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The resonant neutron spin echo spectrometer RESEDA

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We report on the recent progress in the development of the longitudinal MIEZE (Modulation of Intensity with Zero Effort) technique at the resonant neutron spin echo spectrometer RESEDA [1] at the Heinz Maier-Leibnitz Zentrum. The key technical parameters, such as the large dynamical range and possible sample environments are discussed. Typical experimental data comprising quasi-elastic and inelastic scattering are presented to highlight the versatility of the MIEZE technique. These data include magneto-elastic coupling and crystal field excitations in $\text{Ho}_2\text{Ti}_2\text{O}_7$, the skyrmion lattice to paramagnetic transition under applied magnetic fields in MnSi, ferromagnetic criticality and spin waves in Fe as well as molecular dynamics in H_2O .

[1] C. Franz, and T. Schröder; RESEDA: Resonance spin echo spectrometer; JLSRF, 1, A1 (2015);

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