

ΓΕΝΙΚΟ ΣΕΜΙΝΑΡΙΟ ΤΜΗΜΑΤΟΣ ΦΥΣΙΚΗΣ

PHYSICS COLLOQUIUM

Thursday, 31 October 2013

17:00 -18:00

"Manasaki" Lecture Hall, Student Center

"From space to earth – spaceflight for new knowledge and innovations"

Prof. Ernst Messerschmid

Institute of Space Flight Systems, University of Stuttgart

Abstract

In this talk I will begin with my own spaceflight experience on the U.S. Space Shuttle Challenger in 1985 for the German Spacelab D1 Mission. With a few examples I will illustrate the relevance of using the microgravity environment for a wide range of multidisciplinary experiments. This is followed by a description of the International Space Station, the European contribution to the ISS, and how astronauts live and work over several months in space. In the next two decades, humanity will strive to fly back to the Moon, to asteroids and later on to Mars. New systems for transportation and infrastructure will form a complex mission scenario, operated by robotic systems and later by astronauts. Today a wide range of scientific or technological objectives are carried out in space, mostly through international cooperation. Commercial missions are funded by the private sector. Space is now a scientific laboratory, a marketplace, and a workplace with services – from space to Earth – and for new knowledge and innovations.