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ROSETTA, HAYABUSA 2, AND THE EMERGENCE OF LIFE

Abstract

Three decades after the pioneering Halley's encounters in 1986, the space exploration of small bodies is entering a new era, with in situ measurements performed at the very surface of both a cometary nucleus and a C-type asteroid, by the Rosetta and Hayabusa 2 mission respectively. One of the prime objectives is to characterize the complex organic matter they contain, likely formed during the collapse of the protosolar cloud. We shall review the goals and envisioned performances of the embarked payloads, and discuss them in the framework of the emergence of life, on Earth and possibly on other planetary bodies, for which these molecules might have constituted ingredient.