



MicrOmega: a new generation of microscopic NIR spectral imager

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IAS is developing a new generation of microscopic hyperspectral imager, designed to in situ characterize the molecular and mineralogical composition of samples at a grain size (pixel size of 20 μm typically). On each resolved pixel, MicrOmega has the capability to acquire the full NIR spectrum, in a range and with a spectral sampling tuned to enable the identification of most potential constituents: frosts and ices, silicates (discriminating between Ca-rich and Ca-poor pyroxenes, Fe-rich and Mg-rich olivine for example), oxides (such as hematite), clays, sulfates (discriminating for example between mono- and poly-hydrated phases, Ca-rich and Mg-rich sulfates) and other hydrated minerals. MicrOmega directly inherits from the CIVA-Rosetta development, and the OMEGA/Mars Express experience. It will be space qualified early enough to be implemented on board any Mars or Lunar surface Lander or Rover as early as 2009.