

International Conference on High Energy Particle & Astroparticle Physics (ICHEPAP2023)



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Type: **Contributory Talk**

Multi-Component Dark Matter: Identifying at Collider

Friday, 15 December 2023 12:20 (20 minutes)

Chair: Swagata Mukherjee

In this talk, I will demonstrate how having two WIMPs, each with different masses, and mass splitting with the NLSP, generated at a collider through a decay chain, can result in double peaks in the missing energy or missing transverse momentum distribution of the multilepton signal. I will also outline a set of criteria to identify and segregate the second peak in the missing energy spectrum, after a careful analysis of the corresponding Standard Model background contribution. (Ref. JHEP 12 (2022) 049 with Subhaditya Bhattacharya, Jayita Lahiri and Biswarup Mukhopadhyaya)

Presenter: PURUSOTTAM GHOSH (IACS, Kolkata)

Session Classification: Parallel Session 4: Collider