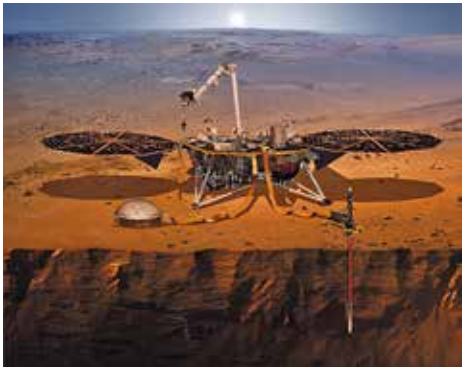
InSight/HP³

Interior Exploration using Seismic Investigations, Geodesy and Heat Transport



Brief description

On 5 May 2018, the NASA InSight space probe embarked on its journey to Mars with the goal of investigating the planet's geophysical properties. On board the lander were the French space agency's (CNES) SEIS seismometer, the HP3 sensor package developed by DLR, and JPL's RISE experiment.

Aims

The InSight mission is intended to comprehensively examine the interior structure of Earth's planetary neighbour. Following the landing, SEIS is measuring the seismic waves from 'Marsquakes' that travel through the planet's interior. HP3 is preparing to determine the heat flow from the planetary interior and the thermophysical properties of the Martian soil. RISE is measuring the precession and nutation of the planet's spin axis.

Parties involved

DLR, Lockheed Martin, JPL (NASA), CNES, Institut de Physique du Globe de Paris

Applications

- Exploration
- Basic research
- Planetary physics
- Comparative planetology

Outlook

- Geophysical exploration of the Moon, Mars and Mercury
- In-situ exploration of the subsurface

Facts and figures

Launch: 5 May 2018
Arrival: 26 November 2018
Mission duration: 2 Earth years

First planetary heat flow measurement on a celestial body after Apollo 17 (1972)

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