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PRESS RELEASE

SELEX Galileo's JIRAM instrument contributes to the success of NASA's JUNO mission

On August 5th at Cape Canaveral, NASA launched the JUNO mission, part of its New Frontiers programme. The mission's primary scientific goal is to significantly improve the understanding of the formation and structure of Jupiter. By advancing humanity's knowledge of the planet, the mission will also dramatically improve our understanding of the origins and early evolution of the rest of the solar system.

In its journey to Jupiter, JUNO will be guided by SELEX Galileo's A-STR star trackers. SELEX Galileo is a global leader in the field of star trackers/attitude sensors which are on-board hundreds of missions and have never had a failure in flight. For the JUNO mission, SELEX Galileo has supplied a specific version of the A-STR with an added 1cm of tungsten coating which will protect the sensor from Jupiter's radiation.

One of the main instruments the Juno mission will make use of is the JIRAM spectrometer which has been developed and produced by SELEX Galileo under Italian Space Agency funding and in cooperation with the INAF, Institute of Physics of the Interplanetary Space in Rome.

JIRAM belongs to a family of image spectrometers, all developed under ASI contracts, currently flying on the European Space Agency (ESA)'s Rosetta and Venus Express missions as well as the NASA Dawn mission. The first product in this family was the VIMS visual channel which is on board NASA, ESA and ASI Cassini-Huygens Mission.

The primary goal of the JIRAM as part of the JUNO mission is to probe the upper layers of Jupiter's atmosphere down to pressures of 5-7 bars at infrared wavelengths in the 2- 5 μm interval using an imager and a spectrometer.

By collecting high contrast imaging and spectroscopy, JIRAM will study the dynamics and chemistry of Jupiter's auroral regions and their link to the planet's magnetic field and magnetosphere.

JIRAM's optical head contains both an imager and spectrometer and can collect images, spectra or spectral data, allowing JUNO to use the appropriate mode for the different requirements of each phase of the mission.

The JIRAM instrument is the latest example of SELEX Galileo's worldwide excellence in space spectrometer instrumentation for both scientific and earth observation applications

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