

Ten Years of Physics with REX-ISOLDE

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The “Radioactive EXperiment at ISOLDE” (REX-ISOLDE) was proposed at the end of 1994 to perform a pilot experiment to study neutron-rich isotopes around $N=20$ and 28 using Coulomb excitation and transfer reactions. A novel concept to accelerate the existing low-energy, singly-charged ISOLDE beams and a new high-efficiency gamma-ray array, called Miniball, dedicated to low-multiplicity experiments were proposed. In 2001, first radioactive beams were accelerated to 2.2 MeV/u and used for physics studies. Later upgrades allowed to rise the final energy to 3 MeV/u. After ten years of operation, REX-ISOLDE has enlarged its scope far beyond the original plans. Isotopes as light as ^8Li and as heavy as ^{224}Ra have been used for Coulomb excitation, few-nucleon transfer reaction or fusion evaporation studies to name a few.

In this contribution we will highlight some of the physics results and emphasize ISOLDE’s unique opportunities. In addition we will give a brief historical note on how the concept of REX-ISOLDE came about.

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