

Teleparallel gravity models with parity violations

Saturday, 1 November 2025 14:30 (30 minutes)

It is not easy to have a healthy parity violating gravity models within Riemannian geometry. The famous Chern-Simons modified general relativity and its extensions are pathological due to the ghost modes appeared at high energy scales. In this talk, I will introduce some parity violating models within the framework of teleparallel gravity, especially the Nieh-Yan modified teleparallel gravity model, which is healthy and robust. It predicts the velocity birefringence phenomenon in gravitational waves and has more interesting applications in cosmology.

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