Press Release

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France-United States space cooperation
InSight Mars exploration mission
First tests of French SEIS seismometer successful

After the excitement and tension of its successful landing on Mars on Monday 26 November, InSight has started powering up and checking out its subsystems. The SEIS[1] seismometer, supplied by CNES as lead contractor with the IPGP global physics institute in Paris as principal investigator working with teams at the French national scientific research centre CNRS, was tested out on Friday 30 November. Everything is nominal and the instrument is in great shape.

While SEIS remains stowed on the deck of the lander, the three French very-broad band (VBB) sensors that are the core of the instrument are normally saturated. They will only be operational once SEIS has been deployed on the surface. However, currents and power levels measured are nominal and the saturation positions are as expected. The short-period seismic sensors, which are less sensitive and therefore able to operate on the deck, functioned nominally during checks.

“The deployment sequence is going according to plan, the teams are fired up and ready to go and all the news we’re receiving is good,” said Philippe Laudet, SEIS Project Manager at CNES. The instrument’s principal investigator Philippe Lognonné (IPGP/Paris Diderot University) added: “A week after landing, we’re already beginning to characterize the seismic noise of the lander to choose the quietest location to set down SEIS on the surface and probe Mars’ deep interior.”

The mission team plans to deploy SEIS on the surface of Mars around Christmas time. InSight operations are being conducted by the Jet Propulsion Laboratory (JPL) in Pasadena and SEIS operations by CNES with its European partners. Research scientists and engineers from IPGP, the ISAE-Supaero aeronautics and space institute and CNRS (the LPGN planetology and geodynamics laboratory in Nantes and the LMD dynamic meteorology research laboratory) make up the rest of the French team at JPL that will be analysing the first data from SEIS and weather sensors to help select the site where SEIS will be deployed.

1 In addition to CNES and IPGP, in collaboration with Sodern, JPL, the Swiss Federal Institute of Technology (ETH Zurich), the Max Planck Institute for Solar System Research (MPS, Göttingen, Germany) Imperial College London and Oxford University supplied subsystems for SEIS.

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