

JULIC Neutron Platform

The HBS project [1, 2] develops an accelerator-based neutron source utilizing high current and low energy nuclear reactions for neutron production. The proton beam is multiplexed to three target stations operated at different beam parameters and optimized for the instrument requirements.

A target test station as part of the JULIC Neutron Platform will be installed at the Big Karl experimental area using the JULIC cyclotron at COSY. The platform will provide experimental space for the development, testing and operation of the target station and individual components of a pulsed accelerator-based neutron source within the HBS project. It will further allow the setting and operation of neutron scattering and neutron analytic instruments for development, training, education, and research.

I will present the JULIC Neutron Platform with its components and the possibilities it provides.

References:

[1] U. Rücker, T. Cronert, J. Voigt, J.P. Dabruck, P.-E. Doege, J. Ulrich, R. Nabbi, Y. Bessler, M. Butzek, M. Büscher, C.Lange, M.Klaus, T. Gutberlet and T. Brückel; *The Jülich high-brilliance neutron source project; The European Physical Journal Plus* (2016), 131

[2] P. Zakalek et al., High-brilliance neutron source project; Proc. HIAT'18, Lanzhou, China, 117-121 (2019)