

# LASER SPECTROSCOPY OF RADIOISOTOPES AT TRIUMF: RECENT HIGHLIGHTS AND FUTURE PLANS

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Collinear laser spectroscopy is a powerful technique used to determine ground/isomeric state properties of radioactive isotopes. The use of gas-filled linear Paul traps to cool and bunch the beams has extended the technique's sensitivity by orders of magnitude, as demonstrated in JYFL and CERN-ISOLDE. There is now wide interest of other laboratories worldwide to apply the same methods. For instance, the Ion Trap setup for Atomic and Nuclear science (TITAN) in ISAC-TRIUMF comprises a gas-filled Paul trap, normally used to prepare cooled-and bunched ions for mass measurements. A unique feature of the existing setup is that it is possible for TITAN's RFQ to deliver ion bunches in the forward direction as well as in reverse mode. This talk will present an overview of the reverse bunched beam technique applied to collinear laser spectroscopy, the recent results and the future development of the experimental program in the facility.