FIRST RESULTS FROM THE HUYGENS SURFACE SCIENCE PACKAGE. J.C.Zarnecki[1] and the SSP Team[1] , [1]Planetary and Space Sciences Research Institute, The Open University, Walton Hall, Milton Keynes, MK7 6AA, United Kingdom. Email: J.C.Zarnecki@open.ac.uk

Introduction: The Surface Science Package (SSP) is one of the 6 scientific instruments carried by ESA's Huygens probe [1]. It is the only one of the 6 instruments whose prime aim is to make measurements after landing, but it is also planned to be operation throughout the atmospheric descent. SSP contains 9 separate sensors designed to characterize the physical properties of the surface at the probe landing site, whether it be solid or liquid. Measurements to be made include impact signature, surface temperature & the thermal conductivity and surface electrical properties. If the surface is liquid (e.g. a liquid methane/ethane lake), then planned measurements include liquid depth and surface wave properties. During descent, measurements include speed of sound, temperature and thermal conductivity and probe motion.

Results: The Huygens scientific payload has been operated nominally every 6 months during the 7 year mission. Initial performance of the SSP from these checkouts has already been reported [2]. First results from the Huygens descent to Titan on January 14th 2005 will be presented, both from the perspective of instrument performance and scientific results.

References: [1] Zarnecki, J.C. et al. (1997) ESA SP – 1177, 177-195. [2] Zarnecki, J.C. et al. (2002) *Space Sci. Rev.*, 104(1), 593-611