

Studies of the equation of state of asymmetric nuclear matter with R3B at FAIR

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Abstract

The R3B experiment at FAIR will offer unique opportunities world-wide to study the properties of bulk asymmetric nuclear matter, e.g. the phase diagram, equation of state, symmetry energy, transport coefficients and in-medium cross sections. The experiment will take advantage of the intense radioactive beams produced by the SuperFRS with energies up to 2 AGeV. We will outline this physics programme and describe the detector sub-systems of R3B which will enable these measurements. Some detectors are already under construction while others are at the planning/R&D stage.