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ARTEMIS–JEAN LOUIS STEINBERG (ARTEMIS-IV/JLS) MULTICHANNEL SOLAR RADIO SPECTROGRAPH UPGRADING THE INSTRUMENT & A STUDY OF TYPE III BURSTS

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Abstract

Radio spectroscopy of the solar corona at decimeter, meter and decameter wavelengths provides basic information on the origin and early evolution of many phenomena which, subsequently, extend through the interplanetary medium to the Earth and beyond. The ARTEMIS solar radiospectrograph records the dynamic spectrum of solar radio bursts on a daily basis. It is located at the Satellite Communication Center station (SCC) of COSMOTE at Thermopylae, Greece. An important aspect of ARTEMIS is its synergy with other ground and space instruments.

ARTEMIS has been out of commission since 2013. The HERON LAB has undertaken its upgrade and operation, in collaboration with the Universities of Athens and Ioannina. We will present the work that has been done so far and our plans for the future .

The facilities' hardware and software improvements will incorporate ground-based radio measurements into the broader community, introducing a new era of the instrument, adding to the research on already acquired radio data of active solar phenomena which is ongoing.

As ESA's Solar Orbiter mission and NASA's Parker Solar Probe mission will continue to observe the sun until 2025/2027, the new ARTEMIS can provide ground coverage, mainly for the RPW and FIELDS instruments, respectively.