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Advanced CPU benchmarking of ARM processors for applications in High Energy Physics

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**Abstract content
 (Max 300 words)
Formatting &
Special chars**

The ATLAS experiment at the Large Hadron Collider plans to accommodate the sheer amount of data that will be obtained after raising the current energy levels to 13TeV, with increased luminosity, thus, current processors will need to be changed in a cost effective manner. An ARM cluster is currently being researched as a viable option as a high throughput computer due to its impressive throughput performance versus its cost, however, its processing capabilities must be tested to gain an understanding of its computational limits. An introduction to the SU3 AHiggs benchmark, based on the MILC code (a quantum chromodynamic calculation using an effective field theory for high temperatures) will be given as well as the performance results of the benchmark across various ARM processors versus a selection of modern computers.

**Apply to be
 considered for a student
 award (Yes / No)?**

No

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

Bsc

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

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**Would you like to
 submit a short paper
 for the Conference
 Proceedings (Yes / No)?**

No

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