

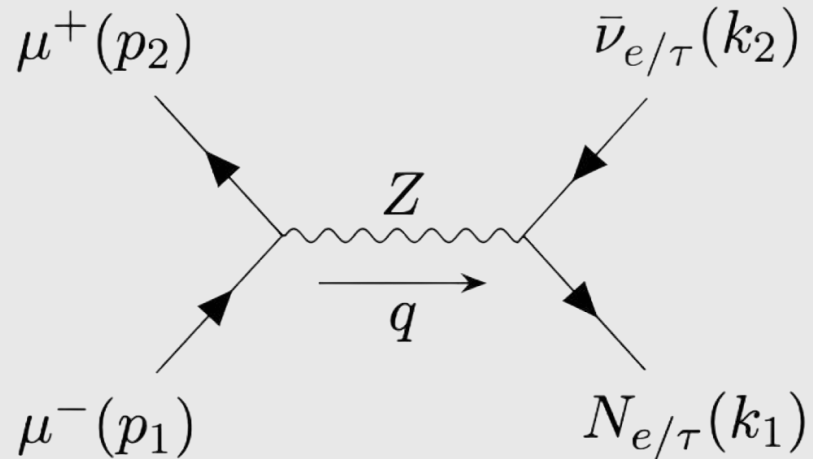
# Direct search on Heavy Neutral Lepton at MuC

Peiran Li, Zhen Liu, Kun-Feng Lyu    arxiv:2301.07117

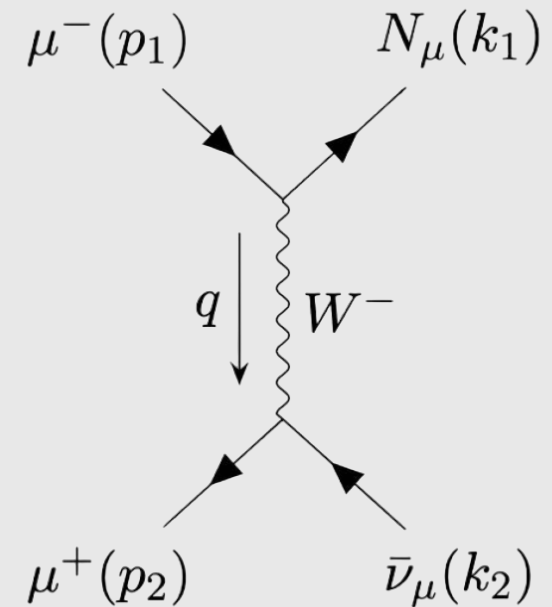


Seesaw model:

- explanation on neutrino mass
- predict heavy neutrino  $N_\ell$  with mixing angle  $U_\ell$

