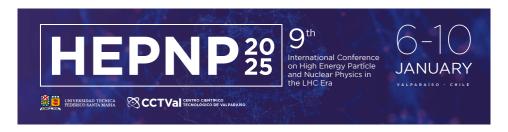
## 9th International Conference on High Energy Particle and Nuclear Physics in the LHC Era



Contribution ID: 547 Type: parallel

## Displaced Vertices of a Light Neutralino at Belle II

Thursday 9 January 2025 14:30 (20 minutes)

I will present ongoing work on light neutralinos with baryon-number-violating R-parity-violating (RPV) couplings at Belle II. Neutralinos can be produced in B-meson decays and subsequently decay into baryon-meson pairs, leading to displaced-vertex (DV) signatures. We employ partial reconstruction techniques to enhance signal efficiency and suppress backgrounds. Using Monte Carlo simulations, we determine Belle II's sensitivity to RPV couplings for GeV-scale neutralinos, surpassing current bounds. These preliminary results complement collider searches and explore new regions of parameter space for physics beyond the Standard Model.

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