Café des Sciences Pasadena, CA – Philippe Lognonné and W. Bruce Banerdt – 25 February 2015

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California Institute of Technology, Cahill Center, Pasadena (California)

Speakers: Prof. Philippe Lognonné (Université Paris Diderot et Institut Universitaire de France, Institut de Physique du Globe de Paris) and Dr. W. Bruce Banerdt (Jet Propulsion Laboratory, California Institute of Technology)

" Getting to know Mars to help understand Earth "

Themes: astrophysics, planetology, space exploration

The Office for Science and Technology in Los Angeles and the Alliance Française de Pasadena, with the support of Caltech, organized the first Café des Sciences in Pasadena, CA, on Wednesday, February 25, 2015. Over sixty people attended a presentation by Prof. Philippe Lognonné and Dr. W. Bruce Banerdt about the InSight mission.

The InSight Mission (Interior Exploration using Seismic Investigations, Geodesy and Heat Transport), selected in the frame of the Discovery Program, is the next NASA mission to Mars and will be launched in March 2016. It will land in September 2016. In contrary to the Mars Exploration Rovers and the Mars Science Laboratory, this will be a static lander, used to deploy for the first time on the red planet a complete geophysical and meteorological observatory. This observatory will record the vibrations of the planet (with long period and short period seismometers), the magnetic field (with a magnetometer), the heat flux (with a mole system penetrating in the subsurface), change in Mars rotation (with geodetic beacon) and weather (with pressure, wind and temperature).

These investigations, similar to those done on Earth by the geophysical networks, will help in our understanding of the internal structure of the planet and of its geological evolution, enabling scientists to compare the later to the Earth's ones and to better understand why and how Mars lost its habitability, about 4 billions years ago.
Dr. W. Bruce Banerdt presenting a scale model of the InSight lander
Credits: Fabien Agenès / OS&T

Prof. Philippe Lognonné, is the SEISmometer (Seismic Experiment for Interior Structure) Principal Investigator, delivered by CNES, the French Space Agency, and built by an international consortium with French, Swiss, German, UK and US laboratories. He is a professor at the University of Paris Diderot and at the Institut Universitaire de France and a planetologist at the Institut de Physique du Globe de Paris.

Dr. William Bruce Banerdt is the InSight Mission Principal Investigator. He is a Principal Research Scientist at the Jet Propulsion Laboratory (JPL) of the California Institute of Technology. As Mission Principal Investigator, he supervises the overall science goals of the InSight mission, which integrate not only the SEIS instruments, but other payloads provided by JPL, DLR (Deutsches Zentrum für Luft- und Raumfahrt e.V.) Berlin, Germany, and CAB (Centro de Astrobiologica), Spain.

Dr. Banerdt and Prof. P.Lognonné have collaborated in the last 20 years to promote and design geophysical missions to Mars in both US, Europe and France.

Credits: Fabien Agenès / OS&T
Flyer of the event