

SPACE EXPLORATION SYMPOSIUM (A3)
Space Exploration Overview (1)

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PHILAE / ROSETTA : A GIANT STEP IN THE SPACE EXPLORATION OF THE SOLAR SYSTEM

Abstract

The space exploration of the solar system has triggered an in-depth revisiting of the processes that shaped the planet evolutionary pathways, leading to the extraordinary planet diversity presently being revealed. Major paradigms, built over the centuries, are being challenged, in particular with respect to the question of the uniqueness of Earth, and of the life it bears. The Rosetta mission, initiated some 30 years ago, is now addressing questions most of which were raised much more recently: diversity is not only presently recognized as the major property of planets within our solar system, but also of stellar systems among themselves, with the identification and characterization of hundreds of exoplanets. We shall review most outstanding outcomes of the Rosetta mission, coupling Orbiter and Lander (Philae) results, and discussed them in a comparative planetology framework, with a specific astrobiology emphasis.