

Overview on the African LaBr Array at iThemba LABS

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The African LaBr Array (ALBA) consists of 23 large volume LaBr₃:Ce. The characteristics of these crystals, such as the good energy resolution and the high efficiency, make this array very useful for the detection of high-energy gamma rays. The ALBA project foresees the use of the gamma spectrometer in stand-alone mode and coupled to the K600 spectrometer or to silicon-detector arrays for the particle identification. A Digital acquisition system based on XIA PIXIE 16 cards (12 bit 500Mz digitization) is currently under test.

The first six detectors of ALBA arrived in 2018 and they were successfully used in an experiment to investigate the pygmy dipole resonance in deformed nuclei. An overview of the project will be given underling the physics program that is envisaged for the upcoming future.

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