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Whistler waves observed by Solar Orbiter during its first orbit

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Plasma waves can play an important role in the evolution of the solar wind and the particle velocity distribution functions in particular. We analyzed the electromagnetic waves observed above a few Hz by the Radio Plasma Waves (RPW) instrument suite onboard Solar Orbiter, during its first orbit, which covered a distance from the Sun between 1 AU and 0.5 AU. We identified the majority of the detected waves as whistler waves with frequency around 0.1 f_ce and right handed circular polarisation. We found these waves to be mostly aligned or anti aligned with the ambient magnetic field, and rarely oblique. We also present and discuss their direction of propagation and the variation of the waves' properties with heliocentric distance.

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