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【422】Light Shift Induced Heading Characteristics of a Coherent Population Trapping Based Scalar Magnetometer

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The Coupled Dark State Magnetometer is a scalar magnetometer based on coherent population trapping within the ⁸⁷Rb D₁ line, which is especially designed for scientific space missions. It is developed in a cooperation between the Institute of Experimental Physics of Graz University of Technology and the Space Research Institute of the Austrian Academy of Sciences.
The magnetometer is on board ESA's upcoming JUICE mission and is going to investigate the magnetosphere of Jupiter and its icy moons.
The presentation explains the magnetometer's working principle, its performance and the residual deviation of the magnetic field strength reading (the heading characteristics) induced by the light shift (AC Stark) effect.

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