

HAL - The new High-field And Low-temperature μ SR facility at S μ S

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Since this year, the sample environment range for muon spin rotation/relaxation (μ SR) at the Swiss Muon Source S μ S is significantly extended by the installation of the new HAL (High-field And Low-temperature) instrument working at high magnetic fields up to 9.5 T and sample temperatures down to 20 mK, an hitherto unaccessible region in the B-T phase diagram of condensed matter research using muons as local field probes. The instrument presently is in the final commissioning phase. In this talk, an overview of the instrument parameters (sample environment, detectors, and beam line) will be presented and the performance will be illustrated by a few examples.

Primary author: SCHEUERMANN, Robert Johann (Paul Scherrer Institut)

Presenter: SCHEUERMANN, Robert Johann (Paul Scherrer Institut)

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