








Acts Parallelization Meeting

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acts-project/traccc: PRs merged between 2024-06-29 and 2024-07-26 |

-  **Zero output in mutex and unique lock tests (PR#637)**
by @stephenswat, merged on 2024-07-03
-  **Improve documentation of 'unique_lock' (PR#638)**
by @stephenswat, merged on 2024-07-03
-  **Alpaka: Clustering + Throughput (PR#558)**
by @CrossR, merged on 2024-07-04
-  **Enable CI tests for CPU-based SYCL builds (PR#636)**
by @stephenswat, merged on 2024-07-04
-  **Add concepts for barrier-like types (PR#602)**
by @stephenswat, merged on 2024-07-04
-  **ref: Update to detray version 0.69.1 (PR#639)**
by @niermann999, merged on 2024-07-08
-  **Add options for the max number of branches (PR#641)**
by @beomki-yeo, merged on 2024-07-16








acts-project/traccc: PRs merged between 2024-06-29 and 2024-07-26 II

-  **Add missing wait statements to CCA testing code (PR#642)**
by @stephenswat, merged on 2024-07-16
-  **Enable thread backend for all Alpaka builds (PR#643)**
by @stephenswat, merged on 2024-07-17
-  **Require multiple threads for Alpaka CCL code (PR#644)**
by @stephenswat, merged on 2024-07-17
-  **Make IO test mock data path absolute (PR#647)**
by @stephenswat, merged on 2024-07-22
-  **Add sanity checks for contiguity and orderedness (PR#609)**
by @stephenswat, merged on 2024-07-22
-  **Add tests for the Alpaka CCL algorithm (PR#646)**
by @stephenswat, merged on 2024-07-22
-  **Make Kokkos code compatible with C++20 (PR#649)**
by @stephenswat, merged on 2024-07-23
-  **feat: make building of traccc::io optional (but on by default) (PR#651)**
by @asalzburger, merged on 2024-07-24








acts-project/traccc: Open PRs I

-  **Temporarily disable SYCL Kalman fitter test (PR#656)**
by [@stephenswat](#), updated on 2024-07-26
-  **Raise minimum C++ standard to 20 (PR#648)**
by [@stephenswat](#), updated on 2024-07-26
-  **build: update extern tags, cxx standard to 20, and compile flags (PR#628)**
by [@fredevb](#), updated on 2024-07-26
-  **Enable tests for Alpaka builds (PR#653)**
by [@stephenswat](#), updated on 2024-07-25
-  **Improve robustness and performance of CCL (PR#595)**
by [@stephenswat](#), updated on 2024-07-24
-  **Archive the Futhark and Kokkos code (PR#652)**
by [@stephenswat](#), updated on 2024-07-24
-  **Add helper class for thread and block identifiers (PR#596)**
by [@stephenswat](#), updated on 2024-07-22















acts-project/traccc: Open PRs II

-  **Add 'wait' or 'ignore' for all async copies (PR#645)**
by [@stephenswat](#), updated on 2024-07-17
-  **Add debug output to clustering algorithms (PR#640)**
by [@stephenswat](#), updated on 2024-07-17
-  **Bump clang-format to version 18 (PR#613)**
by [@stephenswat](#), updated on 2024-07-03
-  **Specific documentation on ROOT for traccc (PR#535)**
by [@SylvainJoubé](#), updated on 2024-06-20
-  **Add track tree writer (PR#503)**
by [@beomki-yeo](#), updated on 2024-06-04
-  **Verbose performance metrics (PR#578)**
by [@SylvainJoubé](#), updated on 2024-05-07
-  **Update event_map for detrayer detector (PR#562)**
by [@beomki-yeo](#), updated on 2024-05-04















