R^3B Experiments with Final CALIFA Setup

The R3B (Reactions with Relativistic Radioactive Ion Beams) experiment, as part of the large research facility FAIR in Darmstadt, enables kinematically complete measurements of reactions with high-energy radioactive beams. The broad physics program offers an unique possibility to gain a deep insight in the nuclear structure and dynamics of exotic nuclei far off stability.

One of the key detectors of the R3B Setup is the CALIFA calorimeter. It surrounds the target area and serves for the detection of gamma-rays as well as protons and other light charged particles. The development of this detector, with a strong contribution from the TUM group, is going to its final setup.

In my talk I will introduce you the versatile setup of the R3B Experiment, with special focus to the CALIFA detector and give you an overview of my analysis from the 2020 experimental data.