

















Pull request and issue summary for acts-project/acts

















April 11, 2023

acts-project/acts: PRs merged between 2023-04-04 and 2023-04-11 |
















- ▶  **refactor: move multipleScattering2 to seeding options (#2010)**
by @LuisFelipeCoelho,  reviewed by @CarloVarni, merged on 2023-04-04
- ▶  **ci: Bump actions/upload-artifact to v3 (#2015)**
by @paulgessinger,  reviewed by @andiwand, merged on 2023-04-04
- ▶  **refactor: Split Track.hpp into TrackProxy.hpp and TrackContainer.hpp (#2007)**
by @paulgessinger,  reviewed by @paulgessinger, merged on 2023-04-04
- ▶  **revert: Patch geant4 config script to download datasets (#2011) (#2014)**
by @paulgessinger,  reviewed by @andiwand, merged on 2023-04-04
- ▶  **fix: Skipping un-physical steps in material mapping (#1882) (#1968)**
by @noemina,  reviewed by @Corentin-Allaire, merged on 2023-04-04
- ▶  **test: fixing error message for material recording tests (#2016)**
by @noemina,  reviewed by @andiwand, merged on 2023-04-04
- ▶  **refactor: Update edm4hep IO code to use frame model (#2001)**
by @paulgessinger,  reviewed by @andiwand, merged on 2023-04-04
- ▶  **test: Enable interaction in 'truth_tracking_kalman.py' (#1990)**
by @beomki-yeo,  reviewed by @andiwand, merged on 2023-04-05

acts-project/acts: PRs merged between 2023-04-04 and 2023-04-11 II



















- ▶  **fix: MultiTrajectory parameters and covariance constness (#2009)**
by @paulgessinger,  reviewed by @benjaminhuth, merged on 2023-04-05
- ▶  **feat: Track level improvements (#2012)**
by @paulgessinger,  reviewed by @pbutti, merged on 2023-04-06
- ▶  **feat: adding Indexed Surface infrastructure (#2018)**
by @asalzburger,  reviewed by @noemina, merged on 2023-04-11

- ▶  **build: Take CMAKE_CXX_STANDARD into account (#1981)**
by @paulgessinger,  reviewed by @andiwand, updated on 2023-04-11
- ▶  **feat: Add Mlpack DBScan clustering to the ML Ambiguity solver (#2005)**
by @Corentin-Allaire,  reviewed by @andiwand, updated on 2023-04-11
- ▶  **feat: Add logger to multi stepper (#1964)**
by @benjaminhuth,  reviewed by @benjaminhuth, updated on 2023-04-11
- ▶  **feat: Refitting algorithm (#1940)**
by @benjaminhuth,  reviewed by @paulgessinger, updated on 2023-04-11
- ▶  **feat: GSF add final multi-component state to track container (#1928)**
by @benjaminhuth,  reviewed by @paulgessinger, updated on 2023-04-11
- ▶  **docs: first brush over the geometry pages (#1395)**
by @asalzburger,  reviewed by @benjaminhuth, updated on 2023-04-11
- ▶  **feat: EDM4hep plugin, Track reader + writer (#2022)**
by @paulgessinger,  reviewed by @paulgessinger, updated on 2023-04-11
- ▶  **refactor: move vertex performance writer (#1998)**
by @andiwand,  reviewed by @asalzburger, updated on 2023-04-11






















acts-project/acts: Open PRs II


- ▶  **feat: Mockup builder class with a cpp script for test (#2008)**
by @dimitra97,  reviewed by @noemina, updated on 2023-04-11
- ▶  **fix: Energy loss function (#1323)**
by @beomki-yeo,  reviewed by @beomki-yeo, updated on 2023-04-11
- ▶  **refactor: change the definition of the rotation parameters (#2021)**
by @XiaocongAi, review requested, updated on 2023-04-10
- ▶  **feat: add python bindings for next navigator (#2019)**
by @andiwand,  **no reviewer**, updated on 2023-04-06
- ▶  **refactor!: move SSS coordinate information to spacePointData (#2004)**
by @LuisFelipeCoelho,  reviewed by @LuisFelipeCoelho, updated on 2023-04-04
- ▶  **feat: remove middle SPs in last layer (#1972)**
by @LuisFelipeCoelho,  reviewed by @LuisFelipeCoelho, updated on 2023-03-31
- ▶  **feat: Addition of CsvSeedWriter (#2003)**
by @piotrmoszkowicz,  **no reviewer**, updated on 2023-03-30
- ▶  **feat: cylindrical detector (#1983)**
by @asalzburger,  reviewed by @noemina, updated on 2023-03-28





