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To
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Dear Sir or Madam,

Letter of support for the continuation of EO-1 Hyperion operations

As the leader of the Remote Sensing section of the GFZ Potsdam and the Principal Investigator of the EnMAP imaging spectroscopy mission, I would like to express our great interest in the continuation of EO-1 Hyperion acquisitions beyond 2015.

Since Hyperion is the only operating satellite system able to provide data comparable to EnMAP (launch scheduled for 2018), it has become a critical data source for a number of our preparatory activities, including:

- Development of pre-processing methods for noise reduction, cloud screening and atmospheric correction. Hyperion is being used as a testbench for the implementation and testing of those methods.
- Earth surface remote sensing observations of geoarchives and landscape formations in southern Africa linked with paleo-environmental research. Particularly of interest is the study of soil erosion, deposition and degradation processes which will allow further development of knowledge for the impact of land use, land use changes and climate changes on the landscape.
- Assessment of land/water resource management in semi-arid NE Brazil, which implies the monitoring of temporal and spatial dynamics of the eutrophication process. Satellite data acquisition and concurrent monthly field campaigns are currently running (mid 2014 till mid 2015) and may be extended beyond 2015 due to long-term cooperation with universities/institutions in land/water resources management in Ceará/Brazil.
- Mineral mapping with the EnGeoMAP (EnMAP Geological Mapper) model. We especially test SNR dependent detection limits for mineral mapping from simulated EnMAP data and "real world" EO-1 Hyperion data. This involves the further development, calibration and validation of mineral and geological mapping tools for EnMAP e.g. for different geological environments and deposit types.

- Assessment of the synergies between different spaceborne instruments for improved environmental mapping and exploration. We are studying the potential of the combination of Hyperion data with multispectral data (EO-1 ALI, Landsat-8 OLI), also to investigate synergies between future sensors (e.g. EnMAP and Sentinel-2).

Please, let me know if there is any other information I should provide on this matter.

Yours faithfully,

Luis Guanter

