THE OPTICAL DESIGN OF THE NEW RADIOACTIVE ION BEAM INJECTOR AT HRIBF

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In this talk, I will present a system overview, and then I will describe the details of the optical design comprising three pieces: ion source extraction, beam transport and 1st-stage mass analysis on the 225-kV platform, and finally, the beam transport line coupling the new injector to the existing RIB injection line to the 25 URC tandem accelerator. In addition to the design, I will give some commissioning and early operational results and discuss some of the beam purification techniques available with the new injector.