MLZ User Meeting 2021



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Tailoring polarized neutron beams by traveling-wave magnetic neutron spin resonance

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We report on experimental tests of the neutron magnetic spin resonator MONOPOL with very cold neutrons. When placed between two supermirror neutron polarizers and operated in a pulsed traveling-wave mode, it allows to decouple time- and wavelength-resolution and can therefore be used simultaneously as electronically tunable monochromator and fast beam chopper. As a first 'real'scientific application we intend its implementation in the PERC facility at FRM II related to high-precision experiments in neutron beta decay.

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