



The International Altimetry Service (IAS) - Servicing Interdisciplinary Earth Science and Applications

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Satellite altimetry has evolved into an operational observational technique and has demonstrated interdisciplinary application across oceanography, geodesy, hydrology, glaciology and geophysics, further qualifies itself as an essential component of global Earth observing systems (GOOS, GCOS, GGOS), which is coordinated by the international organisations, the Global Earth Observing System of Systems, GEOSS. Satellite altimetry techniques are currently being undertaken by the Global Geodetic Observing System (GGOS), a Project of the IAG, as one of the essential observational techniques contributing towards the integration of the three pillars of geodesy (Earth's shape, Earth rotation and gravity field). Contemporary altimetry includes proven and newly improved satellite and airborne sensors (pulse limited, laser, lidar, wide swath, Delay Doppler, Ka-) serves or will serve a wide variety of interdisciplinary research and applications. There is a generally accepted need for long, accurate time series of multi-mission altimeter data covering a diverse temporal and spatial scales, which requires standards on formats, geophysical corrections and their improvement, reference frames, and the knowledge of the long-term stability of altimeter and its ancillary sensors. The latter implies cross-calibration between past, present, and future altimeter missions as well as between different altimeter technologies. All these requirements are best fulfilled by an International Altimeter Service (IAS), acting in a mission and agency independent capacity, with the purpose to advocate scientific and world-community use of satellite and airborne altimetry, and to promote further innovative applications of the sensor. An IAS planning study was commissioned by IOC/GLOSS and IAG. This paper reports on the detailed procedure and mechanism for the official establishment of the IAS, supported by international data/analysis cen-

tres, and with broad support from a number of international scientific organization and national space and other agencies, including IAG, IOC/GLOSS, NASA, ESA, and IAPSO, IUGG/ICSU. Finally, the paper discusses the near-term and future plans to contribute to the activities including IAG's GGOS, and IOC/GLOSS.