
A novel laser desorption mass spectrometry technique for the in-situ detection of biomolecules on space missions

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Abstract

In this talk, we present a novel Laser Desorption – Mass Spectrometry (LDMS) system, for the in-situ investigation of biomolecules on surfaces of solar-system objects. Specifically developed for space exploration, the system consists of a miniature Time-of-Flight MS and single laser desorption / ionization scheme. The first measurements performed on amino acids show these are identified by unique, sparse mass features and at a sensitivity down to 10 femtomole.

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