acts-project/traccc: Open PRs III

-  **feat: implement digitization configurator for detray geometries (PR#465)**
by @niermann999, updated on 2023-10-20
-  **SYCL test in gitlab CI (PR#461)**
by @beomki-yeo, updated on 2023-10-06
-  **Asynchronous operation for Track Finding and Fitting (PR#462)**
by @beomki-yeo, updated on 2023-09-30
-  **Add SYCL CKF (PR#460)**
by @beomki-yeo, updated on 2023-09-29
-  **Add oneDPL for SYCL (PR#442)**
by @beomki-yeo, updated on 2023-09-29
-  **Add scripts for plotting throughput measurements (PR#375)**
by @guilhermeAlmeida1, updated on 2023-06-16
-   **Add Acts integration build CI job (PR#650)**
by @stephenswat, updated on 2024-07-23








acts-project/tracc: Open PRs IV

-   **WIP Implement block-wide odd-even sort (PR#632)**
by @stephenswat, updated on 2024-06-26
-   **WIP TruthParticle Update and Efficiency Measurements, main branch (2024.05.08.) (PR#582)**
by @krasznaa, updated on 2024-06-26
-   **WIP Alternative CUDA implementation of seed finding (PR#230)**
by @stephenswat, updated on 2024-06-25
-   **WIP Introduce tracc::detector_description, main branch (2024.06.21.) (PR#627)**
by @krasznaa, updated on 2024-06-25
-   **WIP ODD Throughput Profiling, main branch (2024.05.13.) (PR#587)**
by @krasznaa, updated on 2024-06-04
-   **WIP Update to new detray geometry reading for alpaka seeding (PR#514)**
by @StewMH, updated on 2024-02-07
-   **WIP Add check format local (PR#490)**
by @beomki-yeo, updated on 2023-11-20








acts-project/traccc: Open PRs V

-   **WIP Add functions to calculate pvalue (PR#405)**
by @beomki-yeo, updated on 2023-10-26
-   **WIP Sort track parameters before CKF (PR#473)**
by @beomki-yeo, updated on 2023-10-21
-   **WIP Improvements to the CCL test data generator (PR#457)**
by @stephenswat, updated on 2023-09-12
-   **WIP CUDA CKF with single kernel (PR#408)**
by @beomki-yeo, updated on 2023-07-17
-   **WIP Implement seed finding Thunderdome in CUDA (PR#410)**
by @stephenswat, updated on 2023-05-27
-   **WIP Add Spack development environment specification (PR#364)**
by @stephenswat, updated on 2023-05-11
-   **WIP MPS benchmarking scripts and test workflow (PR#244)**
by @Chamodya-ka, updated on 2023-01-25



acts-project/detray: PRs merged between 2024-06-29 and 2024-07-26 |

-  **Tune the jacobian validation parameters (PR#765)**
by @beomki-yeo, merged on 2024-07-02
-  **Fix the jacobian histogram plot (PR#766)**
by @beomki-yeo, merged on 2024-07-04
-  **ref: Add labels to the material svgs (PR#764)**
by @niermann999, merged on 2024-07-08
-  **Add CI jobs for the C++20 standard (PR#745)**
by @stephenswat, merged on 2024-07-08
-  **fix: implement DETRAY_SVG_DISPLAY cmake option (PR#768)**
by @fredevb, merged on 2024-07-10
-  **fix: typo in README (PR#769)**
by @fredevb, merged on 2024-07-12
-  **ref: Remove thrust dependency (PR#770)**
by @niermann999, merged on 2024-07-17












acts-project/detray: PRs merged between 2024-06-29 and 2024-07-26 II

-  **fix: access to material parameters from tracking surface (PR#767)**
by @niermann999, merged on 2024-07-19
-  **ref: Remove the incidence angle from the intersection (PR#723)**
by @niermann999, merged on 2024-07-19
-  **Avoid using 'std::sort' in device code (PR#772)**
by @stephenswat, merged on 2024-07-24
-  **Replace 'math::abs' with 'math::fabs' where needed (PR#773)**
by @stephenswat, merged on 2024-07-24
-  **Update algebra-plugins to v0.25.0 (PR#774)**
by @stephenswat, merged on 2024-07-24
-  **Update actsvg version to v0.4.45 (PR#775)**
by @stephenswat, merged on 2024-07-24
-  **Fix a few more floating point conversion errors (PR#776)**
by @stephenswat, merged on 2024-07-24


