

## Overview of SUSY results: electroweak production

36 fb<sup>-1</sup> (13 TeV)

### pp → $\tilde{\chi}_2^0 \tilde{\chi}_1^\pm$

pp →  $\tilde{\chi}_2^0 \tilde{\chi}_1^\pm \rightarrow \ell \tilde{\nu} \ell \tilde{\ell} \rightarrow \ell \nu \ell \ell \tilde{\chi}_1^0 \tilde{\chi}_1^0$  **3l**: arXiv:1709.05406 flavour democratic,  $x = 0.5$

≥ **3l** + **2l same-sign**: arXiv:1709.05406 flavour democratic,  $x = 0.05$

≥ **3l** + **2l same-sign**: arXiv:1709.05406 flavour democratic,  $x = 0.95$

pp →  $\tilde{\chi}_2^0 \tilde{\chi}_1^\pm \rightarrow \tilde{\tau} \nu \ell \tilde{\ell} \rightarrow \tau \nu \ell \ell \tilde{\chi}_1^0 \tilde{\chi}_1^0$  **3l/τ<sub>h</sub>**: arXiv:1709.05406 τ enriched,  $x = 0.5$

**3l/τ<sub>h</sub>**: arXiv:1709.05406 τ enriched,  $x = 0.05$

**3l/τ<sub>h</sub>**: arXiv:1709.05406 τ enriched,  $x = 0.95$

pp →  $\tilde{\chi}_2^0 \tilde{\chi}_1^\pm \rightarrow \tilde{\tau} \nu \tau \tilde{\tau} \rightarrow \tau \nu \tau \tau \tilde{\chi}_1^0 \tilde{\chi}_1^0$  ≥ **3l/τ<sub>h</sub>**: arXiv:1709.05406 τ dominated,  $x = 0.5$

pp →  $\tilde{\chi}_2^0 \tilde{\chi}_1^\pm \rightarrow \mathbf{WH} \tilde{\chi}_1^0 \tilde{\chi}_1^0$  ≥ **3l/τ<sub>h</sub>** + **2l same-sign**: arXiv:1709.05406

**1l+jets**: arXiv:arXiv:1706.09933

**h** → γγ: arXiv:1709.00384

**combined**: arXiv:1801.03957;1706.09933,1709.00384

pp →  $\tilde{\chi}_2^0 \tilde{\chi}_1^\pm \rightarrow \mathbf{WZ} \tilde{\chi}_1^0 \tilde{\chi}_1^0$  **2l opposite-sign**: arXiv:1709.08908

**3l**: arXiv:1709.05406

**2l soft**: arXiv:1801.01846 ΔM = 20 GeV

**combined**: arXiv:1801.03957;1709.08908,1801.01846

pp →  $\tilde{\chi}_2^0 \tilde{\chi}_1^\pm \rightarrow \mathbf{WZ/H} \tilde{\chi}_1^0 \tilde{\chi}_1^0$  **combined**: arXiv:1801.03957 BF = 50%

pp →  $\tilde{\chi}_2^0 \tilde{\chi}_1^\pm / \tilde{\chi}_1^0 \tilde{\chi}_1^\pm, \tilde{\chi}_1^\pm / \tilde{\chi}_2^0 \rightarrow (\mathbf{W}^*/\mathbf{Z}^*) \tilde{\chi}_1^0$  **2l soft**: arXiv:1801.01846 higgsino simplified model, ΔM = 15–20 GeV

### pp → $\tilde{\chi}_1^\pm \tilde{\chi}_1^\pm$

pp →  $\tilde{\chi}_1^\pm \tilde{\chi}_1^\pm, \tilde{\chi}_1^\pm \rightarrow \mathbf{W} \tilde{\chi}_1^0$  **2l opposite-sign**: arXiv:1807.07799  $M_{\tilde{\chi}_1^0} = 1$  GeV

pp →  $\tilde{\chi}_1^\pm \tilde{\chi}_1^\pm, \tilde{\chi}_1^\pm \rightarrow (\tilde{\ell} \nu / \tilde{\ell} \tilde{\nu}) \rightarrow \ell \nu \tilde{\chi}_1^0$  **2l opposite-sign**: arXiv:1807.07799 BF( $\tilde{\ell} \nu$ ) = 50%,  $x = 0.5$

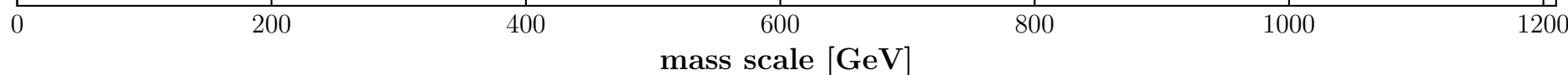
pp →  $\tilde{\chi}_1^\pm \tilde{\chi}_1^\pm, \tilde{\chi}_1^\pm \rightarrow (\tilde{\tau} \nu / \tau \tilde{\nu}) \rightarrow \tau \nu \tilde{\chi}_1^0$  **τ<sub>h</sub>τ<sub>h</sub>, eτ<sub>h</sub>, μτ<sub>h</sub>, eμ**: arXiv:1807.02048 BF( $\tilde{\tau} \nu$ ) = 50%,  $x = 0.5$

### pp → $\tilde{\ell} \tilde{\ell}$

pp →  $\tilde{\ell}_{\mathbf{L/R}} \tilde{\ell}_{\mathbf{L/R}}, \tilde{\ell} \rightarrow \ell \tilde{\chi}_1^0$  **e<sup>+</sup>e<sup>-</sup>, μ<sup>+</sup>μ<sup>-</sup>**: arXiv:1806.05264

pp →  $\tilde{\ell}_{\mathbf{L}} \tilde{\ell}_{\mathbf{L}}, \tilde{\ell} \rightarrow \ell \tilde{\chi}_1^0$  **e<sup>+</sup>e<sup>-</sup>, μ<sup>+</sup>μ<sup>-</sup>**: arXiv:1806.05264

pp →  $\tilde{\ell}_{\mathbf{R}} \tilde{\ell}_{\mathbf{R}}, \tilde{\ell} \rightarrow \ell \tilde{\chi}_1^0$  **e<sup>+</sup>e<sup>-</sup>, μ<sup>+</sup>μ<sup>-</sup>**: arXiv:1806.05264



Selection of observed limits at 95% C.L. (theory uncertainties are not included). Probe **up** to the quoted mass limit for light LSPs unless stated otherwise. The quantities ΔM and x represent the absolute mass difference between the primary sparticle and the LSP, and the difference between the intermediate sparticle and the LSP relative to ΔM, respectively, unless indicated otherwise.