PACTS 2018: Particle, Astroparticle and Cosmology Tallinn Symposium



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Bose condensation and decay of ALP dark matter

Monday 18 June 2018 16:00 (30 minutes)

Bose condensation by gravitational interactions in the virialized dark matter halos/miniclusters is studied. I'll prove that this phenomenon does occur and is efficient even in the kinetic regime. Results suggest that Bose stars may form abundantly in the mainstream dark matter models such as invisible QCD axions and Fuzzy Dark Matter. In a certain parameter ranges Bose stars are unstable and burst into radiophotons. This may explain fast radiobursts (FRB) and some other observational anomalies.

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