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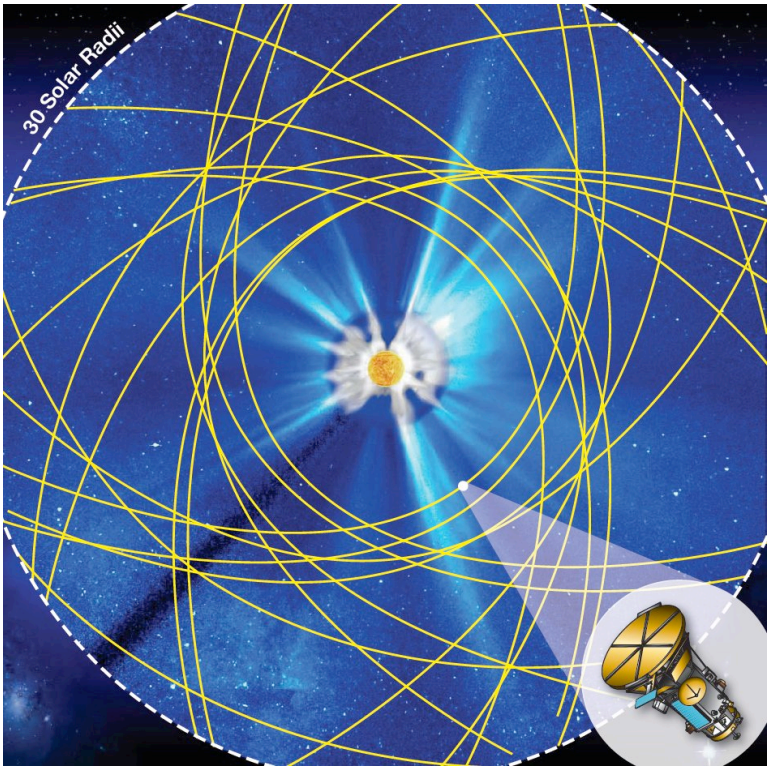
PROBING THE DUST ENVIRONMENT IN THE INNER SOLAR SYSTEM WITH SOLAR PROBE PLUS/WISPR

Solar Probe Plus will be a historical mission to explore the innermost regions of the solar system. By flying down to ~10 solar radii (~0.05 AU) the spacecraft will probe the dust environment in the inner heliosphere. Solar Probe Plus carries only one remote-sensing instrument – the Wide-Field Imager for Solar Probe (WISPR, led by NRL), dedicated the study of the solar wind, coronal mass ejections (CMEs) and dust-plasma interactions.

In the framework of the research project "Coronagraphic German And US SolarProbePlus Survey (CGAUSS)", funded by the German Space Agency (DLR), the University of Göttingen is actively participating in Solar Probe Plus/WISPR on topics such as modelling of the dust environment (in particular the F corona), operations planning, and data analysis of coronal structures. Furthermore, we will perform dedicated hypervelocity impact tests on various structural/optical surfaces to assess the cumulative effects of surface degradation by dust particles hits.

We will present the CGAUSS project, describe the current status, and discuss our modelling plans for the dust environment in the inner heliosphere. Since we are working at the interface of dust science, heliophysics and space weather, we are excited about the opportunity to introduce our project to the wider dust community, engage in fruitful discussions with colleagues, and stimulate collaborations.



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