



## **The Raman LIBS instrument on ExoMars**

B. Ahlers (1), G. Bazalgette Courrèges-Lacoste (1), F. Rull Pérez (2)

(1) TNO Science and Industry, Space and Science, Delft, The Netherlands, (2) Centro de Astrobiología, Unidad Asociada CSIC-UVA, Cristalografía y Mineralogía Facultad de Ciencias, Valladolid, Spain ([berit.ahlers@tno.nl](mailto:berit.ahlers@tno.nl) / Fax: +31-15-2692111 / Phone: +31-15-2692414)

Amongst the different instruments that have been pre-selected to be on-board the Pasteur payload on ExoMars is the Raman/ Laser Induced Breakdown Spectroscopy (LIBS) instrument. Raman spectroscopy and LIBS will be integrated into a single instrument sharing many hardware commonalities.

An international team under the lead of TNO has been gathered to produce a design concept for a combined Raman Spectrometer/ LIBS Elegant Bread-Board (EBB). The instrument is based on a specifically designed, extremely compact, spectrometer with high resolution over a large wavelength range, suitable for both Raman spectroscopy and LIBS measurements. Low mass, size and resources are the main drivers of the instrument's design concept. The proposed design concept, its realisation and testing programme for the combined Raman/ LIBS EBB is presented as well as background information on Raman spectroscopy and LIBS.