Benchmarking

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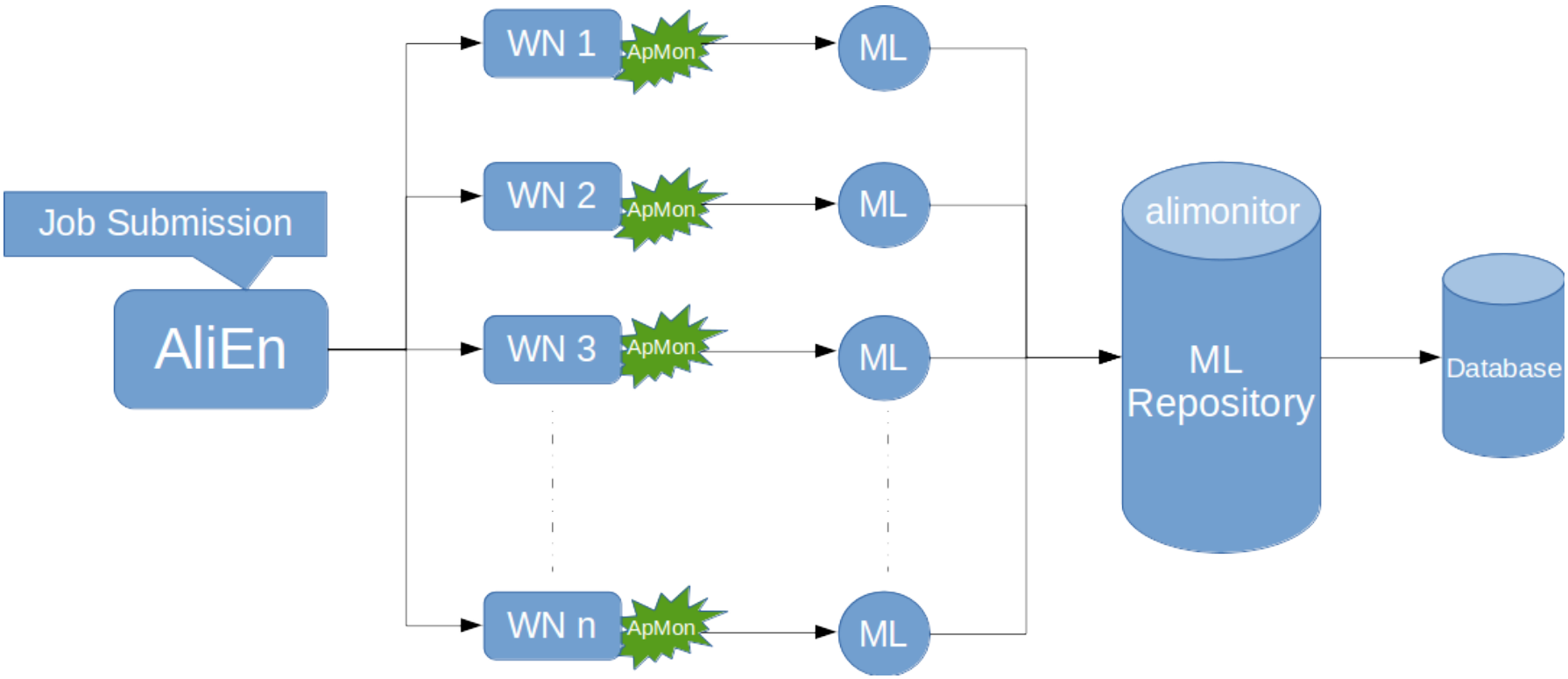
Outline

- Purpose
- Rootmark and Monte Carlo Simulation Data
- Correlations
  - SpecInt2006 with HepSpec06
  - 1/MC with Rootmarks
  - Rootmarks with SpecInt2006
- Conclusion

Purpose

Search for a new benchmark which correlates linearly with HepSpec06 and is widely available.

