AWG meeting in Athens, 6th-7th November 2025

Each presenter has 12 minutes for their talk and 3 minutes for discussion. Please note that small changes in the schedule may occur if needed.

Thursday, 6th November

09:00 – Maria Tsakiri & Petr Štěpánek: Welcome, logistics
09:10 – Laurent Soudarin: IDS news
09:25 – Cecille Manfredi: DORIS system, the current constellation and future missions
09:40 – Jerome Saunier: DORIS Network Status and Outlook
09:55 – Guilhem Moreaux: Status of the realization of the DPOD2020 v5.0
10:10 – Zuheir Altamimi: DORIS contribution to the ITRF2020 Updates (online)

☕ **10:25 – Coffee break**

10:45 – Julian Zeitlhöfler: DTRF2020-u2023 and first steps towards DTRF2020-u2024
11:00 – Guilhem Moreaux: Quick analysis of the ITRF2020-u2024 by the IDS CC
11:15 – Adrian Banos Garcia: Geodetic combinations to improve the realization of the Terrestrial Reference Frame
11:30 – Hugues Capdeville: GRG AC report
11:45 – Petr Štěpánek: GOP AC report
12:00 – Arnauld Pollet / Samuel Nahmani: Status of the IGN-IPGP/JPL Analysis Center

🍴 **12:15 – Lunch**

13:15 – Julian Zeitlhöfler: Current status of the AAC at DGFI-TUM
13:30 – Patrick Schreiner: Status report of the IDS Associate Analysis Centre at GFZ
13:45 – Guilhem Moreaux: Recommendations from the analysis of the latest IDS AC single satellite solutions

🚡 **14:00 – Dionysos Observatory visit (aprox. 3.5 hours)**

🍴 **20:00** – Social Dinner

Friday, 7th November

09:00 – Susanne Blondel: Assessment of self-shadowing effect on the SWOT satellite
09:15 – Alexandre Couhert: Renewed interest in adjusting stochastic accelerations for DORIS-only precise orbit solutions
09:30 – Nikita P. Zelensky: Development of DORIS+SLR and DORIS-only orbits with the new std2400 standards and assessment of radial orbit accuracy

09:45 – Julian Zeitlhöfler: First results on combined orbit determination using SLR and DORIS
10:00 – Sergei Rudenko: Comparison of time series of DORIS and SLR station coordinates of ITRS 2020 realizations and their updates and their impact on POD of altimetry satellites

☕ **10:15 – Coffee break**

10:35 – Xanthos Papanikolaou: DORIS processing software: progress report
10:50 – Ningbo Wang: NRT DORIS Data for Global Ionospheric Irregularity Monitoring (online)
11:05 – Patrick Schreiner: Clocks WG status

🗣️ **11:20 – Discussion and time buffer**

13:00 – Closing meeting

List of Participants

Altamimi, Zuheir (online)
Anastasiou, Dimitrios
Banos Garcia, Adrian
Blondel, Sussane
Capdeville, Hugues
Couhert, Alexandre
Filler, Vratislav
Flohrer, Claudia
Kelley, Anna J.
Krey, Vassiliki
Kumar, Vikash
Le Bail, Karine
Manfredi, Cecile
Moreaux, Guilhem
Moyard, John (online)
Nahmani, Samuel
Papanikolaou, Xanthos
Peng, Hanbing (online)
Pollet, Arnaud
Rudenko, Sergei
Saunier, Jerome
Schreiner, Patrick
Serelis, Georgios
Soudarin, Laurent
Štěpánek, Petr
Tsakiri, Maria
Wang, Ningbo (online)
Zacharis, Vangelis
Zeitlhöfler, Julian

List of Presentations (with Abstracts Where Available)

Assessment of self-shadowing effect on the SWOT satellite
Blondel S., Mercier F., Moyard J., Couhert A., Houry S.
The NASA-CNES climate science Surface Water and Ocean Topography (SWOT) satellite was successfully launched in December 2022. SWOT is the first space mission that will study nearly all of the water on the Earth's surface. To complete this global survey and mapping of the finer details of the ocean's surface topography and water bodies over time, the satellite is equipped with a GPS and DORIS dual-frequency receivers, as well as a Laser Retroreflector Array (LRA) to support verification of the challenging Precision Orbit Determination (POD) requirements (1 cm radial rms error). SWOT architecture, with large appendages (solar panels, KARIn, radiators) coming out from the main central body, combined with its attitude law, can produce cast shadows. The order of magnitude is of multiple square meters of the satellite's surface, depending on the position on the orbit and the sun angle w.r.t. the orbit plane. Thus, it is necessary to model those effects. We will present the current results and efforts underway to improve the modeling of Solar Radiation Pressure (SRP) and assess the amplitude of self-shadowing effects. First, with the observation of residual signatures of systematic errors related to the Sun's elevation angle when using the current a priori SRP model. Then, with the computation of self-shadowing effects and the assessment of its amplitude.

