

The K600 at iThemba LABS

The investigation of medium-energy light-ion scattering and reactions at zero degrees has the advantage of being very selective to excitations with low angular momentum transfer. This simplifies analysis of the many contributions to the spectra due to the complex nature of the nuclear interaction. Only a few facilities exist worldwide where high energy-resolution measurements of this nature can be performed. The K600 Zero-Degree Facility at iThemba LABS was recently successfully developed. A high energy resolution of 37 keV (FWHM) was achieved for inelastic proton scattering measurements at an incident energy of 200 MeV, and 35 keV (FWHM) for the measurement of the (p,t) reaction at 100 MeV. An overview of the the facility and a short discussion on possible future developments will be presented.

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