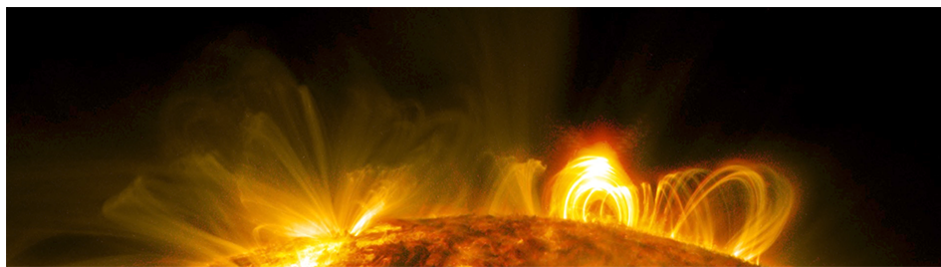


Particle Acceleration in Solar Flares and the Plasma Universe – Deciphering its features under magnetic reconnection



Contribution ID: 40

Type: **Invited talk**

Radiative magnetic reconnection near compact objects

Monday, 15 November 2021 10:15 (30 minutes)

The release of magnetic energy through magnetic reconnection is a major process invoked to model the activity of magnetars, black holes, gamma-ray bursts, and precursors of neutron star mergers. Energy dissipation in these compact objects occurs in a dense radiation field, which impacts the dissipation mechanism and generates copious electron-positron pairs. Radiation spectrum emitted by magnetic dissipation is mainly controlled by the dimensionless compactness parameter set by the ratio of the released power to the object size. Recent simulations of this process demonstrate a reasonable agreement with the observed X-ray spectra of magnetar bursts and the hard state of accreting black holes.

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