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## Search for dark-sector showering in ATLAS using semi-visible jets

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Recent studies in particle physics have shown that there are myriad possibilities for strong dark sector studies at the LHC. One signature is the case of semi-visible jets, where parton evolution includes dark sector emissions, resulting in jets overlapping with missing transverse energy. Owing to the unusual MET-along-the-jet event topology, this is yet an unexplored domain within ATLAS. In this talk, I will discuss my ongoing ATLAS search, focusing on the performance and optimisation challenges associated with such a unique final state, specifically looking at the angle difference between the hardest jet and the missing transverse energy, and targeting a cut-and-count strategy.

## Apply to be considered for a student; award (Yes / No)?

Yes

## Level for award; (Hons, MSc, PhD, N/A)?

PhD

Primary author: SINHA, Sukanya (The University of Witwatersrand)

Co-author: KAR, Deepak (University of Witwatersrand)

**Presenter:** SINHA, Sukanya (The University of Witwatersrand)

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