

**MUST II: large solid angle light charged particle telescope for studies with radioactive beams.**

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Measurements with radioactive beams in inverse kinematics for transfer reactions [e.g.  $d(A,A+1)p$  or  ${}^4\text{He}(A,A+2)d$ ], breakup [e.g.  ${}^{12}\text{C}({}^{12}\text{Be}, {}^6\text{He} + {}^6\text{He}){}^{12}\text{C}$ ] or multi-particle final states [e.g.  $p({}^7\text{Be}, {}^5\text{Be} \rightarrow {}^3\text{He} + 2p)t$ ] require a large solid angle cover with good energy resolution and excellent position resolution. A detection system called MUST II which has six individual telescopes was developed with 100 cm<sup>2</sup> active area each giving a total solid angle of 21% of  $4\pi$  and 5 mrad resolution at 15 cm. The TOF combined with the  $\Delta E.E$  gives mass/charge resolution down to thresholds of 0.2 MeV for the light fragments and a dynamic range reaching 80 MeV for protons. The double sided strip detector, Si(Li) and CsI telescope has nouvelle on board front end electronics using micro electronics allowing a time-to-amplitude and energy measure per channel. The salient results of the resolution and the highly compact and portable acquisition with time stamping will be presented. The first beam measurements will also be shown. Simulated experimental and further application for the system for focal plane spectrometers will be given.