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## RIALTO, The laser ion source at ALTO

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RIALTO, the Resonant Ionization Laser Ion Source at the ALTO (Accélérateur Linéaire et Tandem d'Orsay) facility, uses a multi-step laser excitation process to produce pure ion beams through the resonance ionization technique. The laser laboratory is equipped with three high-power Nd:YAG operating at 10 kHz and pumping three dye lasers; these lasers are coupled with BBO doubling units and one tripling unit; this laser system allows us to achieve two and three-step ionization schemes with a range of 200–850 nm. An atomic beam unit (ABU) is also integrated to optimize operational parameters for online radioactive beam production.

We present recent upgrades to RIALTO that have improved the laser beam distribution and stabilization system, enhancing reliability and reducing laser scheme switch-over time.

These improvements enable the simultaneous production of ion beams for two different elements, demonstrated by the successful generation of radioactive gallium and silver isotopes during the same run. Notably, this marks the first production of laser-ionized silver isotopes at ALTO. Ongoing developments in generating a Zn beam are also presented.

**Author:** SEGOVIA MIRANDA, Anahi

**Co-authors:** LE BLANC, Francois (Inst. Nat. Phys. Nucl. & Particules (IN2P3)-Universite de Paris-); MANEA, Vladimir (Université Paris-Saclay (FR))

**Presenter:** SEGOVIA MIRANDA, Anahi

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