BOSTON UNIVERSITY

SPACE PHYSICS SEMINAR

Tom Krimigis

Johns Hopkins Applied Physics Laboratory & Academy of Athens, Athens Greece

Thirty-five Years in Space and Counting: Voyager 1 at the Border with the Galaxy

725 Commonwealth Ave.
Thursday, February 21, 2013
Refreshments at 3:30pm in CAS 500
Talk begins at 4:00pm in CAS 502

Abstract:

Two Mariner-Jupiter–Saturn (MJS-77) spacecraft were launched in 1977 on a four-year mission to encounter the planets Jupiter and Saturn. Renamed Voyager 1, and 2 after commissioning, the Science Steering Group began to plan for a much longer-lasting mission that envisioned flybys of Uranus and Neptune, executing the so-called Grand Tour of the outer planets that took advantage of a particular planetary alignment occurring every 176 years. Following the Neptune encounter in 1989 a new mission was established-the Voyager Interstellar Mission-with the principal objective of investigating the interaction of the solar system with nearby interstellar space. Much has been accomplished so far, including crossing of the heliospheric termination shock, investigating the source of anomalous cosmic rays, discovering a region where the solar wind no longer expands radially, and seeing recent, tantalizing signs that the spacecraft has entered a new region where the heliosheath particles have disappeared and galactic cosmic rays have increased to apparent interstellar intensities. The heliopause may not be too far away from Voyager 1's current position at ~123 AU, with some suggestions that it has been crossed already. The author has been Principal Investigator of the Low Energy Charged Particle (LECP) experiment since 1970, will review some of the project's history and accomplishments, and provide an update on the latest observations.