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magnetic spectrometer measurements for double beta decay

Neutrinoless double beta decay is of outmost importance for neutrino physics. This mode violates lepton number by two units and thus would open the door to physics beyond the Standard Model of Particle physics. It requires that neutrinos are their own antiparticles and a non-vanishing rest mass of the neutrino, which is linked to the measurable half-life. In the conversion from half-life to neutrino mass and also in the Standard model process including the emission of 2 anti-neutrinos nuclear matrix elements occur. Their determination is a major theoretical challenge and activities were started some years ago to provide more experimental data. Especially important are nucleon transfer reactions and charge exchange reactions.
The talk will give an introduction of the current situation, reviews measurements done in the last years and and outlook what should be done.

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