charter and MoU between the ESF and institutional Members, but no conclusion could be reached on this issue, and the revision will continue in close collaboration between directors and the expert representatives of their Institutions.

CRAF represents all radio telescopes in Europe in matters of radio frequency protection, which is to the obvious benefit of the entire RadioNet community.

On the CRAF website, there is a news item under <https://www.craf.eu/annual-craf-meeting-in-bonn/>, but the input and output documents are not publicly accessible, as they concern internal CRAF strategies for the protection of radio astronomy frequencies.



2. AGENDA OF THE EVENT

Presenters:

Hezareh: CRAF Frequency Manager (MPIfR, Germany)
Thomasson - CRAF expert member (Jodrell Bank, UK)
van der Marel - CRAF expert member (ASTRON, Netherlands)
van Driel: CRAF chairman (Paris Observatory, France)

3 May 2017:

Introduction
Opening of the meeting - van Driel
Adoption of the agenda
Evaluation of Meeting Minutes of the November 2016 CRAF web-meeting - van Driel
Review of action items, and ideas to improve CRAF operations - van Driel, Hezareh
Communications concerning CRAF - van Driel
New CRAF expert members
CRAF budget - van Driel
CRAF Charter explanatory document - van Driel
Preparation for the Stakeholder Council meeting - van Driel
CRAF Frequency Manager report - Hezareh
CEPT/ITU meetings of interest to CRAF and attendance - Hezareh
Issues of concern to the RAS in CEPT/ITU - Hezareh
Status of WRC-19 Agenda Items and position of CRAF
RadioNet H2020 - van der Marel
CRAF Newsletter - Thomasson

4 May 2017:

Full-day visit of Effelsberg radio observatory, including a guided tour

Presentations by invited guests:

Alex Kraus (Effelsberg/MPIfR, Germany): Science with Effelsberg
Jürgen Nitschke (BNetzA, Germany): BNetzA, the Federal Network Agency
Markus Dreis (EUMETSAT): EUMETSAT - Science and current issues in spectrum management
Ralf Ewald (DLR, Germany): DLR - Science projects and current issues in spectrum management

Observatory reports on RFI situation - all

5 May 2017:

Meeting with institutional Member directors; planned first Stakeholder Council meeting - all
Conclusion of the meeting - van Driel
Date and location of next meeting
Any other business

3. PARTICIPANTS

The 22 CRAF expert members come from 15 different countries, three of them are young researchers, two are female, and six of them received RadioNet support (see under "RadioNet financial contribution").

The following 22 CRAF expert members took part in the meeting: Pietro Bolli (Italy), Hayo Hase (IVS), Talayeh Hezareh (MP), Axel Jessner (Germany), Karel Jirička (Czech Republic), Juha Kallunki (Finland) [through Skype], Christophe Marqué (Belgium), Joe McCauley (Ireland), Christian Monstein (Switzerland), Vincent Piétu (IRAM), John Seiradakis (Greece), Serge Yerin (Ukraine), Harry Smith (SKAO), Marian Soida (Poland), Ivan Thomas (France), Peter Thomasson (UK), Viktor Tóth (Hungary), Adrian Tiplady (South Africa), Vincenza Tornatore (Italy), Hans van der Marel (Netherlands), Wim van Driel (France) and Benjamin Winkel (MPIfR).

The seven directors, or their representatives, who participated on 5 May come from eight different countries, none are young researchers, one is female, and none received RadioNet support.

The following eight directors of CRAF Member Institutions, or their delegates, attended the session on 5 May: Stéphane Corbel (INSU, France), Simon Garrington (STFC, UK), Hans Olofsson (Onsala Space Observatory, Sweden), Adrian Tiplady (SKA South Africa and Hartebeesthoek Observatory), Tiziana Venturi [through Skype] (INAF, Italy), René Vermeulen (ASTRON, Netherlands) and Anton Zensus (MPIfR, Germany).

Also participating were the CRAF Frequency Manager, Talayeh Hezareh (Germany) and, for the meeting with the directors, the Executive Director of the ESF, Jean-Claude Worms.

4. CONFERENCE PICTURE

The CRAF expert members dwarfed by the sheer size of the 100 metre Effelsberg radio telescope - one of the telescopes they strive to protect from harmful radio interference



5. RADIONET FINANCIAL CONTRIBUTION

For the present meeting, approximately 3300 EUR of RadioNet support was requested under WP 4.2 for the travel expenses of six participants: Pietro Bolli (IT), Karel Jirička (CZ), Joe McCauley (IR), Vincenza Tornatore (IT), Viktor Tóth (HU) and Serge Yerin (UA), and 2 500 EUR for the organisation of the meeting (MPG).

6. PUBLICATIONS

In the Minutes of the meeting RadioNet support is duly acknowledged.

The Minutes will not be made publicly available, as they contain information on the CRAF strategy for the protection of radio astronomy frequency bands, which should not be shared with other spectrum users such as operators of satellite communication systems and mobile phone systems.