LIX Congresso della Società Astronomica Italiana



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Type: Invited talk

The nucleus and coma of 67P/Churyumov-Gerasimenko: highlights of the Rosetta Remote Sensing Instruments results. (Invited talk)

Thursday, 21 May 2015 10:00 (15 minutes)

The Rosetta Spacecraft carries a suite of instruments devoted to the Remote Sensing studies of the nucleus and coma of the comet 67P/Churyumov-Gerasimenko. The instruments include: ALICE an ultraviolet imaging spectrometer devoted mainly to the study of the gases in the coma and tail and to the determination of the production rates of water and carbon dioxide/monoxide; the dual camera OSIRIS (Optical, Spectroscopic and Infrared Remote Imaging System), consists of a wide angle and a narrow angle cameras with the objective of studying the nucleus'surface morphology and structure, deriving the overall nucleus properties, analyzing the coma dust and gas components and monitoring with high spatial resolution the evolution of the nucleus and its activity; MIRO (Microwave Instrument for the Rosetta Orbiter), is a continuum and a very high spectral resolution line receiver. Is used to determine the abundances of major gases, the surface outgassing rate and the nucleus subsurface temperatures; VIRTIS (Visible, Infrared and Thermal Imaging Spectrometer) is a dual channel spectrometer (an hyperspectral imager and an echelle spectrometer) to study the nucleus surface composition and its thermal properties and to study the gaseous and dust components of the coma. All the Remote Sensing Instruments have operated flawlessly so far, the presentation will describe their major findings during the pre-landing (July 2014 –November 2014) and early escort (December 2014 –April 2015)

Presenter: CAPACCIONI, Fabrizio

phases.

Session Classification: Sistema Solare, Esopianeti e ricerca della vita

Track Classification: Sistema Solare, Esopianeti e ricerca della vita