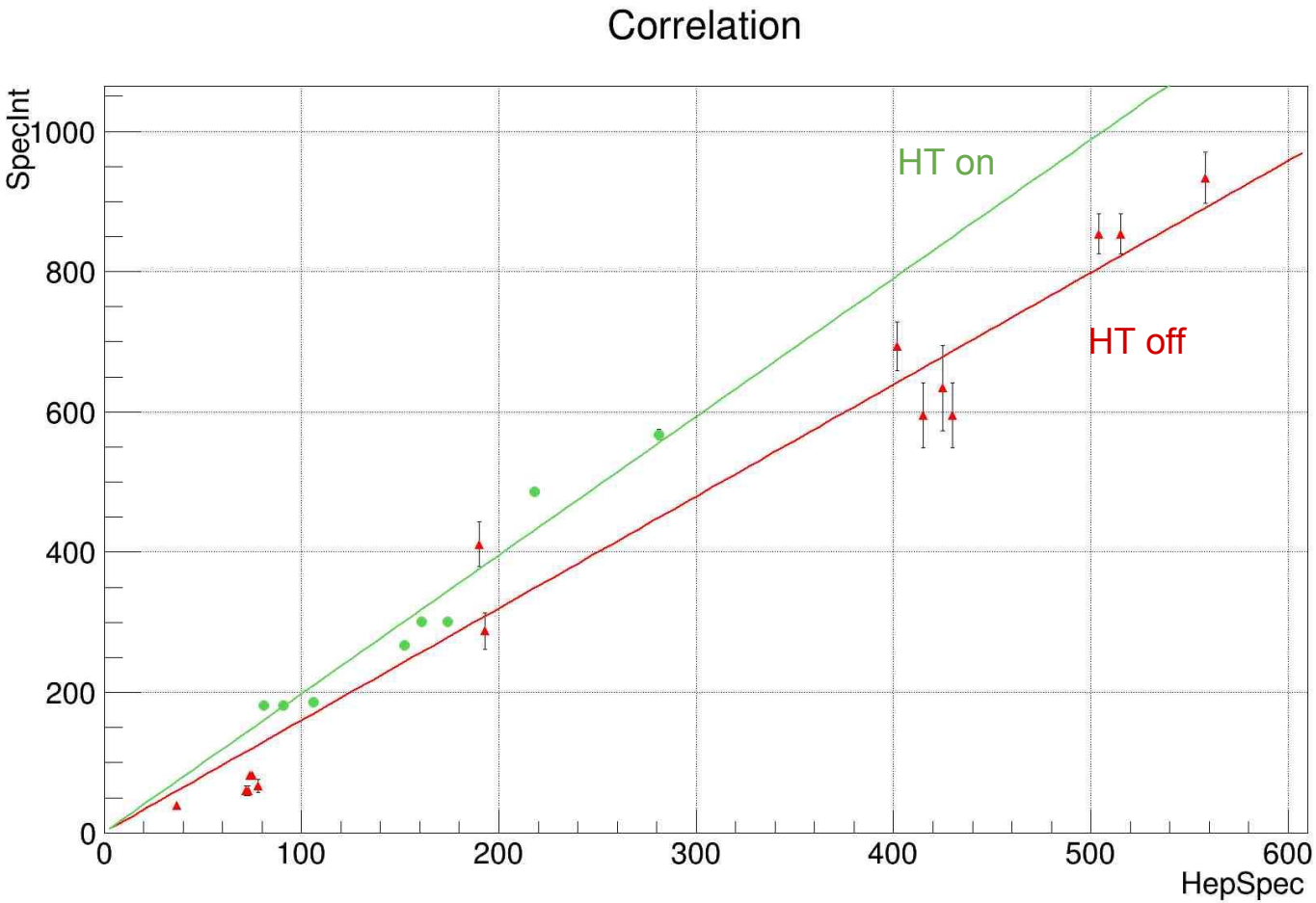
Rootmarks and MC Data



Data

- Job splitted into 50,000 subjobs
- stressHepix and MC simulation.
- Collected data via ApMon messages
- Around 110 different CPU configurations

