

Challenges of the world-wide experimental search for the electric dipole moment of the neutron



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nEDM at FRMII

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At the FRM-II reactor we are currently setting up a new apparatus to measure the neutron EDM with a projected sensitivity of 10^{-28} ecm. To reach this 100 times improved measurement precision, next to the strongest possible source of ultra-cold neutrons, also the understanding of many systematic issues on a yet unprecedented level is required.

Understanding systematic effects includes the control of small magnetic fields and large electric fields. I will give an overview of the ongoing implementation of such an apparatus, including an overview of some technical advancements and milestones that actually enable this precision.

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