



Contribution ID: 499

Type: poster

## Performance study of multicore systems with the ATLAS software Athena

*Wednesday, September 5, 2007 8:00 AM (20 minutes)*

With the proliferation of multi-core x86 processors, it is reasonable to ask whether the supporting infrastructure of the system (memory bandwidth, IO bandwidth etc) can handle as many jobs as there are cores. Furthermore, are traditional benchmarks like SpecINT and SpecFloat adequate for assessing multi-core systems in real computing situations. In this paper we present the results of simulation and full reconstruction jobs with the ATLAS software Athena on both Intel and AMD multi-core systems. The aim of this paper is to examine whether there is a performance penalty associated with multi-core systems. And if there is, the threshold (number of jobs / cores) at which that penalty is first observed.

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**Session Classification:** Poster 2

**Track Classification:** Software components, tools and databases