

Uniform irradiation of an extended target by high power beam.

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As part of the Accelerator Driven Subcritical Reactor project at BNL, high power beams are crucial to increase the neutron production of the spallation target. To minimize the stresses on the target and on the vacuum window, which separates the optical elements of the beam delivery system from the target region, we propose to expand the beam and uniformly distribute it over the target area. In this talk we will present a well proven method which uses higher order beam optics to accomplish beam uniformity and also allows to control the beam halo along the delivery line.

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