



Happy Holidays, INAG!

Season greetings and a summary of 2019

To: All INAG readers,

12/24/2019



Dear all,

Our warmest Season Greetings and wishes for a Fruitful and Happy New Year 2020!

It has become a tradition, as we bid farewell to the year we are leaving behind, to **SUMMARIZE THE STATE OF IONOSONDE UNION AND ACCOMPLISHMENTS**

Ionosonde Network Advances

- [3D Ionospheric Weather Nowcast](#) using 7-minute latency ionosonde data from the Global Ionosphere Radio Observatory ([GIRO](#)) has reached the new landmark of 60 observatories operating in 26 countries.

- Participating ionosonde systems: AIS INGV, Digisondes, IPS 5D, Parus-A, VIPIR, VISRC2
- GIRO welcomes new providers of real-time autoscaled ionograms
- [GAMBIT Explorer](#) is free for education/research applications
- Open source code releases in Fortran and Java to integrate the weather nowcast in your application
- [TechTIDE](#), a Pan-European TID Warning System, operates a network of DPS4D in Europe and South Africa
 - Expanded coverage in 2019:
 - 14 sites for LSTID detection by HF interferometry
 - 6 oblique links for MS- and LSTID [identification](#)
 - [TID Explorer](#) online access to TID detection database
 - TechTIDE [TID Warning System Report](#)
- Norderelbe GmbH, Germany, has announced the development of a new ionosonde prototype [Ionorde 4](#).
- New Digisonde DPS4D observatories in 2019:
 - Wake Is. (NEXION)
 - Thule, Greenland (NEXION)
 - Any moment now:
 - El Arenosillo, Spain (DPS4D)
 - Poker Flat, Alaska (DPS4D)
- [Lowell Digisonde International](#) announced the availability of new "Digisonde Receiver Supplement" or **DRS-5**: a low-cost receive-only system, ready for deployment by mid-2020
- XV International GIRO [Forum](#) and Real-Time IRI Task Force Meeting took place in May 2019 in Lowell, Massachusetts.
- PLEASE REPORT OVERLOOKED 2019 ACCOMPLISHMENTS TO US

XXXIII URSI GASS 2020

Invitation to Session G04 (Modern Ionosondes)

Dear members and friends of INAG:

This is to invite you all to submit your contributions to Session G04 during the upcoming URSI General Assembly and Science Symposium 2020 that will take place in Rome, Italy, from August 29 to September 5, 2020.

Title:

Science with Modern Ionosondes and Associated Instrumentation and Models

Abstract submission deadline:

31 January 2020

Submission page:

<https://www.cvent.com/c/abstracts/75ea042e-5d88-4d0b-afe9-81daeee8dbcd>

Session description:

Ionosondes remain the workhorse of ionospheric weather monitoring, providing measurements of high quality and resolution in near real-time and from a global network of observatories. Modern HF systems have re-emerged as rapid-insight, high-sensitivity Ionosphere Disturbance Indicators (IDIs) that detect and specify adverse effects on trans-ionospheric signal propagation. The session welcomes contributions on recent advances in the ionosonde science and engineering, with a traditional emphasis on the capability to promptly infer ionospheric conditions, on their local and global scale. We are interested in success stories of using ionosondes to specify traveling ionospheric disturbances (TID), ionospheric scintillation activity (ISA), elevated radio absorption (ERA), and other natural and man-made phenomena that make the modeling of ionospheric conditions a difficult task. Special attention will be given to cooperative monitoring of the ionosphere with other instruments, where the synergy of the measurement variety brings a new understanding and practical solutions.

Hope you will join us in Rome!

Session organizers:

Ivan Galkin, GIRO

John-Bosco Habarulema, SANSA

And so it goes. Leaving the Y2019 behind, please be on the lookout for new great ideas, a new generation of the younger researchers, new opportunities for INAG.

Please join us at XXXIII URSI GASS Session G04 in August-September 2020.

HAPPY HOLIDAYS, INAG !
HAPPY NEW YEAR

Ivan Galkin

UMass Lowell: GIRO
INAG Chair

John Bosco Habarulema

SANSA, South Africa
INAG Co-Chair

Baiqi Ning

IGG CAS, Beijing, China
INAG Co-Chair

and **Kehe Wang**, SWS BOM Australia, INAG Bulletin Editor

Exit Note: INAG would like to hear from you on your status and plans. To contribute an article to the INAG Bulletin please write to bulletin@ursi-inag.org. Your article will be published to the URSI G.1 site and announced in this newsletter. To send a short note to INAG newsletter, simply reply to chair@ursi-inag.org.

Copyright © 2019 URSI Ionosonde Network Advisory Group, All rights reserved.