Mem. S.A.It. Vol. 82, 385

Memorie della

Introduction to the session on 'Future planetary scientific and robotic space missions'

V. Giorgio (Chairman)

Thales Alenia Space - Italia S.p.A., Torino, Italy

Abstract. Schiaparelli started in 1877 a systematic observation of the red planet. At that time, he was the Director of the Brera Observatory, Knowledge of the planet was very limited. He discovered regular formation on its surface and started a discussion on whether life was ever present. Today, the same questions remain still unanswered, and missions have been planned to achieve an unambiguous result.

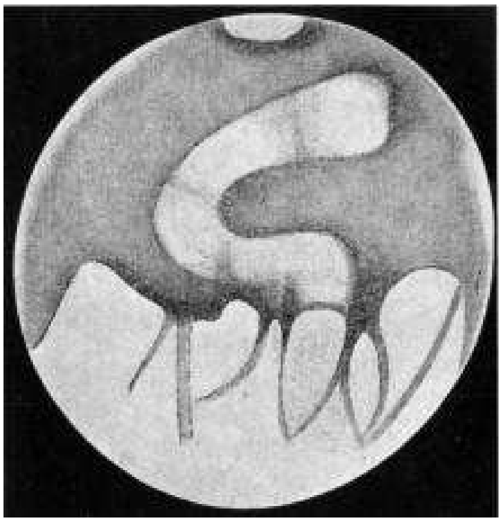

Fig. 1. Mars, 15 September 1892

Observing planets and stars, planetary robotic exploration and bringing sample back to the Earth, to prove return capabilities, seems the only viable and robust road map prior to achieving human exploration. The associated costs are likely to be unaffordable by a single agency or country, so the solution is True International Cooperation, based on sharing overall strategy and executing it together.

The first morning session chaired by Vincenzo Giorgio (TAS-I and member of the international space exploration committee) was infact dedicated to the Exomars mission (ESA/NASA) and to Bepi Colombo mission to Mercury (ESA/JAXA).

The following presentations were made:
Bepi Colombo mission - Mauro Novara (ESA)
Bepi Colombo scientific instruments - Enrico Flamini (ASI)
Exomars Mission - Vincenzo Giorgio (TAS-I)
Exomars instruments - Stefano De Bei (CISAS)

The second part of the morning chaired by Giovanni Pareschi (INAF - OABrera) was focused on the observation of the Universe with the following presentations:
GAIA mission - Mario G. Lattanzi (INAF - OATO)
Solar Orbiter mission & Instruments - Ester Antonucci (INAF - OATO)
Future Cosmic Vision and New Hard X Ray Mission - Alberto Anselmi (TAS-I)