

### **Precision Mass Measurements for Nuclear Structure\***

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Precision of atomic mass measurements have improved tremendously during the last few years when ion trap technology has been applied for rare isotopes. The obtained accuracy allows projecting nuclear mass surface in various ways to investigate many underlying nuclear structure effects.

A combination of ion trap technology and ion guide technique in the Accelerator Laboratory in the University of Jyväskylä has resulted in a vast amount of new binding data, which have been applied for nuclear studies, like evolution of shell gaps and nuclear structure in the neighborhood of  $N=50$ ,  $Z=28$ . Systematic studies of masses around  $Z=40$  and  $N=60$  have isolated the region of sudden shape changes. The obtained data is confirmed by the complementary information from optical spectroscopy at JYFL.

More precise measurements have been applied for special cases covering topics from super allowed beta decay and IMME-test to double beta decay studies and neutrino physics.

In this presentation, highlights from the recent atomic mass measurements for nuclear structure studies at JYFLTRAP will be presented.

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