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Commission GASS 2026 Report
Commission J

The Commission J business meetings (Commission Coordination Activities, CCAs) at the URSI GASS 2026 in Krakow, Poland were held on August 17, 19 and 21, 2026. All these meetings were held in hybrid format to facilitate participation by interested people who were not able to participate in the conference in person. The following are some of the main highlights from the meetings and discussions therein:

1. Elections of Commission Officers

During the first CCA, the process for the election of the Commission Officers was explained to all the attendees, and it was informed that the preliminary results for the elected officials are known, but are pending ratification by the the Council. In the second CCA, the results of the elections were formally announced.

Dr. Pietro Bolli (INAF, Italy) was elected Vice-Chair for a 3-year term starting at the end of GASS 2026. Dr. Michael A. Kriele (UWA, Australia) was elected as ECR for a 6-year term starting at the end of GASS 2026.

Prof. Yashwant Gupta (outgoing Vice-Chair) became the new Chair for a 3-year term starting at the end of GASS 2026, and Dr. Mohamed Darwish (NRIAG, Egypt) continued as ECR for another 3 years.

Commission J members expressed their grateful thanks for the efforts by Prof. Stefan Wijnholds (outgoing Chair) and Dr. Danielle Fenech (outgoing ECR) over the last six years in leading and guiding the activities of the Commission.

2. Review of Terms of Reference

A proposal for refining the Terms of Reference (ToR) for Commission J was put up by some members in the first CCA meeting, and the same was discussed thoroughly in the second CCA meeting, and a final modified version was adopted by the members in the third CCA meeting.
The changes help to clarify better the role of Commission-J in terms of the range of readio frequencies covered, as well as the nature of the cosmic radio signals studied under this Commission. This modified version was presented and discussed in the Coordination Committee CC meeting of 22nd August, and was approved.

The new version of the ToR is as follows:

The activities of Commission J are related to the scientific and technological research of the reception and interpretation of radio waves reflected by extraterrestrial bodies or emitted by natural sources and phenomena in the Universe, including

- Cosmic radio signals from the Early Universe to the present epoch;
- Radio emission of and reflections from Solar system bodies.

Radio astronomical observations are conducted with a variety of observing techniques, continuum-band or spectral lines, single dish or interferometric mode, covering all radio frequencies ranging from the lowest (~kHz) to the highest (~3 THz) frequencies. Emphasis is placed on:

- the promotion of science-driven techniques for making radio-astronomical observations and data analysis;
- support of activities to protect radio-astronomical observations from harmful interference.

3. Any changes/confirmation in Working Groups and other organizations

All the working groups in which Commisison J is involved were discussed during the 2nd and 3rd CCA meetings, and the summary is as follows.

Updates were provided for the following working groups in which Commission J is involved:
1. Commission J Working Group on Space-based Radio Astronomy by Yuri Kovalev
2. Inter-Union (URSI-IUA) Working Group Historical Radio Astronomy by Leonid Gurvits
3. Inter-Commission (GJ) Working Group on Radioastronomy and ionosphere by M. Mevius
4. Inter-Union (URSI-IUCAF) Working Group on Radio Science Services by Tasso Tzioumis

There were no updates on activities of the following working groups where Commission J is involved:
1. Inter-Commission (EFGHJ) Working Group on RFI mitigation and characterisation
2. Inter-Commission (GJFEH) Working Group on Interdisciplinary Space Weather

It was proposed that Chair of Commission J could contact the Chair of the lead Commissions of these working groups to get information about the activities and any proposed changes in the constitution of these working groups.

4. Technical Advisory Committee

Commission-J members discussed plans to set up a Technical Advisory Committee (TAC). A few names of possible members were suggested and current Chair (Yashwant Gupta) will be following up with these (and other possible individuals) to set up the TAC.

5. Preparation of Future Meetings/Identification of meetings to be supported (cfr. Commission budget)

In addition to preparation for furture URSI meetings (AT-RASC 2027 and AP-RASC 2028) the members also reviewed support provided to other meetings during the last triennium, as well as plans for meetings to be supported in the near future. In particular, members were in favour of continuing support to the RFI conference – last in-person edition was in 2024

and was supported by URSI Commission J and the same is proposed for the next in-person edition that will be in 2027. Similarly, the Beacon Satellite Symposium in 2025 was supported by URSI Commission J, and the next edition of this is planned in 2028.

In addition to thse meetings which have been supported financially via the Commission budget, Commission J has also supported several other meetings technically (but not financially) in the past triennium e.g. ISAP 2023 (Malaysia), RCRS 2024 (India), ISAP 2024 (South Korea), ISAP 2025 (Japan), RADIO 2025 (Mauritius), RADIO 2026 (South Africa), COSPAR General Assembly 2026 (Italy). It is expected that several of these meetings that are repeating conferences, e.g. ISAP, RCRS, RADIO and COSPAR are likely to continue to be supported technically by Commission J (it is to be noted that some of these meetings, e.g. RCRS, are supported financially by URSI from the common budget).

6. Proposed sessions and conveners for AT-RASC 2027

After some discussion and review of the current sessions, the following proposals were considered for putting up for ATRASC 2027:

- New telescopes and transformative enhancements to facilities
- VLBI
- Time-domain astronomy
- Cosmological HI: obervatoins and precision calibration
- Wide-field radio astronomy and survey science
- Front-end systems for radio astronomy
- Real-time processing systems
- Post-correlation signal processing : Big Data and AI
- Space-based radio astronomy
- Updates from existing radio observatories
- Mutual benefit between radio astronomy an ionospheric science (jointly with Commission G)
- Radio emission from the Sun, heliosphere and planets (jointly with Commission H)
- Spectrum management and utilization (jointly with Commissions E, A, C and F)
- Machine learning and signal processing to analyse and mitigate EMI (held jointly with Commissions E, G and F)

As it was difficult to attract contributions to the session on “Millimetre and Sub-millimetre wave radio astronomy” in this GASS-2026, it was decided that it may be better to skip that topic at least at the AT-RASC 2027. Similarly, for some other sessions like the joint session with Commission A titled “Precise timing and synchronisation” there were not too many papers and hence it was thought that this should be discussed between the Commissions.
The list of convenors for these sessions is being worked out and will be finalised within the next 4-6 weeks.