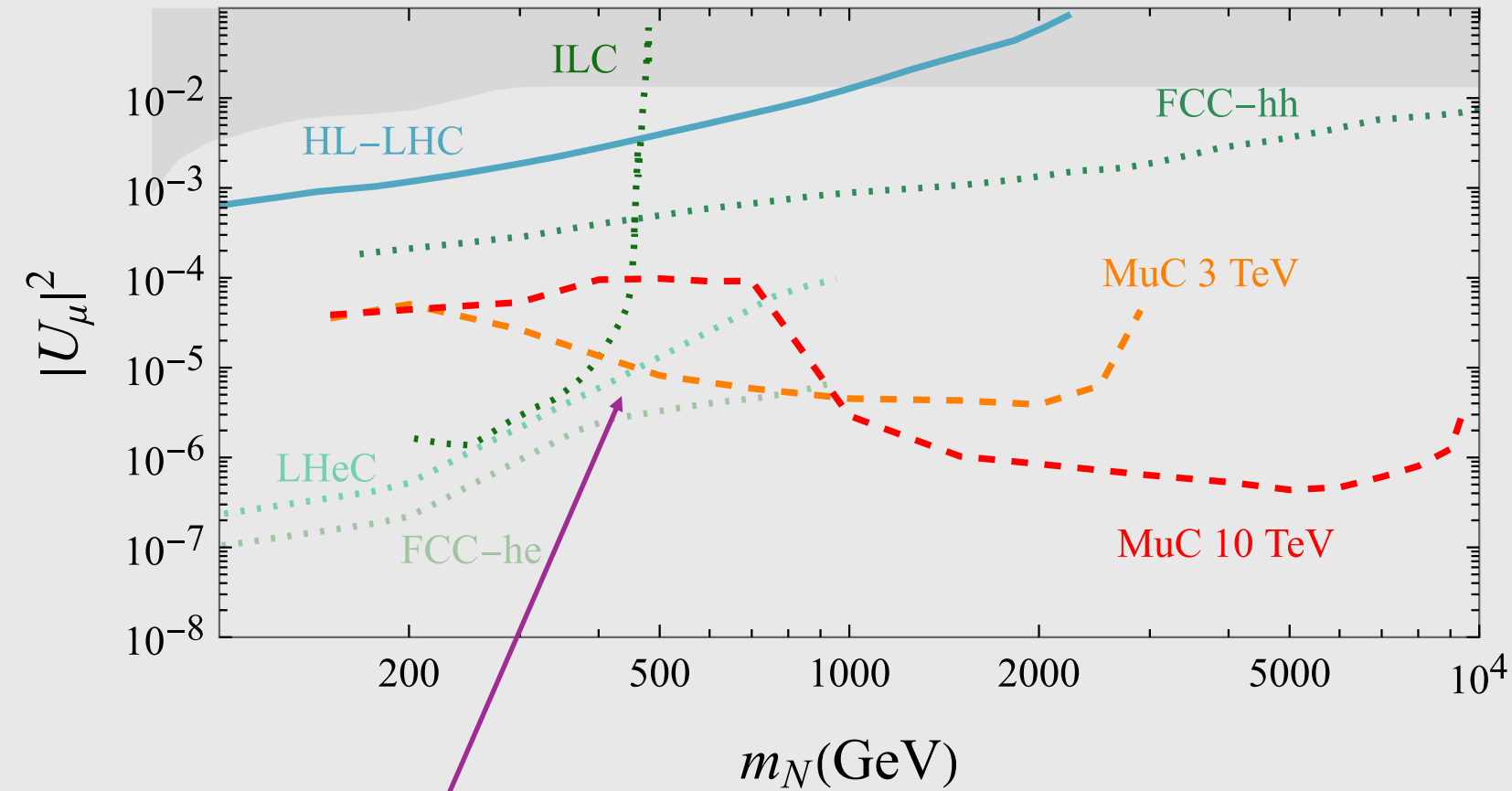


$\times 10^5$   
 $\ll$

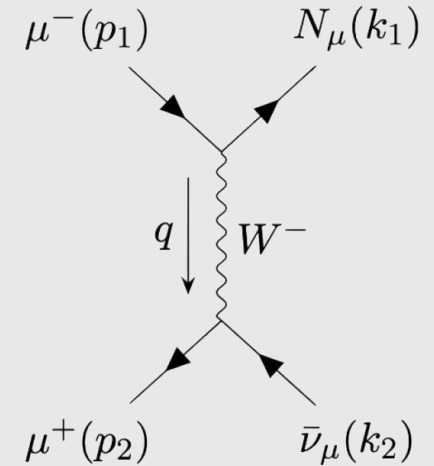


Decay channel:  $N_\ell \rightarrow \ell^- + W^+$

# Sensitivity on $\mu$ -flavored HNL



VBF background:  $\gamma^* \gamma^* \rightarrow W^+ W^-$



Heavy neutral leptons at muon colliders  
PL, Z. Liu, K. Lyu, [arXiv:2301.07117](https://arxiv.org/abs/2301.07117)

T.H. Kwok, L. Li, T. Liu and A. Rock,  
[arXiv:2301.05177](https://arxiv.org/abs/2301.05177)

K. Mekała, J. Reuter and A.F. Zarnecki,  
[arXiv:2301.02602](https://arxiv.org/abs/2301.02602)

# Sensitivity on HNL

