GAP

Atlas HLT

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SAPIENZA
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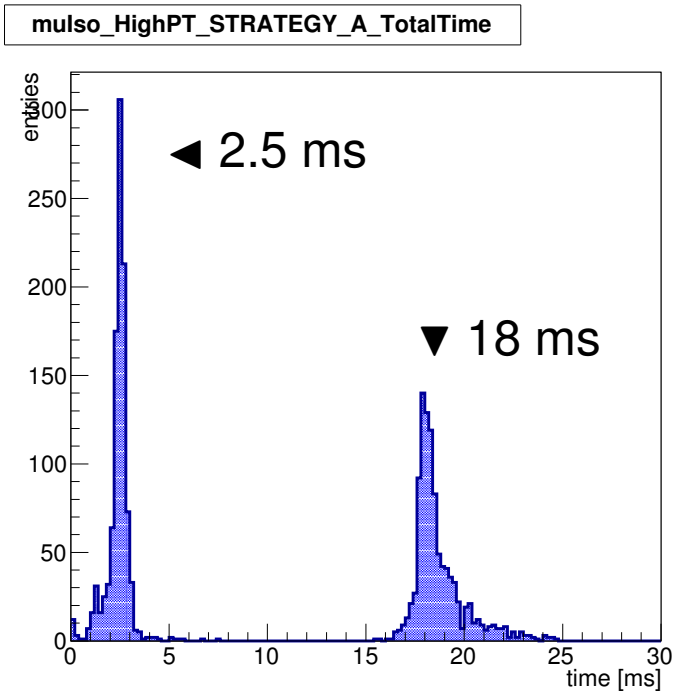
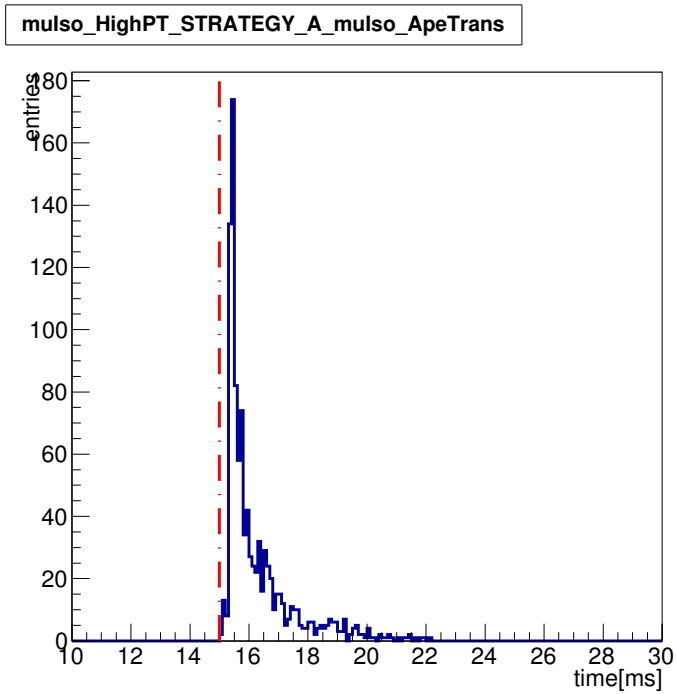
Timing Test: `muIso` on lxplus

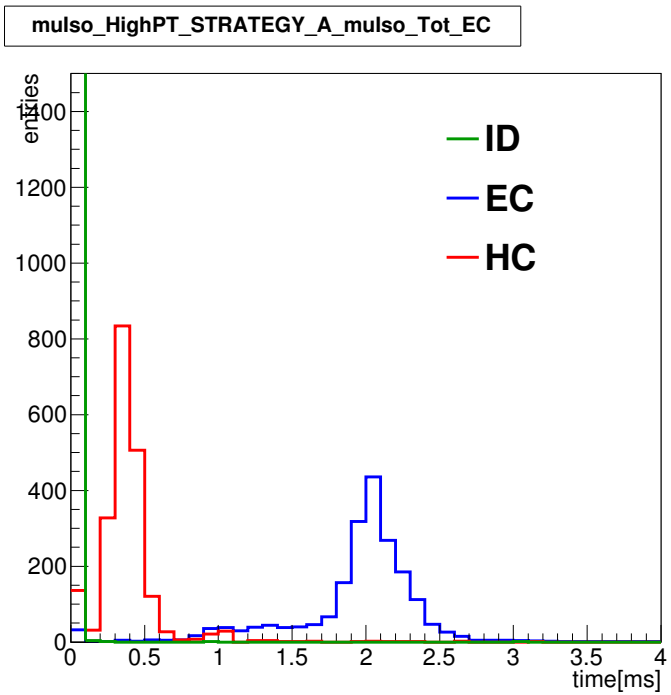
Running the HLT software on lxplus on a real data sample; focusing on the `muIso` algorithm.

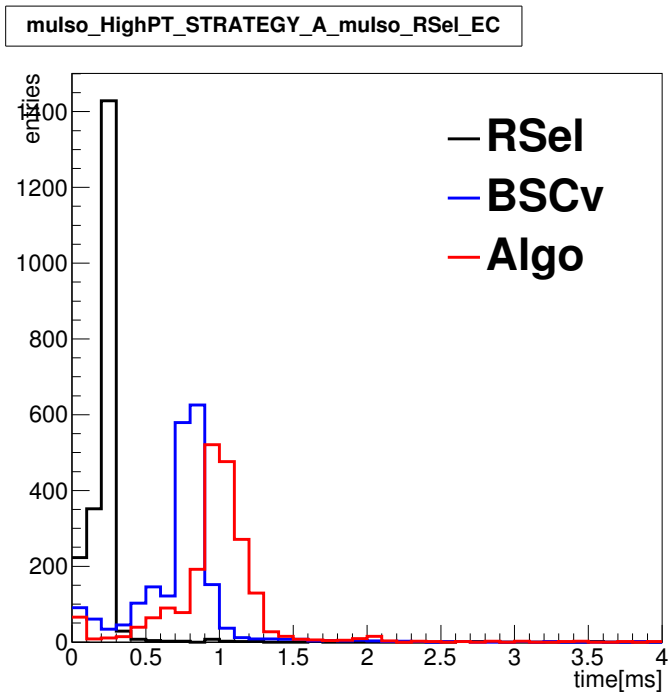




- Communication with the APE server:
  - Every other event processed, sent `char` to APE and back to client (inside muIso)
  - Dummy `sleep(15 ms)` in the server
- Broader timing distribution when server-client communication involved?

Detailed Timer Splits





- ID scan: $\sim$ 0 ms (working?)
- HAD calo. scan: $\sim$ 0.4 ms
- EM calo. scan: $\sim$ 2 ms

- RSel: Region Selection
- BSCv: Bytestream Conv.
- Algo: Algorithm

►EM Calo isolation Algorithm seems interesting for the first test (loop over calo. cells)

ROADMAP

0. Replicate communication test on `gap01.roma1.infn.it`:
   - check all the libraries are in place.

Convert the interesting part of the trigger algorithm to an APE::WORK
(module on the server containing instructions for processing input data received)

2. **Serial version**: similar to the current one
   - export libraries and tools
   - data formatting/handling
3. **Parallel version for GPU**:
   - CUDA implementation
   - algorithm optimization
4. Benchmark measurement (hopefully on simulated high-luminosity environment)
5. Repeat the same strategy for other algoriths.