

Energetic Neutral Atom Observations in the Solar System and Beyond

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Energetic neutral atoms (ENAs) are produced by charge exchange wherever energetic ions meet a neutral atmosphere. This enables remote characterization of the interaction between planets and stellar winds. In particular, when the solar wind encounters the exospheres of the planets in the solar system, ENAs will be produced, and such solar wind ENAs have been observed in-situ at every planet in the solar system where detectors has been available: at Earth, at Mars, and at Venus. Here we review the observations of ENAs in the solar system with a focus on low energy ENAs (LENA), i.e. with energies comparable to the solar wind energy. We also describe the possibility to infer properties of the interaction between extrasolar planets and stellar winds through ENA observations.