

Abstract Submitted
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Search for a neutron electric dipole moment¹ PAUL HUFFMAN,
North Carolina State University, NEDM COLLABORATION — The possible existence of a nonzero electric dipole moment (EDM) of the neutron is of great fundamental interest in itself and directly impacts our understanding of the nature of electro-weak and strong interactions. The experimental search for this moment has the potential to reveal new sources of T and CP violation and to challenge calculations that propose extensions to the Standard Model. The goal of the current experimental effort is to significantly improve the measurement sensitivity to the neutron EDM over what is reported in the literature. The experiment has the potential to either measure the magnitude of the neutron EDM or to lower the current experimental limit by two orders of magnitude. Achieving these objectives will have a major impact on our understanding of the physics of both weak and strong interactions. An overview of the experiment and the present status of our R&D effort will be presented.

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