CRAF REPORT TO CORF

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CORF MEETING, 24 MAY, 2017

RECENT CRAF MEETING #60

Met with directors of our Member Institutions who fund CRAF (radio observatories, national Academies, funding agencies):

informed them about CRAF and its complex activities:
as an organisation at international level (CEPT, ITU)
as individual members with their national administrations

Formed a CRAF Studies Core Group:
to do complicated sharing and compatibility studies

Decided to organize a Summer School on Spectrum Management for Radio Astronomy in South Africa in 2018, with IUCAF and South Africa

CRAF POSITION ON WRC-19 AGENDA ITEMS RELEVANT TO RADIO ASTRONOMY

Our standard position “protect relevant RAS bands” means:

No changes should be made to the ITU Radio Regulations unless acceptable sharing and compatibility criteria are developed with the RAS.

AI 1.1 Allocation at 50-54 MHz to the amateur service in Region 1

– danger for space weather sensors (radio telescopes)

CRAF Position

The band is used for the monitoring of solar activity.
In Region 1, major facilities such as LOFAR use of the band.
For WRC-19 the technical and operational characteristics of space weather sensors should be documented,
to conduct for WRC-23 the necessary sharing studies for incumbent systems operating in bands used by space weather sensors, to determine regulatory protection that will not place additional constraints on incumbent services.

CRAF urges great care in allocating bands to active services, which may block the further development of space weather research.

AI 1.6 **Operation of non-GSO FSS satellite systems at 37.5-39.5 GHz, 39.5-42.5 GHz, 47.2-50.2 GHz and 50.4-51.4 GHz**

- protect relevant RAS bands

CRAF Position

CRAF supports the protection of existing RAS allocations at 42.5 - 43.5 GHz, 48.94 - 49.04 GHz, and 50.2 - 50.4 GHz;
and those of the EESS(passive) .

AI 1.7 **Study spectrum needs for telemetry etc. in the space operation service for non-GSO satellites with short duration missions, to assess, if necessary, new allocations**

- protect relevant RAS bands

CRAF Position

CRAF supports the protection of existing RAS allocations in the bands 150.05 - 153.0 MHz and 406.1 - 410 MHz.

AI 1.8 **Consider support for the modernization of Global Maritime Distress Safety Systems (GMDSS) and to support the introduction of additional satellite systems into the GMDSS**

- "Iridium through a backdoor"

CRAF Position

Any new GMDSS provider must provide protection of incumbent services, including those in adjacent frequency bands, from harmful interference.

CRAF supports the protection of the existing primary RAS allocation in the band 1610.6 - 1613.8 MHz.
No action should be undertaken unless the RAS band is (finally) free from harmful interference and acceptable compatibility criteria are developed with the RAS.

CRAF Frequency Manager is CEPT co-coordinator

AI 1.10 **consider spectrum needs for the introduction of the Global Aeronautical Distress and Safety System (GADSS)**

- protect relevant RAS bands

CRAF Position

CRAF supports the protection of existing RAS frequency allocations.

AI 1.13 **Identification of bands for the future development of International Mobile Telecommunications (IMT), in the range 24.25-86 GHz**

- protect the 10 RAS bands potentially concerned + EESS

CRAF Position

CRAF supports the protection of existing RAS frequency allocations; and those of the EESS(passive) and SRS in passive bands.

CRAF provides the only radio astronomers participating at TG 5/1

AI 1.14 **Consider regulatory actions for high-altitude platform stations (HAPS), within existing fixed- service allocations**

- Beware of Facebook!

CRAF Position

Considering the frequency band 31.0 - 31.3 GHz (fixed uplink), changes to already defined HAPS system characteristics will lead to new compatibility studies with the passive band 31.3 - 31.5 GHz.

