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Portable African Neutron-Gamma Laboratory for Innovative Nuclear Science

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The Portable African Neutron-Gamma Laboratory for Innovative Nuclear Science (PANGoLINS) project aims to further investigate measurements of neutrons which forms an important component part on site or in transit and the detection of both fissile material for the use in decarbonised energy sources or disposal thereof. iThemba LABS has pioneered a mobile gamma-ray detection unit which allows a user to operate in the field and chart the location, strength and energy of gamma radiation. This project allows not only for investigation of neutrons but anticipates the value add on other features that are outdated i.e. battery pack and reducing current, temperature monitoring that impacts data and overall analysis. Benefits of the outcome of this project includes economic impact, contribution to GDP etc., increased highly skilled capacity and knowledge base and increased capabilities for technical innovation and social impact including improvement in quality of life, poverty alleviation and the potential impact in lowering barriers to entry for other South African technology innovations.

An overview of the project, its progress and potential outcomes will be presented.

Primary authors: VAN NIEKERK, Ferdinand (iThemba LABS / Stellenbosch University); PELLEGGRI, Luna (iThemba LABS / University of the Witwatersrand); STODART, Nieldane (iThemba LABS); JONES, Peter Michael (iThemba LABS, National Research Foundation (ZA)); HART, Shanyn (iThemba LABS / University of Cape Town); WOODBORNE, Stephan (iThemba LABS)

Presenter: JONES, Peter Michael (iThemba LABS, National Research Foundation (ZA))

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