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The present status of the GRAPES-3 experiment

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The GRAPES-3 experiment is a high density array of 400 plastic scintillator detectors and a large (560 sq.m.) area muon detector located at Ooty at an altitude of 2200 m above sea level. The primary objective of this experiment is to study the high energy processes occurring in the universe through a systematic study of composition of primary cosmic rays below and above the 'knee', compact sources of multi-TeV gamma rays, diffuse flux of gamma rays and the solar accelerator through the impact of coronal mass ejections, solar flares etc. To achieve these objectives extensive in-house development of necessary instrumentation including plastic scintillator and high-speed signal processing electronics has been carried out. The development of high performance TDC and silicon photo-multiplier have the potential to completely change the nature of scientific problems that can now be addressed. During the talk some of these aspects would be highlighted.

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