## XXVI DAE-BRNS High Energy Physics Symposium 2024



Contribution ID: 127

Type: Postar

## Isolating Hard Gluon Bremsstrahlung Contributions in High-Energy Collisions.

In high-energy collisions, understanding the contribution of hard gluon Bremsstrahlung is crucial for accurate particle interaction modeling. This study investigates the mechanisms by which hard gluon emissions influence the overall event structure and multiplicity distributions. By employing advanced simulation techniques and event generators, we systematically isolate the effects of hard gluon Bremsstrahlung from other background contributions. This provides insights into the interplay between hard and soft processes in small collision systems, enhancing our understanding of perturbative and non-perturbative QCD effects. The findings are expected to have significant implications for future experimental analyses and theoretical frameworks in high-energy physics.

## Field of contribution

Phenomenology

Author: Mrs SHARMA, Upasana (University of Jammu) Presenter: Mrs SHARMA, Upasana (University of Jammu)

Track Classification: Heavy ion and QCD