ESA’s Mission to Search for Signs of Life

Please see Thursday talk

IPPW6
26 June 2008, Atlanta (USA)
Mission Objectives

ExoMars is the first mission of ESA’s Aurora exploration programme.

**Technology Demonstration Objectives:**

- Entry, Descent, and Landing (EDL) of a large payload on the surface of Mars;
- Surface mobility with a rover having several kilometres range;
- Access to the subsurface with a drill to acquire samples down to 2 metres;
- Automatic sample preparation and distribution for analysis with scientific instruments.

**Scientific Objectives** (in order of priority):

- To search for signs of past and present life on Mars;
- To characterise the water/geochemical environment as a function of depth in the shallow subsurface;
- To study the surface environment and identify hazards to future human missions;
- To investigate the planet’s subsurface and deep interior to better understand its evolution and habitability.
Mission Configuration

**Launch:** Dec 2013
**Arrival:** Sep 2014
**DM Release:** From a parking orbit, when conditions are optimal
**Landing:** 100 km (target 50 km) 3-sigma, major axis dispersion

**Spacecraft Composite**

**Science Elements**

**Carrier & Descent Module**

**ExoMars Rover**

**Data Relay**

**GEP**