Clocks WG status
Schreiner P.

Comparison of time series of DORIS and SLR station coordinates of ITRS 2020 realizations and their updates and their impact on POD of altimetry satellites
Rudenko S., Bloßfeld M., Seitz M., Zeitlhöfler J.
In this presentation, time series of DORIS and SLR station coordinates of ITRS 2020 realizations and their updates will be compared and the impact of using these realizations on precise orbit determination of altimetry satellites will be shown.

Current status of the AAC at DGFI-TUM
Zeitlhöfler J.

DORIS contribution to the ITRF2020 Updates (online)
Altamimi Z.

DORIS Network Status and Outlook
Saunier J.

DORIS system, the current constellation and future missions
Manfredi C.

DSO DORIS processing software: progress report
Papanikolaou X., Serelis G., Anastasiou D., Zacharis V., Krey V., Konstantinou A., Tsakiri M.
During the last few years, Dionysos Satellite Observatory has been expanding its

involvement in the DORIS community by developing a state-of-the-art processing software. An open-source toolkit capable of performing high accuracy orbit determination for Low Earth Orbit (LEO) satellites and positioning using DORIS observations. While still under development phase, a list of critical updates have been performed, while others are still pending. This presentation will focus on the current status of the software toolkit, intermediate results and upcoming improvements.

DTRF2020-u2023 and first steps towards DTRF2020-u2024
Seitz M., Zeitlhöfler J.

First results on combined orbit determination using SLR and DORIS
Zeitlhöfler J.

Geodetic combinations to improve the realization of the Terrestrial Reference Frame
Garcia A.B.

GOP AC report
Štěpánek P., Filler V., Kumar V.

GRG AC report
Capdeville H.

IDS News
Soudarin L.

NRT DORIS Data for Global Ionospheric Irregularity Monitoring (online)
Wang N., Le D., Liu A.

Accurate knowledge of the free-electron distribution in the Earth's ionosphere is essential for mitigating ionospheric delays in satellite navigation and for space weather monitoring. The DORIS system provides high-quality dual-frequency phase measurements that offer valuable information on ionospheric conditions. With several DORIS satellite missions now providing near real-time (NRT) data at a latency of only a few hours, these observations are well suited for global ionospheric analysis. Based on our previous work at Chinese Academy of Sciences (CAS), in which we introduced the concept of DORIS differential Slant Total Electron Content (dSTEC) as an independent data source for the combination of GNSS-based Global Ionospheric Maps (GIMs), the present study extends the application of NRT DORIS data to ionospheric irregularity monitoring. We present, for the first time, the computation of the Rate of Total Electron Content Index (ROTI) from NRT DORIS observations and compare the results with co-located GNSS-derived ROTI values on a global scale. Finally, we discuss the prospects and future developments of using NRT DORIS data for global monitoring of ionospheric irregularities.

Quick analysis of the ITRF2020-u2024 by the IDS CC
Moreaux G.

Recommendations from the analysis of the latest IDS AC single satellite solutions
Moreaux G.

Renewed interest in adjusting stochastic accelerations for DORIS-only precise orbit solutions

Couhert A., Moyard J., Mercier F., Blondel S., Houry S.

Worse than usual DORIS-based orbit accuracies have been observed for Low Earth Orbit (LEO) altimeter satellites over the past years due to an increase in solar activity. In periods of high solar activity, the atmosphere becomes more difficult to model because it changes its state more rapidly. The impact is especially remarkable during strong solar geomagnetic storms. In this study we evaluate the benefit of estimating fictitious stochastic accelerations to mitigate in particular the effects of such solar activity changes.

Status of the IGN-IPGP/JPL Analysis Center

Pollet A., Nahmani S., Bertiger W.

This contribution outlines recent developments and investigations conducted by the IGN-IPGP/JPL Analysis Center since the last AWG meeting. We present the outcomes of single-satellite assessments of the IGN22 solutions, as evaluated by the IDS Combination Center. The presentation then examines preliminary results from an internal study on the quality and consistency of tropospheric parameters estimated during our data processing. Lastly, we provide an analysis of the results derived from SWOT satellite data, including both single-satellite and multi-satellite configurations.

Status of the realization of the DPOD2020 v5.0

Moreaux G.

Status report of the IDS Associate Analysis Centre at GFZ

Schreiner P.

The development of DORIS+SLR and DORIS-only orbits with the new std2400 standards and an assessment of their radial orbit accuracy

Zelensky N.P., Lemoine F.G., Beckley B.D., Mitchum G.T., Yang X., Nicholas J.B.