

A neutrino detector optimized for proton decay searches is also well matched to detect neutrinos of $< \sim 1 \text{ GeV}$

- **Japan:** Super -K (50 kton) \rightarrow Hyper-K (1 Mton) (T2K phase II)
- **US:** Report of the US long baseline neutrino experiment study "A well instrumented very large detector, in addition to its accelerator based neutrino program, could be sensitive to proton decay which is one of the top priorities in fundamental science... Indeed, there is such a natural marriage between the requirements to discover leptonic CP violation and see proton decay that it could be hard to imagine undertaking either effort without being able to do the other"
- **Europe:** ApPEC recommendation "We recommend that a new large European infrastructure is put forward as a future international multi-purpose facility on the 100 - 1000 ktons scale for improved studies of proton decay and of low-energy neutrinos from astrophysical origin. The detection techniques ... should be evaluated in the context of a common design study, which should also address the underground infrastructure and the possibility of an eventual detection of future accelerator neutrino beams"