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## New program for measuring masses of silver isotopes near the N=82 shell closure with MLLTRAP at ALTO

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The ISOL facility ALTO, located at Orsay in France, provides stable ion beams from a 15 MV tandem accelerator and neutron-rich radioactive ion beams from the interaction of a  $\gamma$ -flux induced by a 50 MeV 10  $\mu$ A electron beam in a uranium carbide target. A magnetic dipole mass separator and a resonance ionization laser ion source allow selecting the ions of interest. New setups are under preparation to extend the fundamental properties measured at ALTO of ground and excited states of exotic nuclei. For example, high-precision mass measurements for an accurate determination of the nuclear binding energy. To perform these measurements two devices will be hosted at ALTO: a radiofrequency quadrupole to cool and bunch the continuous radioactive beam and the double Penning trap mass spectrometer MLLTRAP, commissioned off-line at the Maier-Leibnitz Laboratory (MLL) in Garching, Germany. The unique production mechanism using photo-fission at the ALTO facility allows mass measurements in a neutron rich area of major interest around  $^{132}\text{Sn}$  with less isobaric contamination than using proton drivers. In this context, we plan to measure neutron-rich silver isotopes ( $Z = 47$ ,  $A > 121$ ) to explore the possible weakening of the shell gap for  $Z < 50$  and its impact on the  $A = 130$  r-process nucleosynthesis. The well-known silver masses ( $A < 121$ ) will be used for the on-line commissioning of MLLTRAP and to characterize the performance of the detection system. The status and timeline of the novel setup will be presented.

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