

EARTH OBSERVATION SYMPOSIUM (B1)  
Earth Observation Sensors & Technology (3)

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PROGRESS IN THE ADVANCED HYPERSPECTRAL IMAGING PROGRAMME ENMAP  
(ENVIRONMENTAL MAPPING AND ANALYSIS PROGRAMME)

**Abstract**

Under contract of the German Space Agency DLR, the next national optical satellite mission EnMAP is scheduled for launch in 2014. The EnMAP Hyperspectral Imager (HSI) will be launched on an Indian PSLV rocket offering a cost-effective launch service. Driven by the demand of the EO community, the hyperspectral data allow for detailed environment monitoring, characterisation and parameter extraction of e.g. rock/soil targets, vegetation and inland and coastal waters on a global scale

The hyperspectral Instrument monitors the earth surface within about 250 continuous spectral bands in the wavelength range between 430 - 2450 nm. The ground resolution is 30 x 30 m in good correlation with the Landsat data guaranteeing in combination with the application of the latest detector technology sufficient Signal to Noise Ratio (SNR). The sensor works in a push broom configuration in a sun synchronous orbit at a height of 643 km. The system offers the broad science and application community a new, extensive and highly resolved set of data supporting and optimising the development of future models and processors to describe and predict different effects in our environment. Additionally, the airborne hyperspectral camera ARES (Airborne Reflective Emissive Spectrometer) shall be put into operation in 2010. Supporting the set-up of a national hyperspectral network the airborne sensor also act as test bed for data handling and information extraction procedures for the later satellite mission. The Hyperspectral Imager on the EnMAP satellite is primary designed to fulfil the scientific requirements but represents at the same time a so-called 'pathfinder' for future operational missions.

The paper will report on the status of the EnMAP programme highlighting all aspects in the sensor and satellite design including the mission operation.