Acts Parallelization Meeting

Joana Niermann

June 30, 2023



acts-project/traccc: PRs merged between 2023-06-16 and 2023-06-30 I

- \(\bullet \) Update detray version to v0.34.0 (PR#419) by \(\bullet \) beomki-yeo, no assignee, merged on 2023-06-17
- %- Fix: unsigned to signed int cast (PR#420) by @guilhermeAlmeida1, no assignee, merged on 2023-06-19

- Fix: Handle empty inputs gracefully (PR#415) by @guilhermeAlmeida1, no assignee, merged on 2023-06-22
- **Use 'vecmem::sycl::local_accessor'** (PR#425) by @beomki-yeo, no assignee, merged on 2023-06-22
- \$\bullet\$ Update the version of the project to 0.6.0. (PR#426) by @krasznaa, no assignee, merged on 2023-06-23

acts-project/traccc: PRs merged between 2023-06-16 and 2023-06-30 II

- Add CKF examples with detray toy detector (PR#411) by @beomki-yeo, no assignee, merged on 2023-06-27
- Remove multiple cache in performance writer (PR#424) by @beomki-yeo, no assignee, merged on 2023-06-28

acts-project/traccc: Open PRs I

- Seeding and Finding with detray geometry (PR#430) by @beomki-yeo, no assignee, updated on 2023-06-29
- \$\tag{Seeding with detray Version1} (PR#421) by @beomki-yeo, \(\hat{\Lambda}\) no assignee, updated on 2023-06-28
- \text{\text{\text{Move 'check_performance' argument to common option (PR#429)}} by \text{\text{\text{beomki-yeo}, } \text{\text{\text{no assignee}}, updated on 2023-06-28}}
- Seeding with detray Version2 (PR#428) by @beomki-yeo, no assignee, updated on 2023-06-27
- \textsquare Update acts version and seeding test (PR#422) by @beomki-yeo, \textsquare no assignee, updated on 2023-06-26
- \(\hat{\text{\text{\$\gamma}}}\) Add scripts for plotting throughput measurements (PR#375) by @guilhermeAlmeida1, \(\hat{\text{\$\gamma}}\) no assignee, updated on 2023-06-16

acts-project/traccc: Open PRs II

- \$\text{\text}\$ feat: Test cuda full chain against cpu (PR#388)
 by @guilhermeAlmeida1, \(\begin{array}{c} \no assignee \), updated on 2023-06-06
- \ Add a very simple seeding efficiency plotter (PR#370) by @stephenswat, no assignee, updated on 2023-06-05
- \$\tag{CUDA CKF with single kernel (PR#408)} by @beomki-yeo, \(\hat{\text{no assignee}}\), updated on 2023-05-28
- 1 Implement seed finding Thunderdome in CUDA (PR#410) by @stephenswat, no assignee, updated on 2023-05-27
- Add functions to calculate pvalue (PR#405) by @beomki-yeo, no assignee, updated on 2023-05-18
- ↑ Add Spack development environment specification (PR#364) by @stephenswat, no assignee, updated on 2023-05-11
- \$\infty\$ Implement CUDA block- and warp-wide odd-even sort (PR#347) by @stephenswat, no assignee, updated on 2023-04-20

acts-project/traccc: Open PRs III

- \(\) Alternative CUDA implementation of seed finding (PR#230) by @stephenswat, \(\) no assignee, updated on 2023-03-26
- \$\text{\text{\$\text{\$\text{Implement} and test a CUDA version of the module map}}} \text{ (PR#154)} \text{ by @stephenswat, }\text{\text{\$\text{\$\text{\$\text{\$\text{no assignee}}}, updated on 2023-03-17}} \text{}
- ↑ MPS benchmarking scripts and test workflow (PR#244) by @Chamodya-ka, no assignee, updated on 2023-01-25
- ↑ added mps script tests (PR#255) by @Chamodya-ka, 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 CUDA spacepoint formation with flat EDM (PR#158) by @stephenswat, no assignee, updated on 2022-04-01