acts-project/acts: Open PRs III

- ▶  **perf: Space Point Formation requires functions that accepts const reference to source links (#1991)**
by @CarloVarni,  **no reviewer**, updated on 2023-03-27
- ▶  **refactor: add propagator stage (#1987)**
by @andiwand,  reviewed by @benjaminhuth, updated on 2023-03-27
- ▶  **refactor: remove/rearrange includes in propagator (#1988)**
by @andiwand,  reviewed by @andiwand, updated on 2023-03-25
- ▶  **feat: Make layer envelope dimensions configurable (#1982)**
by @plariono,  **no reviewer**, updated on 2023-03-23
- ▶   **docs: adding Fatras description (#1402)**
by @asalzburger,  reviewed by @AJPflegler, updated on 2023-04-11
- ▶    **feat!: new cubic volume building (#1821)**
by @asalzburger,  **no reviewer**, updated on 2023-04-11
- ▶   **ci: update machines and use C++20 (#2002)**
by @andiwand,  reviewed by @andiwand, updated on 2023-04-11













acts-project/acts: Open PRs IV

- ▶   **feat: Space point implementation (#1900)**
by @CarloVarni, reviewed by @CarloVarni, updated on 2023-04-11
- ▶   **refactor: Compile time get compatible doublets (#2013)**
by @CarloVarni, review requested, updated on 2023-04-05
- ▶   **refactor!: split filterCandidates for ITk SSS seeding (#1985)**
by @LuisFelipeCoelho, reviewed by @LuisFelipeCoelho, updated on 2023-04-04
- ▶    **refactor: Exa.Trkx configurable stages (#1898)**
by @benjaminhuth,  **no reviewer**, updated on 2023-04-02
- ▶   **refactor: explicit init, pre step, post step for navigator interface (#1984)**
by @andiwand,  **no reviewer**, updated on 2023-03-25
- ▶    **fix: B-field interpolation errors (#1467)**
by @timadye,  **no reviewer**, updated on 2022-10-12
- ▶    **feat: Adding unit tests for perigee propagation outside beam pipe (#1354)**
by @asalzburger,  **no reviewer**, updated on 2022-09-09









- ▶  **bug: default geometric smearing for generic detector is broken (#2020)**
by @gagnonlg, updated on 2023-04-11










- ▶    **feat!: new cubic volume building (#1821)**
by @asalzburger,  **no reviewer**, updated on 2023-04-11

acts-project/acts: All stale Issues / PRs I











- ▶   **WIP** **Stale** **feat!: new cubic volume building (#1821)**
by @asalzbunger,  **no reviewer**, updated on 2023-04-11
- ▶   **WIP** **Stale** **refactor: Exa.Trkx configurable stages (#1898)**
by @benjaminhuth,  **no reviewer**, updated on 2023-04-02
- ▶  **Stale** **Bug: Unpredictable navigation in layer with overlapping surface (#1852)**
by @Corentin-Allaire, updated on 2023-03-25
- ▶  **Stale** **Make central minimum track momentum threshold (#1761)**
by @paulgessinger, updated on 2023-01-21
- ▶  **Stale** **Drop 'boost progress' from examples where it is not used (#1736)**
by @tboldagh, updated on 2023-01-16
- ▶  **Stale** **Remove 'volumeSignature' from geometry building (#1731)**
by @paulgessinger, updated on 2023-01-16
- ▶  **Stale** **Optimal seeding parameters for a detector (#1699)**
by @CouthuresJeremy, updated on 2023-01-05
- ▶  **Stale** **Particle smearing assertion with Geant4 (#1603)**
by @benjaminhuth, updated on 2022-12-21

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- ▶  **Stale Create volume restricted BFieldMap (#1659)**
by @asalzburger, updated on 2022-12-21
- ▶  **Stale Documentation update: Core (#1418)**
by @paulgessinger, updated on 2022-11-23
- ▶  **Stale Documentation update: Examples (#1420)**
by @paulgessinger, updated on 2022-11-23
- ▶  **Stale Documentation update: How-to (core) (#1422)**
by @paulgessinger, updated on 2022-11-23
- ▶  **Stale bug: interpolation out of bounds with ATLAS B-field map (#1484)**
by @timadye, updated on 2022-11-12
- ▶  **Stale Documentation update: Plugins (#1421)**
by @paulgessinger, updated on 2022-10-22
- ▶  **Stale Documentation update: FATRAS (#1419)**
by @paulgessinger, updated on 2022-10-22
- ▶  **Stale Vertexing produces vertex candidates that are unreasonable (#1361)**
by @paulgessinger, updated on 2022-10-22

