## **DREB2022** - Direct Reactions with Exotic Beams



Contribution ID: 274

Type: Poster

## Performance of the CALIFA detector during the experiment s467 on the Ca isotopic chain

Tuesday 28 June 2022 17:15 (5 minutes)

In Feb. 2020 an experiment to study single particle properties around the Ca isotopic chain, reaching from the proton-rich to the neutron-rich side, was performed with the versatile R3B setup at GSI, Darmstadt, Germany. The secondary cocktail beam included neutron-rich isotopes from Cl to Cr. This experiment, part of the R3B Phase 0 program at FAIR, allowed for exclusive studies in inverse kinematics by coincident measurement of outgoing particles and gamma rays, employing reactions like (p,2p), (p,pn), etc. The knocked out particles were detected with CALIFA, a CsI detector with high granularity, situated around the target area. The poster presents performance aspects of CALIFA. Basic properties are shown, like geometry and energy resolution. A focus is on proton and gamma detection efficiency, utilizing hit reconstruction algorithms and investigating their effects on the efficiency. A (p,2p) reaction channel is picked to show the fingerprint parameters for a quasi-free scattering reaction, detected with CALIFA.

## Topic

Experiment

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