

FIG. 1. Constraints on  $|U_{eN}|^2$  as a function of the HNL mass  $m_N$ . Limits shown: ATLAS (2019) [1], ATLAS (2022) [2], BEBC(Barouki et al) [3], Belle [4], Borexino [5], CHARM [6], CMS (2022) [7], Cosmology [8], DELPHI (long) [9], DELPHI (short) [9], KENU [10], NA62 [11], PIENU (2017) [12], PIENU (Bryman et al) [10], PMNS Unitarity [?], T2K [13], TRIUMF [14].

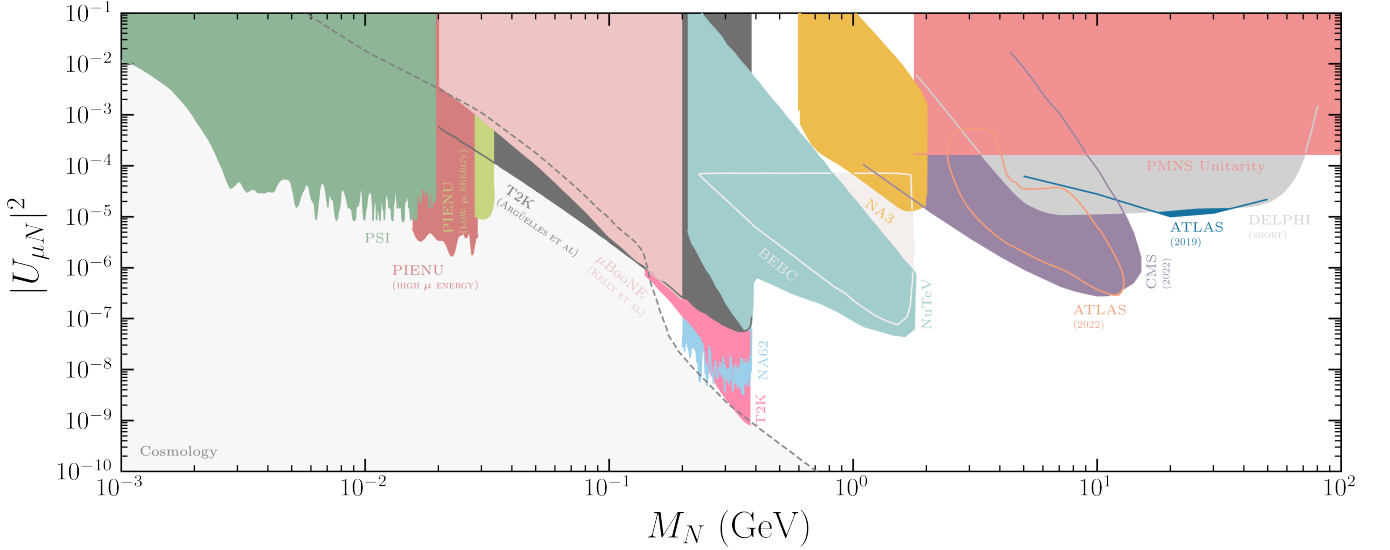


FIG. 2. Constraints on  $|U_{\mu N}|^2$  as a function of the HNL mass  $m_N$ . Limits shown:  $\mu$ BooNE (Kelly et al) [15], ATLAS (2019) [1], ATLAS (2022) [2], BEBC [16], CMS (2022) [7], Cosmology [8], DELPHI (short) [9], NA3 [17], NA62 [18], NuTeV [19], PIENU(high  $\mu$  energy) [20], PIENU(low  $\mu$  energy) [20], PMNS Unitarity [?], PSI [21], T2K [13], T2K (Argüelles et al) [22].

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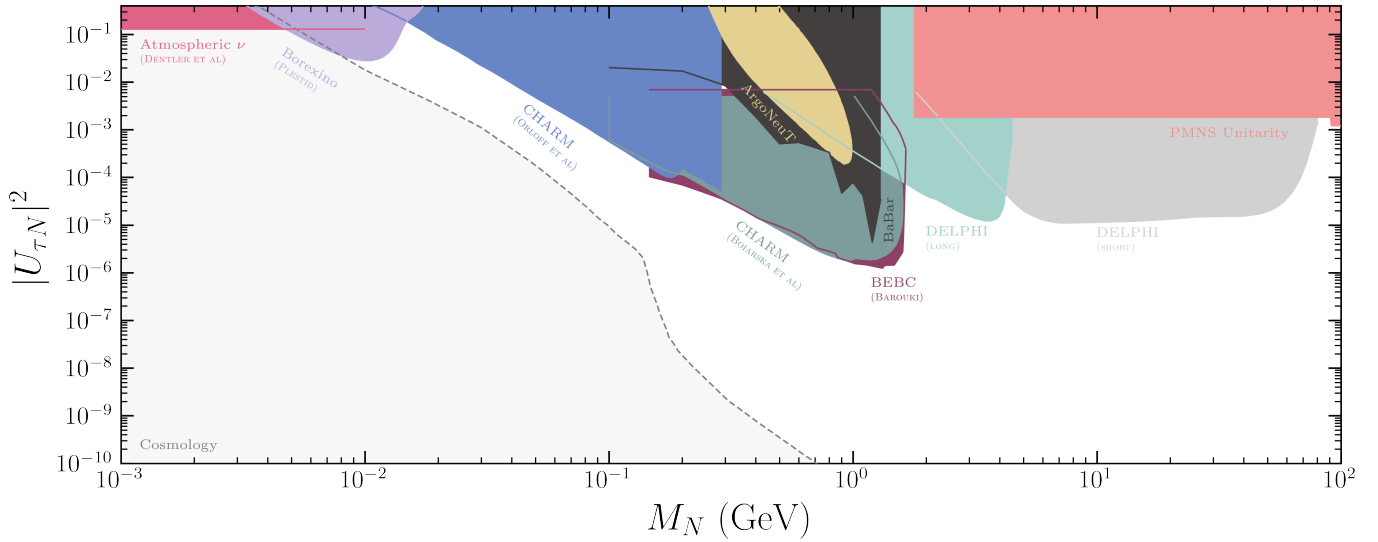


FIG. 3. Constraints on  $|U_{\tau N}|^2$  as a function of the HNL mass  $m_N$ . Limits shown: ArgoNeuT [23], Atmospheric  $\nu$  (Dentler et al) [24], BEBC(Barouki) [3], BaBar [25], Borexino (Plestid) [26], CHARM (Boiarska et al) [27], CHARM (Orloff et al) [28], Cosmology [8], DELPHI (long) [9], DELPHI (short) [9], PMNS Unitarity [? ].

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