

Particle Acceleration via Magnetized Turbulence and Magnetic Reconnection

Thursday, 6 October 2022 09:00 (30 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 show how particles can be accelerated up to the highest energies in some astrophysical sources.

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