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Thematic talk: From Turbulence to Reconnection to Particle Acceleration: Connecting the Dots

Monday, 5 September 2022 11:30 (35 minutes)

Magnetized turbulence and magnetic reconnection are often invoked to explain the generation of high energy particles in astrophysics. Originally, these two routes for particle acceleration were treated as distinct plasma processes. However, with the rapid advances in computing power and theory, they are converging towards a unified domain. In this talk, I will outline recent developments in this fast-growing front exploiting the results of first-principles kinetic (PIC) simulations. I will also highlight their direct implications for some astrophysical sources.

Collaboration

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Session Classification: Theory of Particle Acceleration in Astrophysical Environments