

















## Pull request and issue summary for acts-project/acts

February 21, 2023






## acts-project/acts: PRs merged between 2023-02-14 and 2023-02-21 |














- ▶  **refactor: rename sim output files** (PR#1862)  
by @andiwand, assigned to @benjaminhuth, merged on 2023-02-14
- ▶  **fix: periodic difference for Phi in RootSummaryWriter** (PR#1863)  
by @benjaminhuth, assigned to @andiwand, merged on 2023-02-14
- ▶  **fix: Let Root writers accept empty Trajectories object** (PR#1864)  
by @benjaminhuth, assigned to @andiwand, merged on 2023-02-14
- ▶  **refactor: print numeric value for multi index** (PR#1859)  
by @andiwand, assigned to @benjaminhuth, merged on 2023-02-14
- ▶  **feat: post simulation particle filter** (PR#1851)  
by @andiwand, assigned to @benjaminhuth, merged on 2023-02-14
- ▶  **feat: Add track to trajectory converter** (PR#1857)  
by @paulgessinger, assigned to @andiwand, merged on 2023-02-14
- ▶  **refactor: Track Finding and Fitting algorithms output Tracks only** (PR#1858)  
by @paulgessinger, assigned to @andiwand, merged on 2023-02-14
- ▶  **feat: Set up ODD together with python if possible** (PR#1830)  
by @benjaminhuth, no assignee, merged on 2023-02-15

## acts-project/acts: PRs merged between 2023-02-14 and 2023-02-21 II




















- ▶  **ci: Add script checking for '#pragma once' to CI** (PR#1866)  
by @benjaminhuth, no assignee, merged on 2023-02-15
- ▶  **chore: add detector directory** (PR#1867)  
by @asalzburger, assigned to @andiwand, merged on 2023-02-16
- ▶  **fix: Apply particle filter change to full\_chain\_itk.py** (PR#1873)  
by @toyamaza, assigned to @andiwand, merged on 2023-02-16
- ▶  **refactor: Improved const-correctness for TrackContainer in Examples** (PR#1871)  
by @paulgessinger, assigned to @andiwand, merged on 2023-02-17
- ▶  **feat: Add parameter getters to TrackProxy** (PR#1869)  
by @paulgessinger, assigned to @andiwand, merged on 2023-02-17
- ▶  **feat: Enable removing tracks from container** (PR#1870)  
by @paulgessinger, assigned to @andiwand, merged on 2023-02-17
- ▶  **test: Move G4 test preparation to subprocess / fix subprocess invokation** (PR#1872)  
by @paulgessinger, assigned to @andiwand, merged on 2023-02-17
- ▶  **feat: Batch input for ONNX** (PR#1868)  
by @Corentin-Allaire, no assignee, merged on 2023-02-17
















## acts-project/acts: PRs merged between 2023-02-14 and 2023-02-21 III







- ▶  **refactor: no optional covariance in GSF** (PR#1826)  
by @benjaminhuth, assigned to @andiwand, merged on 2023-02-20
- ▶  **refactor: TrackSelector operates on TrackContainer** (PR#1874)  
by @paulgessinger, no assignee, merged on 2023-02-20
- ▶  **feat: configurable charge smearing in geometric digitization & exact digitization** (PR#1834)  
by @benjaminhuth, assigned to @andiwand, merged on 2023-02-20
- ▶  **chore: ACTSVG version 0.4.29** (PR#1878)  
by @asalzburger, no assignee, merged on 2023-02-20
- ▶  **refactor: EigenStepper overstep limit is configurable** (PR#1881)  
by @paulgessinger, no assignee, merged on 2023-02-21

- ▶  **feat: Machine learning based Ambiguity Solver** (PR#1877)  
by @Corentin-Allaire,  **no assignee**, updated on 2023-02-21
- ▶  **feat: Add script for a parallel Geant4 simulation based on Python's 'multiprocessing'** (PR#1879)  
by @benjaminhuth,  **no assignee**, updated on 2023-02-21
- ▶  **refactor: remove 'operator==' from digitization config objects** (PR#1875)  
by @benjaminhuth, assigned to @asalzburger, updated on 2023-02-21
- ▶  **fix: Pass By Reference function and Extend object to binned group** (PR#1850)  
by @CarloVarni,  **no assignee**, updated on 2023-02-21
- ▶  **ci: Fix clang-tidy job** (PR#1876)  
by @paulgessinger,  **no assignee**, updated on 2023-02-20
- ▶  **refactor: update itk\_seeding.py** (PR#1865)  
by @LuisFelipeCoelho,  **no assignee**, updated on 2023-02-15
- ▶  **perf: Tile 8x8 covariance matrix multiplication** (PR#1181)  
by @stephenswat,  **no assignee**, updated on 2023-02-15

