

The infra-gravity wave initiative

GOOS is an organization that is in charge of Essential Ocean Variables (EOVs). EOVs establish best practices, and are often used to drive policy decisions. The main goal of our initiative is to submit a white paper, advocating for the inclusion of infragravity (IG) waves under the existing “sea state” EOV. This recognition would be of significant importance in engineering applications, policy decisions, and help to systematize IG wave measurements.

Overarching objectives are to elevate the importance of infragravity waves in the Earth System and establish infragravity wave measurements as GOOS’ essential ocean and climate variables (EOV). Specific objectives will include:

1. Establishing an international interdisciplinary group of researchers with expertise in various aspects related to IG waves and their influence on climate and the environment.
2. Identifying gaps in the state-of-the-art of theoretical understanding, measurement (in-situ and remote) capabilities, laboratory experiments, and numerical modeling of infragravity waves.
3. Identifying infragravity waves impact on open ocean and nearshore processes, and potential hazards and the methods/measurements needed to predict those hazards
4. Development of a coordinated plan for the long-term (up to 10 years) research efforts to address the identified gaps in IG wave research.