# Nonlinear waves in space plasma

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Space plasma, which is collisionless due to its extremely low density, and is embedded in a vast interplanetary space, has been regarded as an ideal natural laboratory for various modern physical concepts such as nonlinear waves and turbulence, solitons, chaos, self-organization, and the self-organized criticality. In this presentation we review recent development of studies on magnetohydrodynamic (MHD) waves in space plasma, with particular emphasis on the modeling attempt of nonlinear MHD wave propagation, correlation between the density and the magnetic field flucutations, and recent spacecraft observations.