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The Radio and Plasma Waves (RPW) Instrument on Solar Orbiter : Capabilities, Performance and First results.

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We will review the instrumental capabilities of the Radio and Plasma Waves (RPW) Instrument on Solar Orbiter which at the time of writing this abstract is planned for a launch on February 5th 2020. This instrument is designed to measure in-situ magnetic and electric fields and waves from 'DC' to a few hundreds of kHz. RPW will also observe solar radio emissions up to 16 MHz. The RPW instrument is of primary importance to the Solar Orbiter mission and science requirements, since it is essential to answer three of the four mission overarching science objectives. In addition, RPW will exchange on-board data with the other in-situ instruments, in order to process algorithms for interplanetary shocks and type III Langmuir waves detections. If everything goes well after the launch, we will hopefully be able to present the first RPW data and results gathered during the commissioning.