SpecInt2006 and HepSpec06

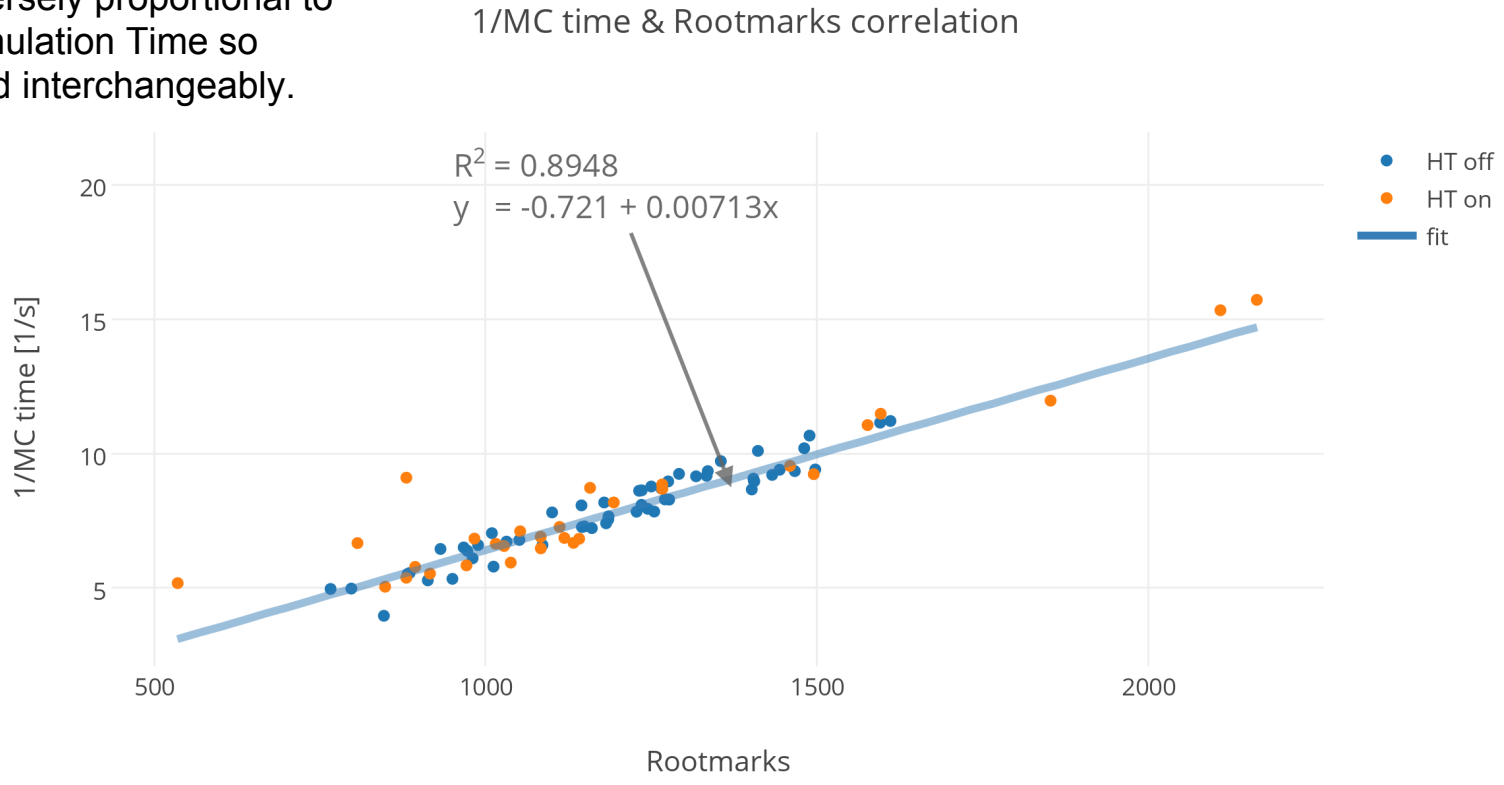


HepSpec06 - 64 points
SpecInt - 29545 points

High Correlation

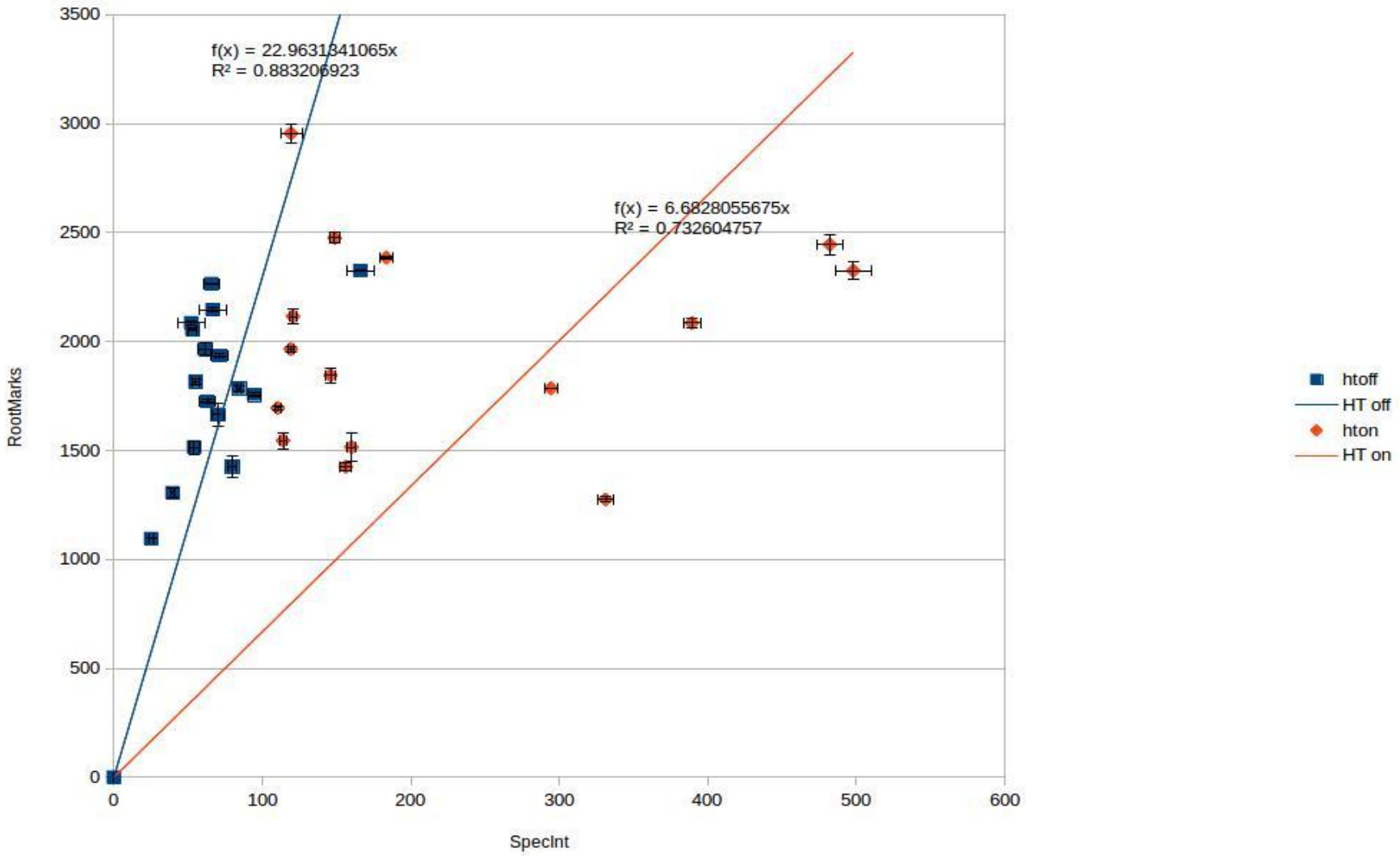
Rootmarks and MC Simulation Time

Rootmark is inversely proportional to Monte Carlo Simulation Time so they can be used interchangeably.

