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General anisotropy

30 min. invited talk

Asymmetrical Heliosphere and Related Cosmic Ray Anisotropies

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We discuss various asymmetries of the heliosphere caused by the time-dependence of the solar wind and the action of the interstellar magnetic field. In particular, the heliotail displacement is discussed in the context of a related anisotropy of TeV cosmic rays. Special attention is paid to the heliospheric termination shock asymmetry. Additionally, the heliopause instability and magnetic reconnection are discussed with the purpose to explain recent Voyager observations of magnetic fields and energetic particles. The properties of the local interstellar medium are chosen by fitting the Interstellar Boundary Explorer ribbon in the energetic neutral atom flux maps.