



Bootstrap electron energization in solar and planetary environments

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Direct observations or deduced analysis indicate clearly that formation of intense fluxes of relativistic electrons is an important ingredient in the evolution of numerous magnetized plasma systems. Examples of relativistic electron energization include

the recovery phase of planetary magnetic storm and post-solar flare coronal activity. It is suggested that there exists a universal mechanism that may explain this electron energization at vastly different magnetized plasma environments. The favorite configuration consists of an inhomogeneous magnetic field anchored at a given magnetic structure and external injection of nonisotropic electrons. The energization proceeds as a bootstrap process due to interaction with self-consistent whistler waves.