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## Investigating shell evolution in neutron-rich Kr isotopes with transfer reactions

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Neutron-rich nuclei near the  $N=50$  closed shell are of particular interest for their role in the rapid neutron capture process (r-process) of heavy element nucleosynthesis. Nuclear properties such as neutron capture rates and spectroscopic properties are crucial inputs to constrain theoretical models and improve their predictive power to properties of exotic, neutron-rich isotopes where little to no experimental information is known. In the region of  $N=50-60$ , a different trend of shell evolution is hinted for the Kr isotopes compared to the neighboring Zr and Sr isotopic chains, however there is limited information available for neutron-rich Kr isotopes. The systematics of the excited  $0^+$  state along these isotopic chains would provide insight into the neutron orbital occupancies and hence shell evolution in neutron-rich Kr isotopes. To address the unknown excited  $0^+$  states in  $^{94}\text{Kr}$  and  $^{92}\text{Kr}$ , the neutron transfer reactions  $^{93}\text{Kr}(d,p)$  and  $^{93}\text{Kr}(d,t)$  were performed at the ISAC II facility at TRIUMF using the ISAC Charged Particle Spectroscopy Station (IRIS). Information about the experiment and preliminary results will be presented.

**Authors:** Dr WALTER, David (TRIUMF / Saint Mary's University); Prof. KANUNGO, Rituparna (TRIUMF / Saint Mary's University); Dr HOLL, Matthias (TRIUMF / Saint Mary's University); IRIS COLLABORATION (TRIUMF)

**Presenter:** Dr WALTER, David (TRIUMF / Saint Mary's University)

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