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Primordial fossils as a probe of parity violation

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The primordial vorticity and gravity wave leave anisotropic imprints in the large-scale structure, known as the primordial fossils. The primordial vector and tensor fossils are directly sensitive to parity violations in the early Universe. I will present a new method to generate parity violating initial conditions for cosmological simulations and show that the tidal estimators can separate the parity-odd signal from the nonlinearities generated in the cosmic evolution. This provides a new way to constrain parity violating signals using the large-scale structure traced by galaxies.

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