

## Inverse kinematics resonance scattering on thick target with EXCYT beams

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In the last years scattering experiments induced by exotic beams were used to study the formation of cluster states in nuclei far from stability. In order to investigate the presence of possible  $\alpha$ -<sup>8</sup>Li and  $\alpha$ -<sup>9</sup>Li cluster states in <sup>12</sup>B and <sup>13</sup>B, a set of resonance scattering experiments on infinite <sup>4</sup>He target are planned with the first radioactive beams (<sup>8</sup>Li and <sup>9</sup>Li) of the forthcoming RIBs facility EXCYT at LNS. In consideration of the poor intensities expected at the beginning for the unstable beams, this experimental approach seems specially suited, since the so called thick target condition allows the measurements of a scattering excitation function in a wide excitation energy region with a single beam energy. A preliminary experiment was then performed with stable beams, in order to test and optimise the experimental set up. In the test experiment, the two systems <sup>18</sup>O+ $\alpha$  and <sup>9</sup>Be+ $\alpha$  were studied and the scattering excitation functions, deduced for the two systems, were compared with previous results reported in the literature. The results of these experiments show the necessity of accurate stopping power measurements.