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# On the Schumann resonance at Mars: day-night asymmetry and dust

Sergio Toledo-Redondo (1), Alfonso Salinas (2), Jorge Porti (3), Olivier Witasse (4), Sandy Cardnell (4), Jesus Fornieles (2), Gregorio Molina-Cuberos (5), Gregoire Déprez (6), and Frank Montmessin (6)

(1) European Space Agency, ESAC, Spain (sergiotr@ugr.es), (2) Department of Electromagnetism and Matter Physics, University of Granada, Granada, Spain, (3) Department of Applied Physics, University of Granada, Granada, Spain, (4) European Space Agency, ESTEC, The Netherlands, (5) Department of Electromagnetism and Electronics, University of Murcia, Murcia, Spain, (6) Laboratoire Atmosphères, Milieux, Observations Spatiales (LATMOS), Guyancourt, France

Schumann resonances are standing waves that are accommodated in the electromagnetic cavity formed between the planetary surface and the ionosphere. Their characteristics depend on the electromagnetic activity and properties of the planetary atmosphere. We show numerical simulations of the Martian electromagnetic cavity, accounting for the day - night asymmetry and different atmospheric dust conditions based on a photochemical model. We find that the resonances are better accommodated on the nightside, and the first resonance is expected to be 9 - 14 Hz, depending on the dust activity, with low quality factors ($Q \simeq 2$). This work serves as an input for future missions (e.g. Exomars) that will try to characterize in-situ the atmospheric electricity on Mars.