



Commission GASS 2021 Report

Commission H

1. Results of Election of Vice-Chair

The call for nominations for the new Commission H Vice Chair was sent out (again) on 15 January , 2021. Two excellent candidates have been nominated are (in alphabetical order):

Robert Marshall and Craig Rodger

Results:

Robert Marshall *31 votes*

Craig Rodger 34 votes

Prof. Craig Rodger won the election and URSI Council confirmed the result on 1 September 2021.

2. Results of Election of Early Career Representative

The call for nominations for the second Commission H Early Career Representative was (again) sent out on 15 January , 2021. Two excellent candidates have been nominated.

Satoshi Kurita and Evgenii Shirokov

Results:

Satoshi Kurita *32 votes*

Evgenii Shirokov 34 votes

Dr. Evgenii Shirokov won the election and URSI Council confirmed the result on 1 September 2021.

3. Appointment of Associate Editor for *Radio Science Bulletin*

Traditionally Comm H has appointed the new vice chair as the Associate Editor for Radio Science Bulletin. So, our new Associate Editor is Prof. Craig Rodger.

4. Updates/Status of Working Groups

Reports of Working Groups may be included in the Appendix1.

One new Working Group was proposed. It will be joint WG with Commissions H, G, and E.

Radio diagnostics of space weather plasma processes,

Comm H representative is prof. Mauro Messerotti, Comm G representative is David R. Themens, and Comm E representative is Yasuhide Hobara

5. Updates to Terms of Reference of Commission

The goals of the Commission are :

- To study waves in plasmas in the broadest sense, and in particular :
 - the generation (e.g. plasma instabilities), propagation, and detection of waves in plasmas,
 - wave-wave and wave-particle interactions,
 - plasma turbulence and chaos,
 - spacecraft-plasma interaction,



- instabilities, heating, and diagnostics of laboratory plasmas;
- To encourage the application of these studies, particularly in the areas of solar/planetary plasma interactions, space weather, and an increased exploitation of space as a research laboratory.

There were not any comments or proposed changes to above mentioned text.

6. Meetings proposed to be supported in the coming triennium

So far, only meeting that was known is the 10th VERSIM Workshop in Finland

7. Report and comments on the scientific program of the Commission for the current GASS

We have experienced problems where

- 1) speakers could not share their screen - we had to prompt IT to give permission
- 2) problems with no sound in the room in Rome,
- 3) problems with the microphone for speakers in Rome - where the sound is very quiet for online listeners.
 - Delays due to the above problems put the session behind and it was very difficult to catch up. We are aware that if the session ends late it means the next session cannot start. We did manage to keep to the timetable - just - by reducing time for questions.
 - The break between sessions was essential - very good.
 - It needs to be stated clearly that everyone online must click on the online link that starts before the session. Even then sometimes this has not been activated and we had to click directly on the session.
 - It is difficult to manage questions in person in Rome when the session chairs are all online and cannot see anything. Thanks to the session hosts in Rome for helping.
 - We kept encouraging people online to put questions in chat - but the number of questions online was disappointing - maybe only 1 or 2 per speaker.
 - Generally - it is clear that there is a problem with different time zones. Generally people in Europe and Asia joined the sessions, but very few people from USA - I think due to the different time zone.
 - We had about 25 people joined online for H04-05 and maybe 10 in the Room in Rome.

Online audience members cannot see the list of participants (and of course don't know who's there in person). This pretty much kills any semblance of participating in a meeting. The setup was much better for AGU, GEM, and VERSIM last year. Another thing that helped a lot in some of those meetings was an independent Slack channel for extended discussion (once people were convinced to join Slack).

8. Proposed sessions for the next GASS

- 1) Open Session
- 2) Radio Diagnostics of Space Weather Plasma Processes
- 3) External/internal natural boundary layers in terrestrial/planetary environments: interplay between macro and microscopic processes
- 4) Multipoint & ground-based observations of magnetospheric wave phenomena, remote sensing of plasma
- 5) Wave-particle interactions



However, these are just the sessions that have been discussed in Comm H CCA meetings. Number will be higher, but now we have put our efforts to AT-AP-RASC2022.

9. Proposed sessions for the AT-RASC

Pre-conference

Early Career Researchers HGE Networking Event requested for the Sunday afternoon

Scientific Sessions - Confirmed

- * Recent advances in geospace research from multi-point observations
- * Radio Diagnostics of Space Weather Plasma Processes
- * Commission H open session
- * Meet the HGE Experts (Commissions HGE)
- * Celebrating the legacy of Richard Thorne: plasma waves, wave-particle Interactions, and their multifold effects on planetary radiation belts dynamics
- * Atmospheric, Ionospheric, Magnetospheric & High Energy Effects of Lightning Discharges
- * Machine learning techniques and their application to plasma waves

There are some joint sessions still under development, but those will be proposed by leading Commission.

There is a full list with Title of the session, names of conveners and co-conveners, and short description of the sessions in the Appendix2.

10. Other business

There was no other business

Officers for 2021-2023

Jyrki Manninen, Chair
Craig Rodger, Vice-Chair
Frantisek Nemecek, ECR1
Evgenii Shirokov, ECR2