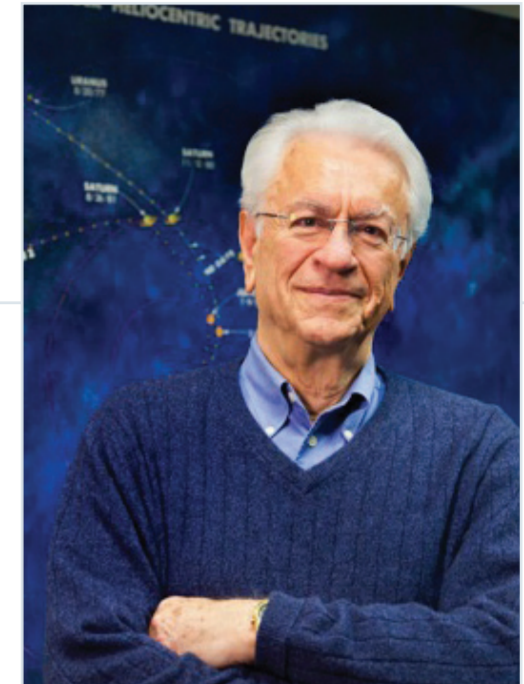


Großes Physikalisches Kolloquium an der Universität zu Köln

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Thirty-six years in space and counting: Voyager 1 at the Border with the Galaxy

19.11.2013
16⁴⁵ Uhr / HS III

Joint seminar with the Institute for Geophysics and Meteorology



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 or meridionally, and that the spacecraft has entered a new region where heliosheath particles have disappeared and galactic cosmic rays have increased to apparent interstellar intensities. The Voyager science team now agrees that the heliopause was crossed at 121.6 AU on August 25, 2012, but that the spacecraft is not yet in «pristine» interstellar space. The author has been Principal Investigator of the Low Energy Charged Particle (LECP) experiment since 1971, will review some of the project's history and accomplishments, and provide an update on the latest observations.