

8th High Power Targetry Workshop (HPTW2023)



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The High-Power Beam Dump System for the BigRIPS Separator

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At the RIKEN RI Beam Factory, heavy-ion beams at 345 MeV/nucleon are employed to generate a great variety of exotic nuclei. These exotic nuclei are produced by a fragmentation or in-flight fission reactions of the heavy-ion beams incident on a beryllium target located at the entrance of the BigRIPS separator. The beam ions that remained unreacted at the target are intercepted by water-cooled high-power beam dumps at the downstream of the target. The beam dumps are designed to safely absorb beams with power of 82 kW at the maximum. Presently, operations have been conducted utilizing beams with a maximum power of 20 kW.

In this contribution, we will report the details of the beam dumps and an incident recently we experienced. In addition, the upgrade plan of one of the beam dumps to cope with the higher beam power due to the future RIBF upgrade will be presented.

Themes for the contribution

7 Operation of targets and beam dumps:

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