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A new CERN long baseline conventional neutrino beam (CN2PY) aimed at a deep underground research infrastructure for large scale detectors at Pyhasalmi: an opportunity for Particle and Astroparticle Neutrino and Grand Unification Physics

Considering the overall state of neutrino physics, and all proposed projects worldwide, we conclude that to stay at the frontier of neutrino physics and astroparticle physics, Europe has to build a next generation neutrino facility at a deep underground location with an appropriately long baseline distance from CERN. Several years of investigations made possible by the LAGUNA and LAGUNA-LBNO Design Studies, indicate that the Pyhasalmi mine in Finland (2300 km from CERN) can host such a research infrastructure.
We are calling on CERN to endorse the creation of the LAGUNA laboratory at Pyhasalmi by inserting it in the European Roadmap, and by preparing an engineering design of a new long baseline conventional neutrino beam (CN2PY) aimed at that facility. CERN should support the development of a full experimental proposal by the end of 2014, in a collaborative effort with neutrino physicists.

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