

SHOCKS IN THE HELIOSPHERE

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The Heliosphere is an ideal laboratory for collisionless shock waves, which are ubiquitous in the universe, ranging from mini-bow shocks ahead of the lunar magnetic anomaly to large scale shocks in front of relativistic jets from active galactic nuclei, or even larger shocks formed by colliding galaxies. It is remarkable that the dissipation processes at collisionless shocks naturally result in the production of large deviation of particle phase-space distribution from the thermal equilibrium, namely the acceleration of nonthermal particles. I will review various aspects of collisionless heliospheric shocks and relating acceleration phenomena.

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