Significance on direct slepton model uu channel, trained network on full susy dataset $(m_{\tilde{\ell}}, m_{\tilde{\chi}_1^0}) = (250, 75)$ $(m_{\tilde{\ell}}, m_{\tilde{\chi}_1^0}) = (350, 250)$ $(m_{\tilde{\ell}}, m_{\tilde{\chi}_1^0}) = (200, 50)$ 10^{0} $(m_{\tilde{\ell}}, m_{\tilde{\chi}_1^0}) = (250, 25)$ $(m_{\tilde{\ell}}, m_{\tilde{\chi}_1^0}) = (275, 100)$ $(m_{\tilde{\ell}}, m_{\tilde{\chi}_1^0}) = (400, 100)$ Expected significance $[\sigma]$ $(m_{\tilde{\ell}}, m_{\tilde{\chi}_1^0}) = (175, 75)$ $(m_{\tilde{\ell}}, m_{\tilde{\chi}_1^0}) = (250, 175)$ $(m_{\tilde{\ell}}, m_{\tilde{\chi}_1^0}) = (150, 130)$ $(m_{\tilde{\ell}}, m_{\tilde{\chi}_1^0}) = (225, 25)$ 10^{-1} 0.0 0.2 0.4 0.6 8.0 1.0 XGBoost output