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ICTP-COST-USNSWP-CAWSES-INAF-INFN International Advanced School on Space Weather | (smr 1749)

Monday 08 May 2006

The formation of the Earth's Magnetosphere: Basic Physical Principles and Steady-State Electrodynamics - Main Building Main Lecture Hall (08:30-09:30)

The lecture discusses the formation of the magnetosphere under steady-state solar wind conditions. We start with early yet still valid models of the formation of the magnetosphere developed half a century ago. The basic physical principles of the electrodynamic coupling between the supersonic solar wind plasma and embedded magnetic field on one hand and the geomagnetic field and thermospheric ion reservoir on the other hand are described. Characteristic properties of various magnetospheric plasma regimes prevailing under stable condition are oulined. The lecture leads eventually to a presentation of a basic model of the magnetosphere in the unperturbed state.

time	title	presenter
08:30	The formation of the Earth's Magnetosphere: Basic Physical Principles and Steady-State Electrodynamics	J. WATERMANN