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One tracker calibration to rule them all

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In the S393 experiment several different settings in the FRS were used producing a wide range of isotopes from Li to Ne. To identify the outgoing fragments from the target reactions "Ralf's tracker" is used. This is a program developed by Ralf Plag which tracks a fragment from the target through Aladin and all the way to the TOF-wall. The track is compared to the measured hit positions in the SSTs, GFIs and TFW. By changing the mass of the tracked fragment, the path through Aladin will change and hence also the hit positions in the GFIs and TFW. The mass of the fragment is found by minimising the residual at these detectors. For this approach to work it is very important that all the detectors are given the same positions in the tracker as during the experiment. It is also important that the charge identification and beta of the fragment is correct. It has turned out to be hard to find a detector setup that works for all different FRS-settings. This in turn has made it necessary to recalibrate the tracker for each setting by slightly moving the detectors to get reasonable mass identifications. I will present how this can be avoided by carefully aligning the SSTs and using a time-dependent incoming TOF-calibration.

Indicate to which session your contribution belongs

Ongoing data analysis

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