- ▶  **Stale Add Primary Vertex Label to tracks (#1544)**
by @Lucas-Borgna, updated on 2022-10-22
- ▶  **Stale EDM Memory usage (#1516)**
by @paulgessinger, updated on 2022-10-22
- ▶  **Stale Documentation update: Contribution guidelines (#1423)**
by @paulgessinger, updated on 2022-10-19
- ▶   **WIP Stale fix: B-field interpolation errors (#1467)**
by @timadye,  **no reviewer**, updated on 2022-10-12
- ▶  **Stale Monitor Floating Point Exceptions in CI (#1481)**
by @paulgessinger, updated on 2022-10-01
- ▶  **Stale Optionally have the vertex finding recalculate perigee parameters relative to consistent reference (#1482)**
by @paulgessinger, updated on 2022-10-01
- ▶  **Stale Full chain vertexing with AMVF (#1406)**
by @paulgessinger, updated on 2022-10-01









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- ▶  **Stale** **Documentation: hints for debugging (#1463)**
by @timadye, updated on 2022-09-24
- ▶  **Stale** **Vertexing produces unexpectedly poor efficiency (#1362)**
by @paulgessinger, updated on 2022-09-20
- ▶  **Stale** **Ambiguous perigees with low momentum (#1386)**
by @andiwand, updated on 2022-09-20
- ▶  **Stale** **Vertexing produces propagation errors (#1345)**
by @paulgessinger, updated on 2022-09-20
- ▶  **Stale** **add monitoring for vertexing in physmon (#1313)**
by @andiwand, updated on 2022-09-20
- ▶  **Stale** **2D r-z Magnetic Field Map Improperly Read (#669)**
by @osbornjd, updated on 2022-09-20
- ▶  **Stale** **Fatras: Bethe-Heitler calculation wrong? (#1437)**
by @asalzbürger, updated on 2022-09-20
- ▶   **WIP** **Stale** **feat: Adding unit tests for perigee propagation outside beam pipe (#1354)**
by @asalzbürger,  **no reviewer**, updated on 2022-09-09

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- ▶ **Stale** **Some writers performs their writes in the destructor** (#881)
by @paulgessinger, updated on 2022-08-11
- ▶ **Stale** **Vertexing issues observed in python vertexing example** (#1091)
by @paulgessinger, updated on 2022-08-11
- ▶ **Stale** **Magnetic Field Storage** (#1239)
by @osbornjd, updated on 2022-06-12
- ▶ **Stale** **Reproducibility test using hash checks for non-linear KF** (#1246)
by @paulgessinger, updated on 2022-06-12
- ▶ **Stale** **Cut tube segment dd4hep conversion tests** (#1146)
by @rahmans1, updated on 2022-05-25
- ▶ **Stale** **Bug: fatras different particle final states between python and executable** (#1221)
by @CouthuresJeremy, updated on 2022-05-01
- ▶ **Stale** **ci: Coverage job is broken with gcovr \geq 5.1** (#1211)
by @paulgessinger, updated on 2022-04-29
- ▶ **Stale** **Bug: issue on first build after DD4hep update on system with globally installed acts** (#1139)
by @gagnonlg, updated on 2022-02-22

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- ▶  **Stale** **Feat: Radial bounds in DD4hep plugin (#822)**
by @whit2333, updated on 2022-02-19
- ▶  **Stale** **Add example (+test) for vertex fitting with constraints (#1100)**
by @paulgessinger, updated on 2022-01-07
- ▶  **Stale** **Should seed finding tools have a higher-level interface? (#988)**
by @stephenswat, updated on 2021-11-25
- ▶  **Stale** **[bug] Off axis endcap with dd4hep plugin. (#942)**
by @whit2333, updated on 2021-11-25
- ▶  **Stale** **Improvement: Estimate track parameters from seed at perigee surface (#1036)**
by @XiaocongAi, updated on 2021-11-10
- ▶  **Stale** **Polyhedron surfaces tests are disabled (#454)**
by @msmk0, updated on 2021-11-04
- ▶  **Stale** **Tracking for TPC/DC without surfaces (#165)**
by @FabianKlimpel, updated on 2021-11-04
- ▶  **Stale** **BoundingBox tests fail on double precision (#752)**
by @paulgessinger, updated on 2021-11-04

- ▶  **Stale** **Debug Information in Acts Seeder (#944)**
by @osbornjd, updated on 2021-10-21
- ▶  **Stale** **fix: avoid double-static cast (#647)**
by @asalzburger, updated on 2021-10-21