DNP07-2007-000305

Abstract for an Invited Paper for the DNP07 Meeting of the American Physical Society

Nuclear Theory and the New Standard Model.

MICHAEL RAMSEY-MUSOLF, University of Wisconsin-Madison

During the next decade, a program of experimental studies of neutrinos and fundamental symmetries in nuclear physics is poised to uncover key ingredients of the "New Standard Model" of fundamental interactions. Nuclear theory will play a vital role in interpreting the results of this program and elucidating their implications for the New Standard Model. In this talk, I discuss some of the important challenges for nuclear theory in this context, focusing on neutrinoless double beta-decay, electric dipole moments, and precision measurements of neutrino properties and electroweak processes.