Preamble

Satellite Altimetry has evolved to an operational remote sensing technique with important interdisciplinary applications to many geosciences. For geodesy, the potential operational, precise and near global mapping and monitoring of the Earth surface is of particular importance. The construction of high-resolution global mean sea surface and potentially its variability will help to globally unify height reference systems. Altimetry contributes to essential improvements of the Earth gravity field. Even with the new dedicated gravity field missions CHAMP, GRACE and GOCE, satellite altimetry will be needed for the determination of the high resolution gravity field. Mapping and monitoring of seasonal and secular changes of the mean sea level helps to understand fundamental processes of the System Earth: the ocean water mass redistribution, one component of the global hydrological cycle, has impact to the Earth centre-of-gravity, to Earth rotation by the ocean angular momentum functions, the temporal variations of the Earth gravity field, as well as studies of sea level rise and its impact on environment.

Many organisations already provide altimetry data and products suggesting that a service fulfilling these requirements can only be realised as integrated effort: a distributed approach with close collaboration between data providers, archive and product centres, and research laboratories. Such an International Altimetry Service should act mission and agency independent and provide all user groups an improved access and better information on which to build scientifically sound decision making. With respect to endorsements by GLOSS, IAPSO and IAG an Integrating Office for the envisaged International Altimetry Service is established to identify and pool together international resources in altimetry, to propose a design plan for the establishment of an International Altimetry Service and to suggest projects gradually improving existing services for the benefit of the altimetry community at large.

IAS Integrating Office

The general objectives of this IAS-Integrating Office shall be:

• to provide a platform (and single point of contact) for general information on satellite altimetry and its applications;
• to communicate with, and interface to, altimeter mission data providers, centres which process, archive, and analyse altimeter data, and other related services and organizations;
• to promote satellite altimetry as a core element of Global Earth Observing Systems; and
• to help compile and analyse data, and respond to altimeter user requirements.

The IAS Integrating Office accomplishes its mission by:

• collaborating as appropriate with space agencies, processing centres, research institutes and altimetry experts;
• establishing a collaborative web site (a Wiki or Content Management System) that is able to compile basic information on satellite altimetry, its data, products and applications as given by data providers, archive and product centres, research laboratories and experienced users;
• directing user requests for altimetry data, services, models, etc., to the appropriate organization;
• establishing pilot projects which will enhance and expand its activities; these will target various needs of the altimetry community, and may become permanent components of the International Altimetry Service; and
• reporting to IAG, IAPSO, GLOSS, GOOS, GGOS, GEOSS and other bodies related to satellite altimetry on the status, achievements and plans of the altimetry service.

IAS-IO initial tasks and added-value activities:

• Improve information and documentation on altimetry mission data and related products. Provide users with information on where to get altimetry data and
products by compiling and providing associated metadata, setting links to existing data providers and giving advice how to read, transform, and apply data and products. Enable users to assess data and product quality and to compare similar products generated by different organisations.

- Develop tools, interfaces or systems to provide GDR/level2 data or derived higher level products which have been upgraded by improved geophysical corrections, reprocessed orbit ephemeris or re-tracked sensor data. Strengthen the future upgrade capability for GDR/level 2 data by distributed processing mechanisms.

- Provide interfaces to allow user-defined data extracts where experienced user can decide what record parameter they want to get and inexperienced users are given recommended extract formats for specific applications. This requires to setup and maintain electronic version of data element dictionaries for GDR/level 2 data or higher level products.

**Steering Committee**

- Ole Anderson (representative for IGFS)
- Wolfgang Bosch (chair)
- Alexander Braun (ice applications)
- Yoshi Fukuda (president of IAG Commission 2)
- Richard Gross (for Geophysical Fluids, Vice-President of Commission 3)
- Cheinway Hwang (president Sub-Commission SC2.5 on Satellite Altimetry)
- Phil Woodworth (for PSMSL and GLOSS Experts)