Contribution ID: **78** Contribution code: **PSA-40** Type: **Poster**

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Monday, 21 October 2024 17:15 (20 minutes)

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Abstract:
A simple single anode gas ionization chamber (GIC) design for low-energy ions was developed for a compact accelerator mass spectrometer at Guangxi Normal University (GXNU-AMS) , China. This detector comprises a 50-nm silicon nitride window, an anode, a Frisch grid, and a cathode. To determine the optimal measurement conditions and to characterize the detector performance at low energy, test experiments were performed with a 239Pu/241Am α source and 3H and 14C ions at the energies of ˜180 keV. The results prove that this GIC can be used for measuring ions at low energy and meets the requirements for low-energy ion measurements at GXNU-AMS.
Keywords: GIC; low energy; AMS

Student Submission

Yes

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Presenter: Mr SHI, Shu lin

Session Classification: Poster Session A

Track Classification: New and Advanced AMS Techniques