## $ATLAS-CONF-2013-028 \quad \text{(upperLimit)}$ $\textit{TChiChipmStauL}: pp \rightarrow \widetilde{\chi}^{\scriptscriptstyle 0}_{\scriptscriptstyle 2} \, \widetilde{\chi}^{\scriptscriptstyle \pm}_{\scriptscriptstyle 1}, \, \widetilde{\chi}^{\scriptscriptstyle 0}_{\scriptscriptstyle 2} \, \widetilde{\chi}^{\scriptscriptstyle \pm}_{\scriptscriptstyle 1} \, \rightarrow \tau \, \widetilde{\tau} \, (\, \nu \, \widetilde{\nu}\,) \, \tau \, \widetilde{\nu} \, (\, \nu \, \widetilde{\tau}\,), \, \widetilde{\tau} \rightarrow \tau \, \widetilde{\chi}^{\scriptscriptstyle 0}_{\scriptscriptstyle 1}, \, \widetilde{\nu} \rightarrow \nu \, \widetilde{\chi}^{\scriptscriptstyle 0}_{\scriptscriptstyle 1}$

 $m_{\widetilde{\chi}^0}, m_{\widetilde{\chi}^{\pm}} = x, m_{\widetilde{\tau}}, m_{\widetilde{v}} = 0.5 * x + 0.5 * y, m_{\widetilde{v}^0} = y$ exclusion (SModelS) 180 ±20% (SModelS) 2.5 exclusion (official) 160 140 k-factor = 1.25 $oldsymbol{\sigma}_{ ext{signal}}/oldsymbol{\sigma}_{ ext{Ul}}$ 120 **>** 100 1.5 80 60 40 0.5 20 150 200 250 300 350  $\chi$ official plot:

https://atlas.web.cern.ch/Atlas/GROUPS/PHYSICS/CONFNOTES/ATLAS-CONF-2013-028/figaux\_08a.png