



Contribution ID: 1859 Contribution code: MOPS094

Type: **Poster Presentation**

Reconstruction of the beamlines of the 1.7 MV tandem accelerator to address the users' demands

Monday 2 June 2025 16:00 (2 hours)

The KOMAC (Korea Multi-purpose Accelerator Complex) of the KAERI (Korea Atomic Energy Research Institute) has been operating 1.7 MV and 3 MV Tandem accelerators for many years. Recently, in the fields of cultural heritage research and semiconductor device development, there have been strong demands from users for precise composition analysis and large-area & uniform irradiation of proton beam using a 1.7 MV Tandem accelerator. In order to satisfy the needs of these special and important users, the entire beamlines are being rearranged and beamline characterizations are being performed. The external beam PIXE (Proton-Induced X-ray Emission) beamline is being constructed for precise element composition analysis of cultural heritage samples, and for large-area silicon wafer uniform irradiation, the beamline, which was previously capable of uniform irradiation of proton beams up to 6 inch wafers, will be improved to 8 inches. This presentation focuses on the construction of the external beam PIXE beamline for cultural heritage analysis and the results of element composition analysis experiments on cultural heritage samples.

Footnotes

Paper preparation format

Word

Region represented

Asia

Funding Agency

This work has been supported through KOMAC (Korea Multi-purpose Accelerator Complex) operation fund of KAERI by MSIT (Ministry of Science and ICT).

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Session Classification: Monday Poster Session

Track Classification: MC1 :Colliders and Related Accelerators: MC1.A07 Electrostatic Accelerators