

Großes Physikalisches Kolloquium an der Universität zu Köln

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The rich revenue from the use of radioactive ion beams: recent highlights and scientific opportunities at the ISOLDE, CERN facility



This year the radioactive ion beam facility ISOLDE at CERN celebrates its fiftieth birthday. This world-leading ISOL (Isotope Separator On Line) facility is dedicated to the production of radioactive nuclei for many different experiments in the fields of nuclear and atomic physics, solid-state physics, materials science and life sciences.

Continuous developments in production techniques over the years have led to the largest variety of available radioactive beams of high isotopic and often isobaric purity.

In this talk an overview will be given of the present status of the facility illustrating the unique possibilities through recent physics highlights.

But also a look into the future will be given as a major on-going upgrade, called the

HIE ISOLDE project, will boost ISOLDE to higher intensities and to higher energies for the post-accelerated radioactive beams opening up new possibilities and challenges.

