

**SPACE****MARS: THE INSIGHT MISSION HAS TAKEN OFF, WITH THE ITALIAN LARRI SYSTEM ON BOARD**

On 5 May, at 04:05 California time (13:05 in Italy), the Martian lander, InSight (Interior Exploration using Seismic Investigations, Geodesy and Heat Transport), was successfully launched from the Vandenberg base in America, to start its NASA mission to Mars. Equipment on board the lander included LaRRI (Laser Retro-Reflector for InSight), a laser microreflector developed by INFN with the support of the Italian Space Agency (ASI).

The task of the InSight mission is to explore the depths of the Red Planet, to understand how rocky planets, such as the Earth, are formed. The instruments on board include a seismometer to detect Martian earthquakes, a probe for monitoring the heat flow from inside the planet and, of course, the LaRRI microreflector, which is an instrument designed and constructed by the SCF_Lab research group from the INFN Frascati National Laboratories, in a joint programme with ASI-Matera, dedicated to geodetic measurement.

Using new satellites in orbit around Mars, the Italian laser micro reflectors will provide the precise position of the landers and rovers during their exploration, forming a network of Martian geodetic reference points, a test of Einstein's general relativity complementing the lunar one carried out with the Apollo reflectors (measured by ASI-Matera) and a definitely better definition of the 0 Meridian of Mars (a kind of "Mars Greenwich"). ■