acts-project/detray: PRs merged between 2023-06-16 and 2023-06-30 I

- Signid: refactor voume neighborhood call (PR#494) by @niermann999, no assignee, merged on 2023-06-16
- \$\text{\current} Update Project Version to v0.35.0 (PR#496)}
 by @beomki-yeo, no assignee, merged on 2023-06-19
- }-- feat: volume placement transforms (PR#497)
 by @niermann999, no assignee, merged on 2023-06-21
- \$\(\) fix: write volume transform to file (PR#498) by @niermann999, no assignee, merged on 2023-06-23
- %- ref: split metadata and add full metadata as default to detector (PR#486) by @niermann999, no assignee, merged on 2023-06-26
- ► ref: move volume kernels to own file (PR#499) by @niermann999, no assignee, merged on 2023-06-26

acts-project/detray: PRs merged between 2023-06-16 and 2023-06-30 II

- ► ref: some fixes for ITk (PR#478) by @niermann999, no assignee, merged on 2023-06-26
- limit ref: navigator inspector calls (PR#501) by @niermann999, no assignee, merged on 2023-06-27

acts-project/detray: Open PRs I

- \$\tau\$ feat: implement surface normal and incidence angle (PR#504) by @niermann999, no assignee, updated on 2023-06-30
- \$\tau\$ ref: surface interface in navigation state (PR#500) by @niermann999, no assignee, updated on 2023-06-29
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- \(\) ref: telescope detector config (PR#503) by @niermann999, \(\) no assignee, updated on 2023-06-29
- \$\text{\$\text{Version}\$ (PR#502)} \\
 \text{by @fredevb, } \text{\$\text{\$\lefth}\$ no assignee, updated on 2023-06-27} \end{array}
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9

acts-project/detray: Open PRs II

- \$\times \text{WIP: Navigator with max constrained step size under Arbitray B field and Interactions (PR#491)
 - by @beomki-yeo, no assignee, updated on 2023-06-13
- \$\frac{1}{2}\$ add vecpar example (PR#235) by @georgi-mania, \(\hrac{1}{2}\$ no assignee, updated on 2023-05-15
- \$\text{neat: material builders} (PR#364) by @niermann999, no assignee, updated on 2023-04-19
- \(\hat{\text{Add support for C++20 concepts}}\) (PR#447) by @stephenswat, \(\hat{\text{A no assignee}}\), updated on 2023-04-14
- \$\tag{1}\$ feat: Add cpu propagation benchmarks that use openMP (PR#404) by @niermann999, \(\hat{n} \) no assignee, updated on 2023-04-10
- \$\text{\text{ feat: stepper print inspector}}\$ (PR#402) by @niermann999, \text{\text{\text{ no assignee}}}\$, updated on 2023-04-10
- \$\text{ref: Add new stepper policy and benchmark it (PR#327)} by @niermann999, \(\hat{\hat{no assignee}} \), updated on 2022-11-10

acts-project/vecmem: PRs merged between 2023-06-16 and 2023-06-30 I

■ Fix: Check if no allocation is necessary in jagged vec buffer (PR#233) by @guilhermeAlmeida1, no assignee, merged on 2023-06-21

acts-project/vecmem: Open PRs I

■ [WIP] Add cms caching cuda allocator (PR#79) by @cgleggett, no assignee, updated on 2021-04-28

acts-project/algebra-plugins: Open PRs I

- \$\text{\texternal Build Re-Design, main branch (2023.05.25.)} (PR#104) by @krasznaa, no assignee, updated on 2023-05-25
- \$\text{\text{feat: SoA layout for vector}}\$ (PR#95) by @niermann999, no assignee, updated on 2023-04-03
- 1 feat: add a Vc SoA implementation for transform3 (PR#97) by @niermann999, no assignee, updated on 2023-03-29