

THE RADAR IMAGING INSTRUMENT AND ITS APPLICATIONS: ASAR

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ABSTRACT

Envisat will carry an all-weather, day-and-night high resolution radar imaging instrument: the Advanced Synthetic Aperture Radar (ASAR). ASAR builds on the success of the ERS-1 and ERS-2 SARs, which have contributed to major scientific achievements and initiated pre-operational and commercial applications of radar data. The ASAR system has therefore been designed to provide continuity with the ERS instrument and to extend the range of measurement capabilities. Three new modes of operation, improved performances and new algorithms allow the generation of novel data products, including near-real-time and off-line precision image products, to be provided to scientific, institutional and commercial users, for land, ocean and ice applications.