acts-project/detray: PRs merged between 2024-06-29 and 2024-07-26 III

-  **Mark dependencies as system libraries (PR#777)**
by @stephenswat, merged on 2024-07-24
-  **fix: Update surface material selection in random scatterer (PR#778)**
by @niermann999, merged on 2024-07-25







acts-project/detray: Open PRs I

-  **ref: Switch to vectorized Vc AoS plugin (PR#736)**
by @niermann999, updated on 2024-07-25
-  **Raise minimum C++ version to 20 (PR#771)**
by @stephenswat, updated on 2024-07-24
-  **ref: Add new stepper policy and benchmark it (PR#327)**
by @niermann999, updated on 2024-04-16
-   **feat: Add cpu propagation benchmarks that use openMP (PR#404)**
by @niermann999, updated on 2024-07-15
-   **Multiple scattering in the volume material (PR#677)**
by @beomki-yeo, updated on 2024-02-18
-   **add vecpar example (PR#235)**
by @georgi-mania, updated on 2023-05-15
-   **Add support for C++20 concepts (PR#447)**
by @stephenswat, updated on 2023-04-14



acts-project/vecmem: PRs merged between 2024-06-29 and 2024-07-26 |

-  **Make atomic reference constructor explicit (PR#285)**
by @stephenswat, merged on 2024-07-01


acts-project/vecmem: Open PRs I

-  **Fix checkout support in CI for Ubuntu 18.04 (PR#287)**
by @stephenswat, updated on 2024-07-16
-  **Mark copy events as 'nodiscard' (PR#286)**
by @stephenswat, updated on 2024-07-16
-  **Deduplicate 'empty.sycl' file (PR#284)**
by @stephenswat, updated on 2024-07-01
-  **Separate SYCL compilation details from vecmem core (PR#283)**
by @stephenswat, updated on 2024-06-18
-  **Revert "Windows CI Fix, main branch (2024.06.11.)" (PR#281)**
by @krasznaa, updated on 2024-06-14
-  **[WIP] Add cms caching cuda allocator (PR#79)**
by @cgleggett, updated on 2021-04-28




acts-project/algebra-plugins: PRs merged between 2024-06-29 and 2024-07-26 |

-  **Disable Fastor in macOS CI job (PR#125)**
by [@stephenswat](#), merged on 2024-07-24
-  **Include external libraries as system libraries (PR#124)**
by [@stephenswat](#), merged on 2024-07-24







acts-project/algebra-plugins: Open PRs I

-  **ref: Restore explicit vectorization in the Vc AoS plugin (PR#118)**
by [@niermann999](#), updated on 2024-07-25




acts-project/covfie: Open PRs I

-  **Enable additional conversion warnings (PR#26)**
by [@stephenswat](#), updated on 2024-07-25
-  **Add missing constructor to CUDA array (PR#27)**
by [@stephenswat](#), updated on 2024-07-25
-  **Replace 'boost::filesystem' by 'std::filesystem' (PR#14)**
by [@stephenswat](#), updated on 2023-10-12

acts-project/machines: PRs merged between 2024-06-29 and 2024-07-26 |

-  **Update HepMC3 download URL (PR#110)**
by [@paulgessinger](#), merged on 2024-06-29
-  **Bump 'ubuntu2204' version flag (PR#109)**
by [@andiwand](#), merged on 2024-06-29
-  **Update images to C++20, dependencies, archive unused ones (PR#113)**
by [@paulgessinger](#), merged on 2024-07-12
-  **add back alma9-base image (we need it) (PR#114)**
by [@paulgessinger](#), merged on 2024-07-12
-  **Set Pythia version to 310 (PR#115)**
by [@paulgessinger](#), merged on 2024-07-15
-  **Add new Ubuntu 24.04 CUDA, ROCm, OneAPI machines (PR#117)**
by [@stephenswat](#), merged on 2024-07-24

acts-project/machines: Open PRs I

-  **Update Ubuntu 22.04 CUDA machine to C++20 (PR#118)**
by [@stephenswat](#), updated on 2024-07-25
-   **Add ability for images to extend each other (PR#94)**
by [@stephenswat](#), updated on 2024-06-29