

New Scientific Opportunities with the TRIUMF ARIEL e-linac



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MESA - A fully instrumented ERL facility for particle and nuclear physics experiments

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MESA is a recirculating superconducting accelerator under construction at Johannes Gutenberg-Universität Mainz. It can be operated in either external beam or ERL mode and will be used for high precision particle and nuclear physics experiments and will be a fully instrumented ERL user facility with three major experiments after completion. The operating cw beam current and energy in EB mode is 0.15 mA with polarized electrons at 155 MeV. In ERL mode a polarized beam of 1 mA at 105 MeV will be available. In a later construction stage of MESA the beam current in ERL-mode shall be upgraded to 10 mA (unpolarized). Civil construction and commissioning of components like electron gun, LEPT and SRF modules are ongoing already. We will give a project overview including the accelerator layout including experimental setups, the current status and an outlook to the next construction and commissioning steps.

Attendance

Contact Email

Scheduling Constraints

Primary author: HUG, Florian

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