

# NF03 - Beyond the Standard Model

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- **Neutrino BSM topics:**

- Sterile Neutrinos [oscillations, fixed targets, atmospheric neutrinos, colliders, supernovae, rare decays (HNL searches)] [NF01 & NF02 overlap].
- Large extra dimensions. [NF01 overlap]
- Lorentz and CPT violation. [NF01 overlap]
- Non-standard neutrino interactions (NSI) and non-unitarity of the PMNS (NU). [NF01 overlap]
- Leptogenesis [NF08 overlap]
- Neutrino-dark matter portals.
- Neutrino decay [long-baseline, short-baseline, Icecube, etc] [NF01 overlap, partially?]

- **Non-Neutrino BSM @ Neutrino Facilities:**

- Searches for low mass dark matter/dark photons produced in neutrino beams [overlap with EF10]
- Searches for (in)elastic boosted dark matter in large neutrino detectors
- Searches for milli-charged particles [overlap with EF]
- Neutrino tridents (and dark tridents)
- Baryon number violation in large neutrino detectors [including nucleon decay and n-nbar oscillation] [overlap with RF4]
- Lepton flavor violation searches ( $\mu \rightarrow e + \gamma$ , etc.) [overlap with RF4]
- Neutrinoless double beta decay [overlap with RF4]