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IS456 - Ground and isomer state properties of the neutron-deficient polonium isotopes using the ISOLDE RILIS

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For many years, the RILIS has provided very clean beams for ISOLDE. It is now also a tool used for precision measurement of nuclear ground and isomer state properties. Combining the laser spectroscopy technique in the ion source itself with the high sensitivity and precision of nuclear spectroscopy, it is possible to extract optical spectra for very exotic nuclei as was demonstrated with the lead and bismuth studies at the RILIS. This last summer, a similar study was performed on the neutron-deficient 193–200,202,204Po isotopes using recently developped laser ionized beams of polonium. In this presentation, we shall report on the achievements of experiment IS456 as well as on the challenges of the analysis of such data. The first insight on the nuclear properties will be discussed.

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