## acts-project/acts: Open PRs II














- ▶  **fix: Energy loss function** (PR#1323)  
by @beomki-yeo, assigned to @asalzburger, updated on 2023-01-21
- ▶   **refactor: GSF counts backward-pass misses as outliers** (PR#1880)  
by @benjaminhuth,  **no assignee**, updated on 2023-02-20
- ▶    **docs: adding Fatras description** (PR#1402)  
by @asalzburger, assigned to @asalzburger, updated on 2023-02-18
- ▶    **docs: first brush over the geometry pages** (PR#1395)  
by @asalzburger, assigned to @asalzburger, updated on 2023-02-18
- ▶   **refactor: Change transformCoordinates to avoid recalculation of variables in the Seedfinder** (PR#1831)  
by @LuisFelipeCoelho,  **no assignee**, updated on 2023-02-17
- ▶   **feat: Example of integrating HoughTransform example algorithm with python** (PR#1795)  
by @tboldagh,  **no assignee**, updated on 2023-02-15
- ▶   **refactor: Seeding does not use a grid of pointers** (PR#1820)  
by @paulgessinger,  **no assignee**, updated on 2023-02-08

- ▶   **feat!: new cubic volume building** (PR#1821)  
by @asalzbürger,  **no assignee**, updated on 2023-02-03
- ▶    **refactor: Create and use Acts::SpacePoint as input for public interface of Seedfinder!** (PR#1394)  
by @robertlangenberg,  **no assignee**, updated on 2022-11-12
- ▶    **fix: B-field interpolation errors** (PR#1467)  
by @timadye,  **no assignee**, updated on 2022-10-12
- ▶    **feat: Adding unit tests for perigee propagation outside beam pipe** (PR#1354)  
by @asalzbürger,  **no assignee**, updated on 2022-09-09













- ▶   **WIP**  **Stale** **docs: adding Fatras description** (PR#1402)  
by @asalzburger, assigned to @asalzburger, updated on 2023-02-18
- ▶   **WIP**  **Stale** **docs: first brush over the geometry pages** (PR#1395)  
by @asalzburger, assigned to @asalzburger, updated on 2023-02-18
















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

- ▶   **WIP** Stale **docs: adding Fatras description** (PR#1402)  
by @asalzburger, assigned to @asalzburger, updated on 2023-02-18
- ▶   **WIP** Stale **docs: first brush over the geometry pages** (PR#1395)  
by @asalzburger, assigned to @asalzburger, updated on 2023-02-18
- ▶  Stale **Make central minimum track momentum threshold** (Issue#1761)  
by @paulgessinger,  **no assignee**, updated on 2023-01-21
- ▶  Stale **Drop 'boost progress' from examples where it is not used** (Issue#1736)  
by @tboldagh,  **no assignee**, updated on 2023-01-16
- ▶  Stale **Remove 'volumeSignature' from geometry building** (Issue#1731)  
by @paulgessinger,  **no assignee**, updated on 2023-01-16
- ▶  Stale **Optimal seeding parameters for a detector** (Issue#1699)  
by @CouthuresJeremy,  **no assignee**, updated on 2023-01-05
- ▶  Stale **Particle smearing assertion with Geant4** (Issue#1603)  
by @benjaminhuth, assigned to @benjaminhuth, updated on 2022-12-21














## acts-project/acts: All stale Issues / PRs II













- ▶  **Stale** **Create volume restricted BFieldMap** (Issue#1659)  
by @asalzburger,  **no assignee**, updated on 2022-12-21
- ▶  **Stale** **Documentation update: Core** (Issue#1418)  
by @paulgessinger, assigned to @andiwand, updated on 2022-11-23
- ▶  **Stale** **Documentation update: Examples** (Issue#1420)  
by @paulgessinger, assigned to @andiwand, updated on 2022-11-23
- ▶  **Stale** **Documentation update: How-to (core)** (Issue#1422)  
by @paulgessinger,  **no assignee**, updated on 2022-11-23
- ▶  **Stale** **bug: interpolation out of bounds with ATLAS B-field map** (Issue#1484)  
by @timadye,  **no assignee**, updated on 2022-11-12
- ▶   **WIP** **Stale** **refactor: Create and use Acts::SpacePoint as input for public interface of Seedfinder!** (PR#1394)  
by @robertlangenberg,  **no assignee**, updated on 2022-11-12
- ▶  **Stale** **Documentation update: Plugins** (Issue#1421)  
by @paulgessinger, assigned to @paulgessinger, updated on 2022-10-22

