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Status and Prospects in Neutron Beta Decay

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Neutron beta decay is an exceptional laboratory for sensitive experimental tests which can reveal new particles and interactions beyond our Standard Model of Particle Physics. Recent advances in both theory and experiment have opened the door for the neutron to play an increasingly important role as a reference system for unitarity tests of the Cabibbo-Kobayashi-Maskawa quark-mixing matrix and constrain extensions to the Standard Model which predict non-V–A currents. These low energy precision measurements have sensitivity to new physics at energy scales comparable to or above the reach of the Large Hadron Collider. This presentation will review the state of the art in experimental determinations of neutron beta decay observables and outlook for precision tests and probes for new physics in the next generation.