

HYRESSA: Towards an Improved Access to Hyperspectral Data in Europe

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Remote sensing data infrastructures

During 20 years Europe has gained a lot of expertise in hyperspectral remote sensing. The last few years several hyperspectral flight campaigns with different kind of sensors have been performed and next-generation European airborne hyperspectral sensors (APEX and ARES) are under construction. These sensors are operated by different data providers across Europe and as a consequence flight campaign planning, sensor calibration, data processing, ... are strongly variable at the expense of the user. Different calibration, acquisition, processing and in-situ protocols and the relatively large costs of uncoordinated sensor deployment are barriers to exploit the full potential of hyperspectral imagery. HYRESSA (HYperspectral REMote Sensing in Europe – specific Support Actions) is a FP6 project to investigate the Strengths, Weaknesses, Opportunities and Threats of hyperspectral remote sensing in Europe and to investigate the user needs of the European scientific hyperspectral remote sensing community. In the frame of the HYRESSA project a European hyperspectral contact database containing about 700 contacts was built and a SWOT and User Needs workshop was organized on 5-6 July 2006 at DLR (15 mainly EU members states were represented). The outcome of this workshop was used to build a web-based Questionnaire on User Needs which was launched end of 2006 to the European scientific hyperspectral remote sensing community. The main user needs identified during the SWOT and User Needs workshop are: standardization (especially for data processing and calibration), more transparency on calibration processes, European platform for hyperspectral remote sensing (e.g. sensor pool, information about campaigns, data pool, spectral libraries, ...), education and training and the increase of the awareness of the added value of hyperspectral remote sensing. Furthermore, HYRESSA will investigate the refinement of protocols (for e.g. calibration, acquisition, processing, in-situ measurements, ...) in compliance with standards and will explore new strategies on how to build a European hyperspectral remote sensing network and on how to coordinate a European user-oriented hyperspectral remote sensing Research Infrastructure. The HYRESSA outcome is a starting point to prepare for a European user-oriented hyperspectral remote sensing Research Infrastructure including networking activities, transnational access to coordinated European hyperspectral flight campaigns and research for the improvement of the access to the Research Infrastructure and to exploit the full potential of hyperspectral imagery. The HYRESSA project, its objectives and outcome will be presented at the symposium. More information can be found at the HYRESSA website (<http://www.hyressa.net>).