

INSTITUT FÜR ISOTOPENFORSCHUNG UND KERNPHYSIK
DER UNIVERSITÄT WIEN

E I N L A D U N G
zum
I N S T I T U T S S E M I N A R
von

Lowry CONRADIE

iThemba LABS, Cape Town, South Africa

The accelerator facilities at iThemba LABS

The main accelerator at iThemba LABS, situated at Faure near Cape Town in South Africa, is a K 200 variable-energy, separated-sector cyclotron. Intense beams of 66 MeV protons are delivered for the production of radioisotopes and neutron therapy after pre-acceleration in the light-ion injector cyclotron using an internal ion source. Proton beams with much lower intensity are accelerated to an energy of 200 MeV for proton therapy. For nuclear physics research beams of light and heavy ions, delivered by an electron cyclotron resonance ion source, as well as polarized hydrogen ions from another external ion source, are pre-accelerated in a second solid-pole injector cyclotron before acceleration in the main machine. Additions and improvements to the cyclotrons and beam lines currently in progress, for increasing the beam intensity for radioisotope production, include flat-topping systems for the light-ion injector and separated sector cyclotrons, and an additional buncher. A new vertical beam line is under construction and beam splitting in the existing beamlines is being planned to extend the facilities for the production of radioisotopes. The design and construction of these components, some new diagnostic equipment, and plans for new facilities for proton therapy will be presented. The 6 MV Van de Graaff accelerator, at Faure, that has been upgraded during the past few years, and the 6 MV Tandem Van de Graaff, in Johannesburg, that is currently being completely refurbished will be discussed.

Monday, 19. June 2006, 11:00 Uhr

**1090 Wien, Währinger Str. 17, "Kavalierstrakt",
1. Stock, Seminarraum von VERA**

R. Golser

W. Kutschera