



Contribution ID: 43

Type: **not specified**

PO07 - The Control and Data Acquisition for HEPS Linac High-Power RF Source System

Tuesday, 12 September 2023 15:10 (20 minutes)

The High Energy Photon Source is a fourth-generation light source under construction in China and is currently undergoing beam commissioning in the linear accelerator section. It is worth mentioning that the control and data acquisition design for the all-solid-state pulse modulator and the electron gun pulse power supply. It realizes wide range and high precision control of the beam current, and the high repetition stability of the solid-state output pulse voltage. To verify the performance of the linac key subsystems, several test platforms were built before the installation of the HEPS project. The designed control system has completed the whole process of automatic conditioning for the key components, from low power to rated high power. With a cumulative time of more than 10000 hours, which verifies the reliability. As a result, the implementation and commissioning process in the HEPS linac construction went very smoothly. This can also provide reference cases for the construction of other subsequent projects.

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Session Classification: Poster / Demo Sessions