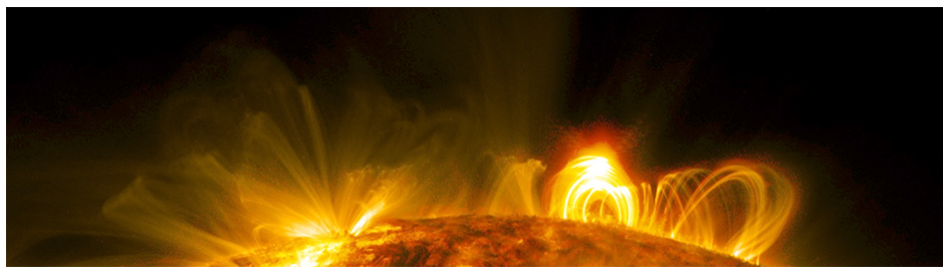


Particle Acceleration in Solar Flares and the Plasma Universe – Deciphering its features under magnetic reconnection



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Magnetic Reconnection and Electron Acceleration: Recent Insights from Microwave Imaging Spectroscopy Observations of Solar Flares

Thursday, 18 November 2021 09:00 (30 minutes)

Solar flares involve the catastrophic release of magnetic energy through magnetic reconnection. Solar flares are also highly efficient particle accelerators, capable of accelerating a large number of charged particles to high energies within a short time. The unique sensitivity of microwave emission to both the dynamic coronal magnetic field and the flare-accelerated high-energy electrons makes it an excellent tool for probing the key physical processes underlying magnetic reconnection and particle acceleration. Recently, we have enjoyed a major transition in solar microwave observing as it has evolved from imaging at a few discrete frequencies to true broadband imaging spectroscopy. In this talk, I will highlight some of our recent results based on this new technique, using data from the Expanded Owens Valley Solar Array and the Karl G. Jansky Very Large Array.

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