Contribution ID: **22** Type: **Poster Presentation**

Low Pressure Focal Plane Detectors for the K600: A design study

Magnetic spectrometers have proven to be very useful in the world of experimental nuclear and astrophysics. The focal plane detection system instrumenting these spectrometers is instrumental in their success. A new focal plane detection system is envisaged for the K600 QDD magnetic spectrometer at iThemba LABS in Cape Town, South Africa. The existing focal plane detection system, consisting of two multi-wire drift chambers (MWDCs) and plastic scintillators, is designed to detect light ions (H and He isotopes) at medium energies (50-200 MeV). The significant material budget of these detectors affects the low energy threshold for operation of the K600. A conceptual design for a new focal plane detectionsystem will be presented.

This work is sponsored by the NRF

Apply to be
 considered for a student
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Yes

Level for award
 (Hons, MSc,
   PhD, N/A)?

MSc

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Session Classification: Poster Session 1

Track Classification: Track B - Nuclear, Particle and Radiation Physics