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## CsI-Silicon Particle detector for Heavy ions Orbiting in Storage rings (CsISiPHOS)

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The CsI-Silicon Particle detector for Heavy ions Orbiting in Storage rings (CsISiPHOS) was designed and developed for  $\beta$ -decay studies at the Experimental Storage Ring (ESR) and as a prototype of the in-pocket detectors for the ILIMA programme at the future Collector Ring (CR) at FAIR. The detector serves as a  $\Delta E/E$  telescope to be used for detection and identification of each incident ion. Furthermore, from the position determined using a DSSD the trajectory of ions which have changed their charge (by  $\beta$  decay or electron capture/loss) at certain positions in the ESR can be traced back. In a recent commissioning experiment the detector was employed to measure the  $\beta^+$  decay rate of H-like  $^{142}\text{Pm}^{60+}$  ions into  $^{142}\text{Nd}^{59+}$ . With a resolution (FWHM) of 60 MeV in the silicon detectors at  $\Delta E=6.7$  GeV, and a total energy resolution of 330 MeV at  $E=56.8$  GeV, the detector can identify neighbouring isobars in this mass range distinctly. In this presentation, we report on the design of the detector and the preliminary results from the experiment. This work was supported by the BMBF project 05P12RGFNJ (Multi-purpose pocket detector for in-ring decay spectroscopy), the Helmholtz association via the Young Investigators Project "LISA: Lifetime Spectroscopy for Astrophysics" (VHNG627), Helmholtz-CAS Joint Research group HCJRG-108, and the Maier-Leibnitz Laboratory in Munich. Authors are grateful for the help of M. Böhmer (TUM electronics lab), Bettina Lommel and Birgit Kindler (GSI target lab), and the GSI accelerator staff.

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