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Exploiting the 8π spectrometer to probe nuclear matter and drive innovative applications at SFU and TRIUMF

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The 8π spectrometer was funded in 1984 by Atomic Energy of Canada Ltd. (AECL) and Natural Sciences and Engineering Research Council of Canada (NSERC) and comprised of 20 High Purity Germanium (HPGe) detectors, their BGO Compton suppressors with phototubes, and a 72 element inner BGO ball. After its use at the TASCC facility in Chalk River, it was moved to the Lawerence Berkeley Laboratory and then to the ISAC-I facility at TRIUMF. In early 2014 it was relocated to the Nuclear Science Laboratories at the Department of Chemistry, Simon Fraser University where it will be used for fission studies in its original configuration as a high-multiplicity spectrometer. Spare 8π HpGe detectors and electronics will be available as needed for trap-assisted decay

spectroscopy at TITAN at TRIUMF. In addition, the 8π will become the detection system for neutron-activation analysis of interest to basic and applied research following installation of a neutron generator at SFU. The current status of the 8π spectrometer and its application will be presented and discussed.

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