Delivering the Goods with Africa’s First AMS Facility

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The first AMS facility on the continent of Africa has been completed at the Gauteng site of the iThemba Laboratories for Accelerator-Based Sciences (LABS) located on the campus of the University of the Witwatersrand in Johannesburg, South Africa. Carbon-14 ions were injected, accelerated, selected and detected during a multi-stage commissioning process. The detection of Carbon-14 ions is illustrated in figure 1. A sample preparation laboratory for Carbon-14 has been completed and a second laboratory dedicated to cosmogenic isotopes is under finalization. Furthermore, a team of three AMS scientists has been recruited to drive the facility to deliver on the considerable investments made thus far from the South African government and the IAEA. Some of the latest results from analyses undertaken with the AMS facility will be presented.

![E-ΔE spectrum from the AMS gas-ionization detector demonstrating the detection of Carbon-14 ions generated from an OX-II standard.](image-url)