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CNES and NASA on Mars

SEIS seismometer for InSight mission delivered to Toulouse Space Centre

Monday 20 July, the Institut de Physique du Globe de Paris (IPGP¹) and contractor Sodern delivered the SEIS Mars seismometer to CNES. SEIS is a titanium sphere housing three very-broad-band seismic sensors that form the core of the instrument. Once on the surface of Mars, these miniaturized sensors packed with technology will detect even the smallest seismic waves to determine if there is any seismic activity on the Red Planet. SEIS is the result of a close 10-year collaboration between CNES and IPGP that is set to depart on NASA's InSight mission to Mars on 4 March 2016.

InSight is a geophysical lander mission of NASA's Discovery programme designed to investigate the planet's deep interior structure. The mission's principal instrument is SEIS (Seismic Experiment for Interior Structure), a European—mainly French—seismometer developed by CNES as prime contractor. The core of this seismometer is a sphere housing very-broad-band (VBB) sensors that was delivered for integration to the Toulouse Space Centre (CST) this week.

The sphere will now be assembled with the instrument's other subsystems, which include short-period (SP) seismic probes conceived by Imperial College London and Oxford University in the United Kingdom, the levelling system designed by the Max Planck Institute for Solar System Research (MPS) in Germany, electronics systems from the Swiss Federal Institute of Technology in Zurich (ETHZ) in Zurich, Switzerland, and a shielded cable several metres long connecting the electronic systems on the lander to the seismometer that will be put down on the surface of Mars, produced by NASA's Jet Propulsion Laboratory (JPL) in the United States. JPL is also supplying the protective cover that will shield the seismometer from the cold, wind and very fine Martian dust particles that could prevent it from working properly. InSight will also be carrying the Heat Flow and Physical Properties Package (HP3) built by the German aerospace agency DLR in Germany and the Rotation and Interior Structure Experiment (RISE) developed by JPL.

The InSight mission is scheduled to launch in less than one year's time on 4 March 2016 and should reach Mars six months later in September 2016.

1 Institut de Physique du Globe de Paris / Paris 7 - Denis Diderot University / CNRS

More on InSight mission, videos :

<https://insight.cnes.fr/fr/videos>

Photos :

<http://cnes.photonpro.net/cnes/search.do?q=insight>

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