

Physics and its Medical Applications in Africa

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Chief among its activities is the operation of a k=200 separate sector cyclotron which provides proton beams of energies up to 200 MeV. These beams are used for fundamental nuclear physics research in the intermediate energy region, isotope production and medical physics applications. The main emphasis of the latter is the neutron and proton therapy treatment programme. To this end, iThemba LABS is the only hadron therapy centre in Africa and in the Southern Hemisphere and one of the very few (in not the only) centre where patients can be treated with high-energy neutrons and protons. Patients from all over South Africa as well as neighbouring countries have been treated on these facilities. Currently, plans are in advance for the extension/upgrade of the facilities to include a dedicated radiation treatment centre. In this presentation I will outline details of the programmes (in nuclear and medical physics research) and give outlook on the role iThemba LABS will play in the area in accelerator bases sciences –both in the Country and the rest of the African continent.

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