

## **Present status of the KISS project**

*Friday, 30 June 2017 10:20 (20 minutes)*

KISS project aims at finding an astrophysical condition for synthesizing r-process heavy elements, which form the third peak in the solar abundance pattern. This is an experimental challenge in nuclear physics to measure ground and isomeric state properties of unknown nuclei around the region of  $N=126$  isotones. So far we have constructed and developed new type of mass separation system, KISS (KEK Isotope Separation System) and performed measurements of lifetimes and hyperfine structures of some platinum and iridium neutron-rich radioactive isotopes by applying multi-nucleon transfer reactions and in-gas laser ionization and spectroscopy methods.

In this report, I will present recent physics results, updated KISS performance, and future's research plan including systematic mass measurements with MRTOF (Multi-Reflection Time-Of-Flight spectrograph).

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**Session Classification:** Session 11 (Chair: T. Ahn)