Acts Parallelization Meeting

Stephen Nicholas Swatman

March 10, 2023



Today's Contibutions

■ Discussion on the use of Git LFS for traccc data

acts-project/traccc: PRs merged between 2023-02-24 and 2023-03-10 I

- %- Remove redundant information from counter headers (PR#321) by @guilhermeAlmeida1, no assignee, merged on 2023-02-24

- SYCL Eigen Build Update, main branch (2023.02.27.) (PR#323) by @krasznaa, no assignee, merged on 2023-02-27
- %- Remove unused file (PR#324) by @beomki-yeo, no assignee, merged on 2023-02-28
- Intel iGPU Compatibility, main branch (2023.03.02.) (PR#327) by @krasznaa, no assignee, merged on 2023-03-02
- \$\to Add Particle Generation Options (PR#314)
 by @beomki-yeo, no assignee, merged on 2023-03-03

acts-project/traccc: PRs merged between 2023-02-24 and 2023-03-10 II

- \$\infty\$ Optional ROOT, main branch (2023.03.03.) (PR#328) by @krasznaa, no assignee, merged on 2023-03-06

- Seeding FP64 Cleanup, main branch (2023.03.08.) (PR#333) by @krasznaa, no assignee, merged on 2023-03-09
- CMake Updates, main branch (2023.03.09.) (PR#334) by @krasznaa, no assignee, merged on 2023-03-09

acts-project/traccc: PRs merged between 2023-02-24 and 2023-03-10 III

- % Clusterization FP64 Cleanup, main branch (2023.03.09.) (PR#335) by @krasznaa, no assignee, merged on 2023-03-09
- Remove return in CCL_kernel (PR#338) by @guilhermeAlmeida1, no assignee, merged on 2023-03-09
- Project Version Update, main branch (2023.03.10.) (PR#340) by @krasznaa, no assignee, merged on 2023-03-10
- Add CI functionality to detect FP64 instructions in PTX (PR#336) by @stephenswat, no assignee, merged on 2023-03-10

acts-project/traccc: Open PRs I

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- \$\tau\$ Alternative CUDA implementation of seed finding (PR#230) by @stephenswat, \(\underbrace{\hat{\chi}}\) no assignee, updated on 2023-03-08
- \(\) ci: Add basic GPU CI (PR#237)
 by @paulgessinger, \(\) no assignee, updated on 2023-01-25
- ↑ MPS benchmarking scripts and test workflow (PR#244) by @Chamodya-ka, no assignee, updated on 2023-01-25
- \$\text{\text}\$ added mps script tests (PR#255) by @Chamodya-ka, \(\hat{\text}\) no assignee, updated on 2023-01-25
- ↑ Add infrastructure for CUDA graph algorithms (PR#307) by @stephenswat, ↑ no assignee, updated on 2023-01-25
- ↑ Implement and test a CUDA version of the module map (PR#154) by @stephenswat, ↑ no assignee, updated on 2022-04-13

acts-project/traccc: Open PRs II

■ 🔭 Implement CUDA spacepoint formation with flat EDM (PR#158) by @stephenswat, 🔥 no assignee, updated on 2022-04-01

acts-project/detray: PRs merged between 2023-02-24 and 2023-03-10 I

- %- Remove Problematic printf-s, main branch (2023.02.24.) (PR#400) by @krasznaa, no assignee, merged on 2023-02-24

- \$\text{-- feat: re-introduce unbounded mask (PR#393)} by @niermann999, no assignee, merged on 2023-02-28
- % ref: generalize telescope to switch module shape (PR#394) by @niermann999, no assignee, merged on 2023-03-01
- limit feat: axis aligned bounding boxes (PR#395) by @niermann999, no assignee, merged on 2023-03-06
- Fix a bug in particle id increment (PR#405) by @beomki-yeo, no assignee, merged on 2023-03-07

8

acts-project/detray: PRs merged between 2023-02-24 and 2023-03-10 II

- Fix a BUG particle ID increment again... (PR#406) by @beomki-yeo, no assignee, merged on 2023-03-07
- Fef: add world portals to telescope detector (PR#396) by @niermann999, no assignee, merged on 2023-03-08
- %- ref: pathcorrection unittest runs on telescope detector (PR#397) by @niermann999, no assignee, merged on 2023-03-08

acts-project/detray: Open PRs I

- \$\text{\text{ feat: Enable reading of a solenoid field map in the toy geometry (PR#399)} by @niermann999, \text{\text{\text{ no assignee}}}, updated on 2023-03-09
- \(\frac{1}{2}\) ref!: Add config to track generators and split the header (PR#403) by @niermann999, \(\hat{1}\) no assignee, updated on 2023-03-09
- \(\hat{\cap}\) ref: move surface vector into sf finder store (PR#367) by @niermann999, \(\hat{\cap}\) no assignee, updated on 2023-03-09
- \$\text{ feat: stepper print inspector (PR#402)} by @niermann999, no assignee, updated on 2023-03-02
- \$\tau\$ feat: cylinder portal intersector (PR#370) by @niermann999, no assignee, updated on 2023-02-16
- \$\text{\text{\$\gamma}}\$ feat: surface barcode (PR#368) by @niermann999, no assignee, updated on 2023-02-16

acts-project/detray: Open PRs II

- \$\text{neat: material builders} (PR#364) by @niermann999, no assignee, updated on 2023-01-17
- \(\hat{\cappa}\) ref: Add new stepper policy and benchmark it (PR#327) by @niermann999, \(\hat{\cappa}\) no assignee, updated on 2022-11-10
- \textstyle \textbf{Volume radiation length (PR#328)} by @beomki-yeo, \textbf{\hat} no assignee, updated on 2022-10-26
- ↑ add vecpar example (PR#235) by @georgi-mania, no assignee, updated on 2022-07-13



Stephen Nicholas Swatman March 10, 2023 12

acts-project/vecmem: Open PRs I

- ↑ Public Header Tests, main branch (2023.03.03.) (PR#222) by @krasznaa, ↑ no assignee, updated on 2023-03-03
- [WIP] Add cms caching cuda allocator (PR#79) by @cgleggett, no assignee, updated on 2021-04-28

acts-project/algebra-plugins: Open PRs I

■ \(\hat{\text{Added Fastor as a full backend and frontend.}}\) (PR#78) by @wermos, \(\hat{\text{No assignee}}\), updated on 2023-03-09