The frequency band 38 - 39.5 GHz considered in Region 1 is not of concern to CRAF. However, CRAF also supports RAS operations in other Regions

AI 1.15 **Identification of bands for land-mobile and fixed services applications operating in the range 275-450 GHz**

- Protect relevant RAS bands + EESS, SRS

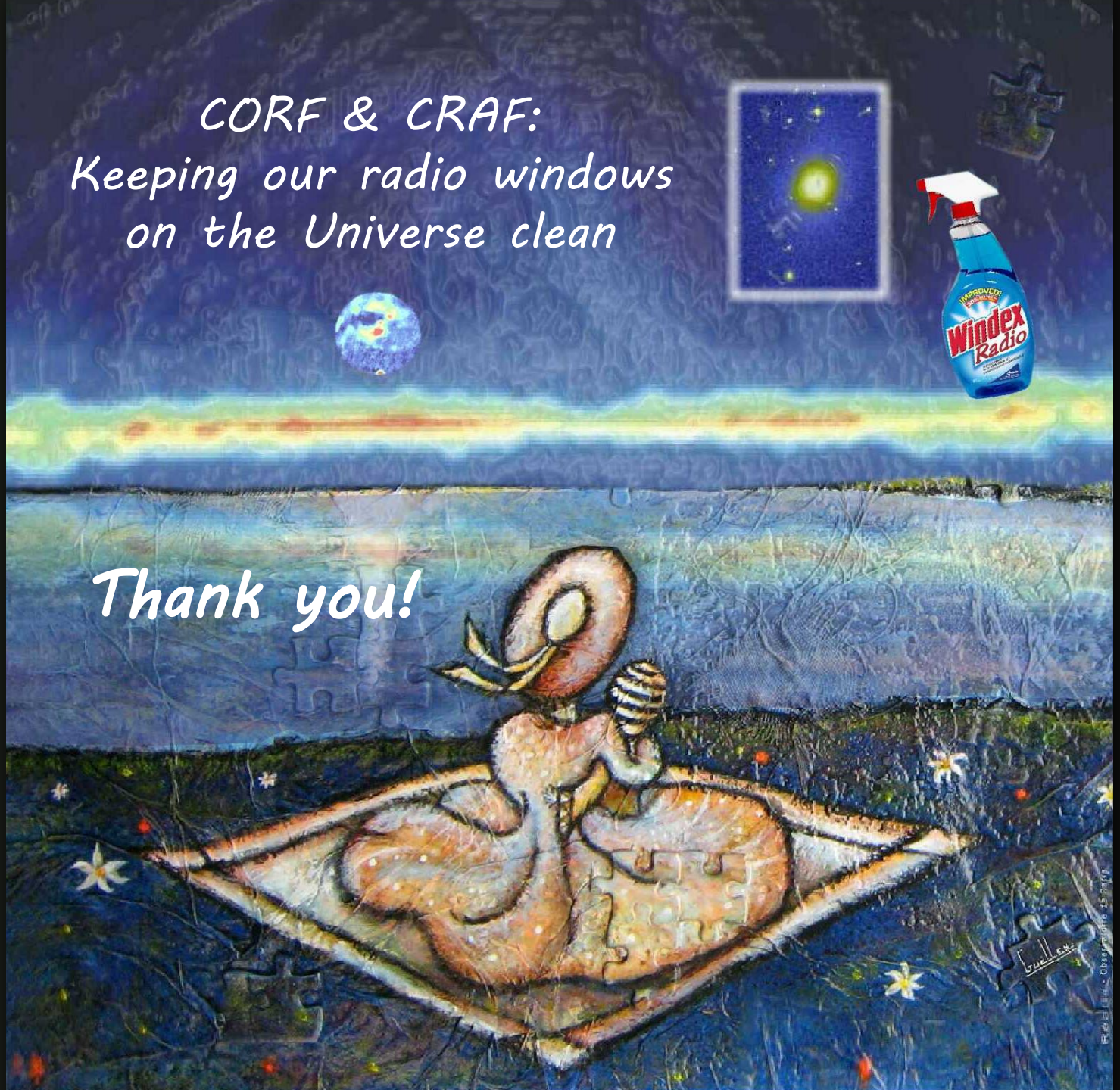
CRAF Position

CRAF supports the protection of existing RAS frequency allocations;
and those of the SRS, and EESS (passive).
CRAF also supports the development of propagation models for this frequency range.

FURTHER ISSUES FOR CRAF

- massive NGSO systems at 10.7-12.5 GHz (DL) and 14-14.5 GHz (UL) ➡ OneWeb, SpaceX
- Iridium NEXT generation
- car radars at 79 GHz
- wind turbines

- Important, but not allocated, RAS bands and new technologies
- more [and younger] astronomers needed at ITU/regional levels


CORF & CRAF:
Keeping our radio windows
on the Universe clean
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Thank you!