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Nuclear Physics at ISOLDE-CERN

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The ISOLDE Facility at CERN is the world's leading facility for the production of radioactive ion beams (RIBs) using the ISOL (Isotope Separation On-Line) method. Over 1000 isotopes of more than 70 elements have been produced by the impact of a 1.4 GeV proton beam on a variety of targets and using different ion sources for providing beams at 40-50 keV energy. Purified isotope/isomer beams can be further accelerated to about 10 MeV/u using the HIE-ISOLDE post-accelerator.
The low-energy and accelerated beams are used for a wide variety of experiments in nuclear structure research, but also for studying astrophysical processes, for materials properties research, for biochemical and biomedical research and for fundamental interaction studies.
This presentation will introduce the ISOLDE facility and RIB production, including some recent examples of experiments addressing open questions in nuclear physics.

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