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Investigation of the Isovector Giant Dipole Resonance (IVGDR) strength in the selected neutron-rich calcium isotopes 42, 44, 48Ca

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Abstract content
 (Max 300 words)
Formatting &
Special chars

Experiments were performed at the cyclotron of iThemba LABS together with the K600 magnetic spectrometer. High energy-resolution zero-degrees proton inelastic-scattering data were obtained for 42Ca, 44Ca and 48Ca at $E_p = 200$ MeV and fine structure has been observed in the region of the Isovector Giant Dipole Resonance (IVGDR) lying between 17 to 24 MeV excitation. In an excitation energy region below the IVGDR lies the so-called Pygmy Dipole Resonance (PDR), resulting from the oscillation of excess neutrons against a stable proton-neutron core with $Z \approx N$. An additional aim of the experiment is to identify the PDR and to investigate the nature and systematics of this resonance which are presently not well understood. Preliminary data will be presented and future prospects will be discussed.

Apply to be
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Yes

Level for award
 **(Hons, MSc,
 PhD)?**

PhD

Main supervisor (name and email)
and his / her institution

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Would you like to
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 for the Conference
 Proceedings (Yes / No)?

No

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