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“Fundamental Interaction Studies with Radioactive Nuclei”

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In the past few years significant progress was made in the study of weak interaction properties at low energies. Particle traps and GEANT based simulations have played a crucial role in this. Improved theoretical calculations and new measurements have verified the unitarity condition of the quark mixing matrix with high precision, leading to stringent limits on different types of physics beyond the standard model. Further, a series of new results from different types of correlation measurements in the beta decay of radioactive nuclei have recently become available. These provide new constraints on exotic, viz. scalar and tensor, charged weak currents. An overview of the status and prospects for the future of this field will be given.

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