

Advances in in-beam spectroscopy with the JUROGAM II spectrometer

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The JUROGAM II gamma-ray spectrometer is the latest in a series of detector systems to study many aspects of the nuclear landscape from $N=Z$ nuclei, nuclei near the proton drip line to superheavy elements. JUROGAM II has an absolute efficiency of $\sim 6.2\%$ and is used in conjunction with the RITU gas-filled separator and the GREAT focal plane spectrometer.

In order to extend the bounds of spectroscopy new means of instrumentation have been commissioned. These include the commissioning and complete instrumentation with new digital electronics for the increased number of channels for 24 four-fold Clover detectors and 15 Tapered detectors and associated anti-Compton suppression shields. The new instrumentation allows for increased count-rate performance of the detectors and this increased beam intensities to be used.

JUROGAM II has been designed with other complementary detectors to be integrated at the target position. These include devices for in-beam conversion electron spectroscopy and for light-ion identification. Two such devices have been recently commissioned and first results obtained.

An overview of the project, achievements and recent highlights presented.