Contribution ID: **63** Contribution code: **WEP12** Type: **Poster Presentation**

Design and development of the beam collimation system for CiADS

Wednesday 17 September 2025 17:00 (1 hour)

China initiative Accelerator Driven System (CiADS) consists of a 350m-long linac, a spallation target, a sub-critical reactor and several experimental terminals. The linac will provide protons at the energy of 500MeV with 2.5MW power. In order to keep the uncontrolled beam loss along the beam transport line before entering the target and the reactor less than 1 W/m, a two-stage collimation system with (2+1) periodic lattice has been designed for the linac and target coupling section of CiADS. The detailed design of the beam collimation system is presented, including material selection, structural design, thermal performance analysis, radiation shielding optimization, and remote maintenance. Key technical issues which affect the collimation equipment development are also introduced.

Footnotes

Funding Agency

Author: NIU, Haihua (Institute of Modern Physics)

Co-authors: Dr CAI, Hanjie (Institute of Modern Physics); JIA, Huan (Institute of Modern Physics); Mr ZHENG, Yajun (Institute of Modern Physics); QIN, Yuanshuai (Institute of Modern Physics); Ms HUANG, Yuxuan (Institute of Modern Physics); Mr WANG, fengfeng (Institute of Modern Physics)

Presenter: NIU, Haihua (Institute of Modern Physics)

Session Classification: Wednesday Poster Session

Track Classification: ACCELERATORS: Neutron Sources