

# Performance Measurement of LArTest

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# Dev Env

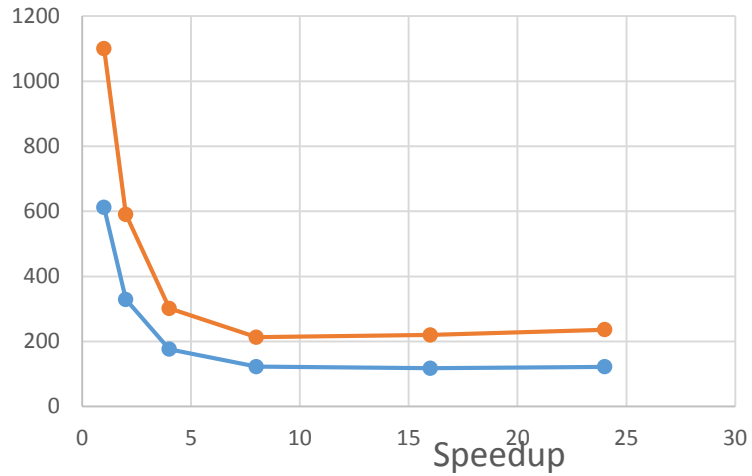
- OS: Scientific Linux 6.5, GCC: 4.9.4, Binutils: 2.28
- Geant4 10.3.p01. Two versions:
  - Default version
  - Modified version: with properties table's modification
- Testbeds
  - Jnws008 (32 cores, E5-4620 v2, 128GB)
  - Jnws054 (24 cores, E5-2680 v3, 64GB)
- MC: hanswenzel/IArTest, V1.0
  - COMMAND: IArTest tinyIArBox.gdml e-\_tiny\_noio.in -t 1

# Notes

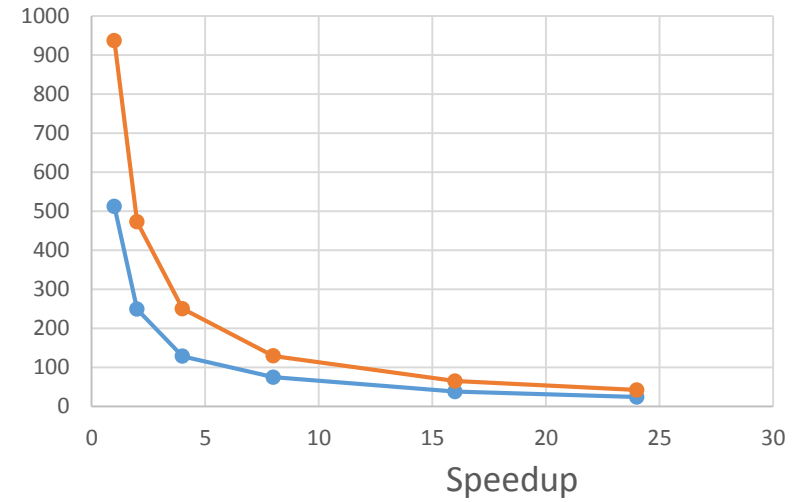
- No Optical Photons by default! Need to enable stack photon options.
  - `/process/optical/defaults/scintillation/setStackPhotons true`
- Instead of using muon, using low energy electrons.
  - `/gun/particle e-`
  - `/gun/energy 4 MeV`
- Turn off I/O
  - Analysis root file
    - `/testConfig/WriteHits false`
    - `/testConfig/DoAnalysis false`
  - Reduce G4cout
    - `// G4RunManager::GetRunManager()->SetPrintProgress(1);`
    - `/process/optical/verbose 0`

# Results

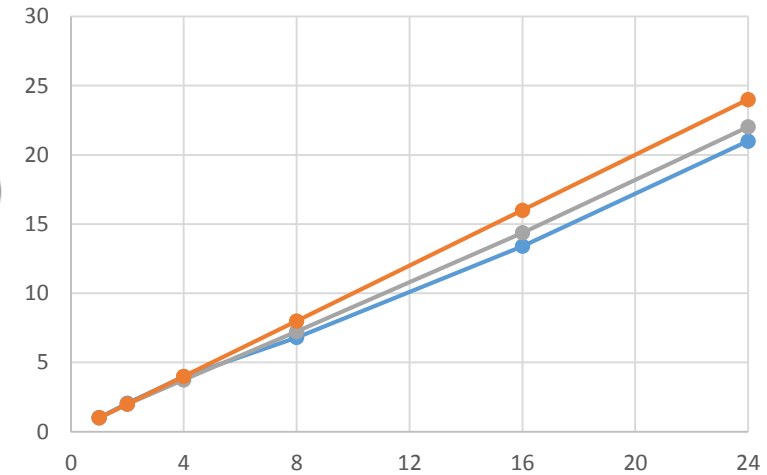
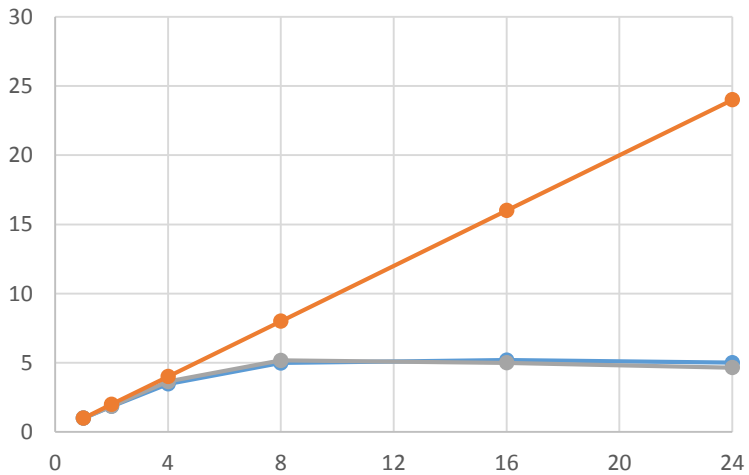
■ Using Default Geant4



■ Using Modified Geant4



Time



Speedup

Performance Problem