**SUSY 2025** 



Contribution ID: 80

Type: not specified

## Phenomenological MSSM interpretation of CMS Run 2 searches

Results are presented for the combination of CMS Run 2 searches for new physics, interpreted in the framework of the phenomenological MSSM (pMSSM) via a scan over its 19-dimensional parameter space, using 138 fb<sup>-1</sup> of proton-proton collision data collected at 13 TeV. A global Bayesian analysis is performed, using a likelihood-based Markov Chain Monte Carlo (MCMC) approach incorporating data from CMS, as well as constraints from pre-LHC collider searches, the flavor sector, and Higgs mass measurements. In particular, the impact of the CMS search for the supersymmetric partners of tau leptons on the pMSSM parameter space is emphasized.

Author: LIAO, Hongbo (Chinese Academy of Sciences (CN)) Presenter: LIAO, Hongbo (Chinese Academy of Sciences (CN))