



## The PIONEERS Consortium develops a new generation of planetary seismometers

Capitalizing on its research to design the SEIS seismometer sent to Mars as part of the InSight mission, the PIONEERS Consortium announces the launch in March of a project to develop a new generation of planetary seismometers: the PIONEERS project (Planetary Instruments based on Optical Technologies for an Innovative European Exploration using Rotational Seismology).

The PIONEERS Consortium is a European consortium of research laboratories (ISAE-SUPAERO, IPGP, ETHZ, ROB, LMU) and an industry (iXblue, France). The PIONEERS project has been selected under the Horizon 2020 program, the largest European program for research and innovation with almost 80 billion euros of funding over 7 years (including 3 million euros allocated to the PIONEERS project).

The academic team around PIONEERS is made up of key members of the European consortium that provided SEIS for the InSight mission, including IPGP, inventor of the SEIS instrument or that are specialist in rotational deformations. The researchers plan to take advantage of the technological developments of this Martian mission and of the ring laser instrument to go even further with the PIONEERS project. They will develop the next generation of sensors, aiming for a technological breakthrough based on optical interferometry technologies. Their industrial partner, iXblue, provides this, via its spinning seismology technology blueSeis, gyroscopes capable of handling the extreme conditions of space. Thanks to the innovations of the PIONEERS project, Europe will be able to maintain the technological advance that it has acquired thanks to the seismometer SEIS.

### Partners



ISAE-SUPAERO – Institut Supérieur de l'Aéronautique et de l'Espace, France



IPGP – Institut de Physique du Globe de Paris, France



ETHZ – Swiss Federal Institute of Technology in Zurich, Switzerland



ROB – Royal Observatory of Belgium



LMU – Ludwig Maximilian University of Munich, Germany



iXblue, France