

**Forum Challenges and advances in remote sensing of
coastal sea level with ground-based GNSS-IR**

27-29 May 2026

Agenda

| Wednesday, 27 May | | |
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| 9:00-9:15 | ISSI Introduction | |
| Session 1: Sea level monitoring from the GLOSS perspective | | |
| 9:15-9:30 | GLOSS and tide gauge (TG) networks | Begoña Pérez |
| 9:30-9:45 | Tide gauge applications | Oda Ravndal |
| 9:45-10:00 | Tide gauge requirements to monitor sea level | Guy Wöppelmann |
| 10:00-10:15 | Best practices to assess TG performance | Phil Thompson |
| <i>Coffee break</i> | | |
| 11:00-12:30 | <i>Plenary discussion on observing gaps:</i> The aim is to clarify the needs and requirements from tide gauge operators and the GLOSS community, for different applications (datums, climate, storm surges, etc) | |
| <i>Lunch</i> | | |
| Session 2: Methods for GNSS-IR sea level retrievals and performance | | |
| 14:00-14:30 | Current Status of GNSS-IR: what we know and what we don't know | Kristine Larson |
| 14:30-14:45 | GNSS-IR Reflector Height Retrievals from U.S. National Park Service and Greenland Coastal Stations | Joel Johnson |
| 14:45-15:00 | Kalman filtering applied to high-rate ground-based GNSS-IR sea level measurements | Alvaro Santamaria |
| 15:00-15:15 | Low-cost GNSS-IR captures storm surges during Typhoons Wipha, Tapah, and Ragasa (2025) in Hong Kong-Macao | Dongju Peng |
| 15:15-15:30 | Evaluating a Density-Maxima Approach for GNSS-IR Water Level Retrieval. | Fernando Oreira |
| <i>Coffee break</i> | | |
| Session 2 (cont.) | | |
| 16:00-17:00 | <i>Plenary discussion on methods skills (1/2):</i> The aim is to clarify to what extent the presented methods are suitable/mature to fulfil sea level applications. | |
| <i>Ice breaker</i> | | |
| Thursday, 28 May | | |
| Session 2 (cont.) and beginning of Session 3 | | |
| 9:00-9:15 | Multi-Antenna GNSS-IR for Water-Level Monitoring: Methods and Applications in Remote Regions | Natalya Gomez |
| 9:15-9:30 | Coastal sea level measurements with 2-antenna GNSS-IR installations | Rüdiger Haas |
| 9:30-9:45 | Scaling low-cost GNSS-IR water level monitoring networks: experiences from Europe, Africa and Asia | Makan Karegar |
| 9:45-10:00 | Perspectives from the PSMSL GNSS-IR dataset | Simon Williams |

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| 10:00-10:15 | Feasibility Assessment of Defining Taiwan's Vertical and Depth Datums Using Coastal GNSS-IR Altimetry. | Chi-Ming (Allen) Lee |
| 10:15-10:30 | Lessons learned from running a GNSS-IR network with 30+ dedicated stations: the good, the bad and the ugly | Felipe Geremia-Nievinski |
| <i>Coffee break</i> | | |
| 11:00-12:30 | <i>Plenary discussion on methods skills (2/2):</i> The aim is to clarify to what extent the presented methods are suitable/mature to fulfil sea level applications. | |
| <i>Lunch</i> | | |
| Session 3: Recommendations & guidance from field experiences | | |
| 14:00-14:15 | Integrating GNSS-IR into the Greenland tide gauge network | Per Knudsen |
| 14:15-14:30 | GNSS-R for sea-level monitoring in polar Regions | Sajad Tabibi |
| 14:30-14:45 | Experiences of using GNSS-IR for water level determination in Norway | Michael S. Dähn |
| 14:45-15:00 | GNSS-IR and tide gauge data from Thule 2014-2024. | Christian Solgaard |
| 15:00-15:15 | Towards Spanish Coastal Sea Level Monitoring Service Using GNSS-IR | Andrea Rosillo |
| 15:15-15:30 | Applications of GNSS-IR in traditional tide gauge networks | Jon Avery |
| <i>Coffee break</i> | | |
| Session 3 (cont.) | | |
| 16:00-17:00 | <i>Plenary discussion on GNSS-IR operation:</i> The aim is to define a set of recommendations and guidelines, to the extent of possible, on practical aspects (e.g. deployment of equipment, data formats, etc) for tide gauge operators. | |
| <i>19:30 Group dinner at <u>Restaurant Rosengarten</u> Alter Aargauerstalden 31b</i> | | |
| Friday, 29 May | | |
| Session 4: Discussion and moving forward | | |
| 9:00-10:30 | This final session will be a plenary discussion to establish the current state of knowledge and development of GNSS-IR for sea level monitoring. In particular, the need to establish working groups, develop targeted intercomparison experiments (and if so, which design and under which umbrellas), the need for training and fostering shared codes and repositories, the establishment of dedicated analyses centres or services, etc. | |
| <i>Coffee break</i> | | |
| Final – wrap up | | |
| 11:00-12:30 | Closing and future actions/contributors to the outcome. | |