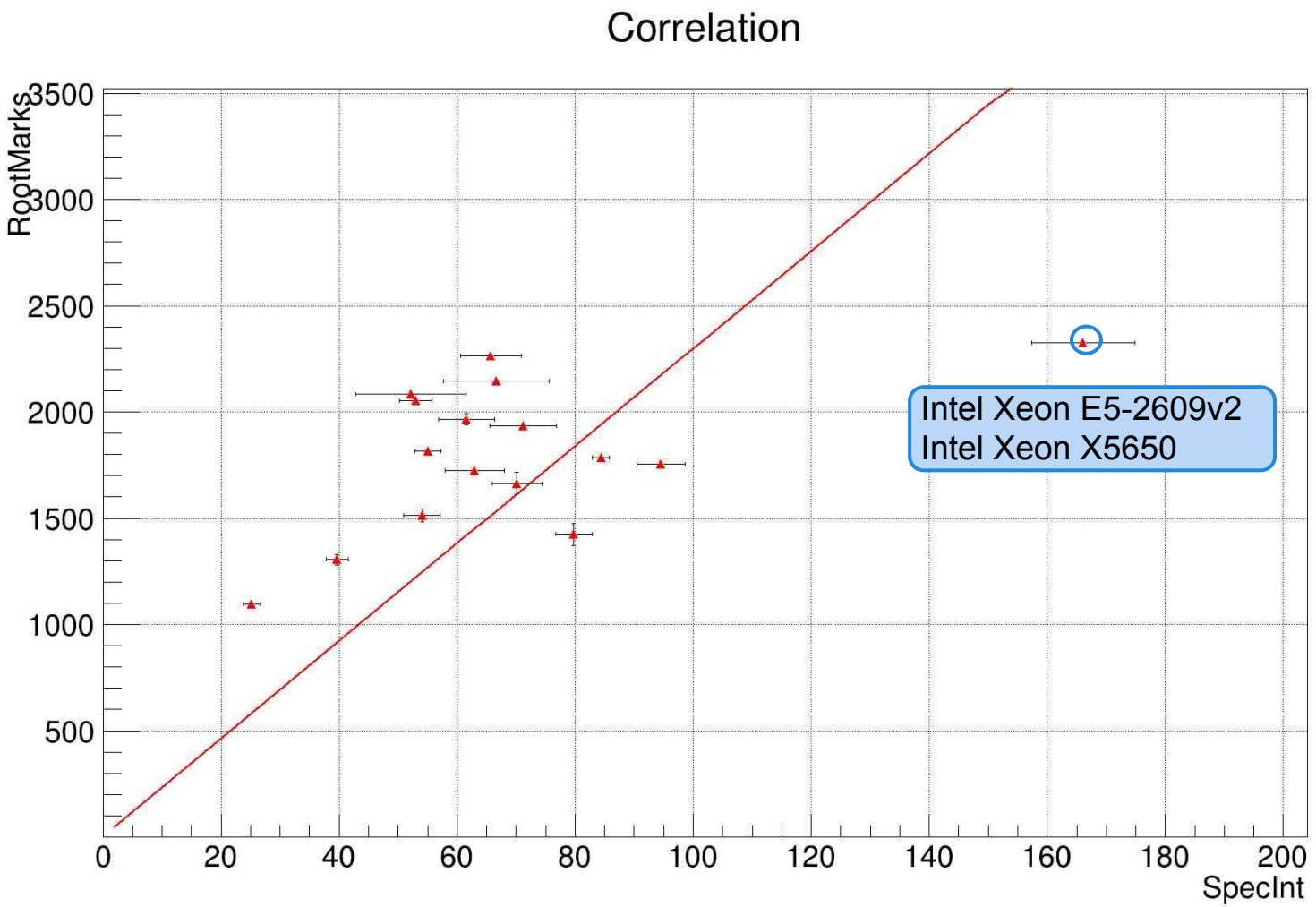


High Correlation

Rootmarks and SpecInt2006



Rootmarks and SpecInt2006



Conclusion

- HepSpec06 and SpecInt06 can be used interchangeably.
- Rootmarks and MC has high correlation.
- High Deviation of Rootmarks with HepSpec06 so it can’t be used in replacement.
- A benchmark has to be created/searched which correlates linearly with SpecInt06.

Thank you!

Backup

Other Potential Candidates (Benchmarks)

- Linpack
- HINT
- Phoronix Test Suite
- BRL-CAD
- DEISA Benchmark Suite