

Precision mass measurements with ISOLTRAP - Past, present, and future

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The ISOLTRAP Penning trap mass spectrometer has contributed many precise and accurate ground state masses, e.g., for the investigation of nuclear structure, the determination of charge radii, or the study of nucleosynthesis pathways, just to name a few applications. With ISOLTRAP also new techniques were introduced which allow one to make better measurements or to reach more and more exotic nuclei. An overview of the present ISOLTRAP mass database is given including the recent results from 2009. Furthermore, future physics cases are discussed and new technical developments, for example the installation of an electrostatic mass separator for better suppression of contamination.

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