

## LAND-R3B: Experimental Results and Technical Developments

*Tuesday, 6 December 2011 15:20 (30 minutes)*

In this talk I will discuss briefly the experimental concept of the R3B experiment and concentrate on some of its recent results concerning two types of reactions, namely quasi-free scattering and electromagnetic excitation.

Quasi-free scattering aims at a detailed study of the single-particle structure of nuclei, while electromagnetic excitation is being used to study the collective response of nuclei. Our experiments, performed in inverse kinematics, allow exotic nuclei to be investigated in both respects.

The experimental findings for low-lying dipole strength, often referred to as pygmy dipole resonance, for exotic Sn isotopes will be discussed in the context of their possible relation to parameters of the equation of state of asymmetric nuclear matter.

For quasi-free scattering in inverse kinematics, first results from pilot experiments will be presented.

An overview on the further development of the existing setup into the R3B experiment at the FAIR facility will be given.

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