

Current Status of Isotope Separation On-Line Target in RISP

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Rare Isotope Science Project (RISP) was launched by the Institute for Basic Science (IBS) in December 2011 in South Korea. RISP is now developing Isotope Separation On-Line (ISOL) target system, which consists of uranium-carbide multi-disks, to provide various rare isotope beams for nuclear science as well as other associated applications. Production of high purity rare isotopes, e.g. ^{132}Sn with the intensity of $\sim 10^8$ pps, is estimated by bombarding a 70 MeV proton beam on the target at 0.5 mA beam current via the proton-induced fission reaction. The target is designed to be operated at a temperature of ~ 2000 °C taking into consideration of fast release characteristics. We are developing the lanthanum-carbide disks, as a first step, due to the difficulties of handling radioactive material. The current status and present design of the ISOL target are introduced, briefly, along with an overview of the RISP ISOL system.