## acts-project/acts: All stale Issues / PRs III












- ▶  **Stale** **Documentation update: FATRAS** (Issue#1419)  
by @paulgessinger, assigned to @asalzburger, updated on 2022-10-22
- ▶  **Stale** **Vertexing produces vertex candidates that are unreasonable** (Issue#1361)  
by @paulgessinger,  **no assignee**, updated on 2022-10-22
- ▶  **Stale** **Add Primary Vertex Label to tracks** (Issue#1544)  
by @Lucas-Borgna,  **no assignee**, updated on 2022-10-22
- ▶  **Stale** **EDM Memory usage** (Issue#1516)  
by @paulgessinger,  **no assignee**, updated on 2022-10-22
- ▶  **Stale** **Documentation update: Contribution guidelines** (Issue#1423)  
by @paulgessinger, assigned to @paulgessinger, updated on 2022-10-19
- ▶   **WIP** **Stale** **fix: B-field interpolation errors** (PR#1467)  
by @timadye,  **no assignee**, updated on 2022-10-12
- ▶  **Stale** **Monitor Floating Point Exceptions in CI** (Issue#1481)  
by @paulgessinger,  **no assignee**, updated on 2022-10-01

## acts-project/acts: All stale Issues / PRs IV









- ▶  **Stale** **Optionally have the vertex finding recalculate perigee parameters relative to consistent reference** (Issue#1482)  
by @paulgessinger,  **no assignee**, updated on 2022-10-01
- ▶  **Stale** **Full chain vertexing with AMVF** (Issue#1406)  
by @paulgessinger,  **no assignee**, updated on 2022-10-01
- ▶  **Stale** **Documentation: hints for debugging** (Issue#1463)  
by @timadye,  **no assignee**, updated on 2022-09-24
- ▶  **Stale** **Vertexing produces unexpectedly poor efficiency** (Issue#1362)  
by @paulgessinger,  **no assignee**, updated on 2022-09-20
- ▶  **Stale** **Ambiguous perigees with low momentum** (Issue#1386)  
by @andiwand,  **no assignee**, updated on 2022-09-20
- ▶  **Stale** **Vertexing produces propagation errors** (Issue#1345)  
by @paulgessinger,  **no assignee**, updated on 2022-09-20
- ▶  **Stale** **add monitoring for vertexing in physmon** (Issue#1313)  
by @andiwand, assigned to @paulgessinger, updated on 2022-09-20

- ▶  **Stale** **2D r-z Magnetic Field Map Improperly Read** (Issue#669)  
by @osbornjd, assigned to @timadye, updated on 2022-09-20
- ▶  **Stale** **Fatras: Bethe-Heitler calculation wrong?** (Issue#1437)  
by @asalzbürger,  **no assignee**, updated on 2022-09-20
- ▶   **WIP** **Stale** **feat: Adding unit tests for perigee propagation outside beam pipe** (PR#1354)  
by @asalzbürger,  **no assignee**, updated on 2022-09-09
- ▶  **Stale** **Some writers performs their writes in the destructor** (Issue#881)  
by @paulgessinger, assigned to @Corentin-Allaire, updated on 2022-08-11
- ▶  **Stale** **Vertexing issues observed in python vertexing example** (Issue#1091)  
by @paulgessinger,  **no assignee**, updated on 2022-08-11
- ▶  **Stale** **Magnetic Field Storage** (Issue#1239)  
by @osbornjd,  **no assignee**, updated on 2022-06-12
- ▶  **Stale** **Reproducibility test using hash checks for non-linear KF** (Issue#1246)  
by @paulgessinger, assigned to @XiaocongAi, updated on 2022-06-12

## acts-project/acts: All stale Issues / PRs VI

- ▶  **Stale** **Cut tube segment dd4hep conversion tests** (Issue#1146)  
by @rahmans1, assigned to @asalzburger, updated on 2022-05-25
- ▶  **Stale** **Bug: fatras different particle final states between python and executable** (Issue#1221)  
by @CouthuresJeremy,  **no assignee**, updated on 2022-05-01
- ▶  **Stale** **ci: Coverage job is broken with gcovr >= 5.1** (Issue#1211)  
by @paulgessinger, assigned to @paulgessinger, updated on 2022-04-29
- ▶  **Stale** **Bug: issue on first build after DD4hep update on system with globally installed acts**  
(Issue#1139)  
by @gagnonlg,  **no assignee**, updated on 2022-02-22
- ▶  **Stale** **Feat: Radial bounds in DD4hep plugin** (Issue#822)  
by @whit2333,  **no assignee**, updated on 2022-02-19
- ▶  **Stale** **Add example (+test) for vertex fitting with constraints** (Issue#1100)  
by @paulgessinger,  **no assignee**, updated on 2022-01-07
- ▶  **Stale** **Should seed finding tools have a higher-level interface?** (Issue#988)  
by @stephenswat, assigned to @stephenswat, updated on 2021-11-25

## acts-project/acts: All stale Issues / PRs VII

- ▶  **Stale** **[bug] Off axis endcap with dd4hep plugin.** (Issue#942)  
by @whit2333, assigned to @asalzburger, updated on 2021-11-25
- ▶  **Stale** **Improvement: Estimate track parameters from seed at perigee surface** (Issue#1036)  
by @XiaocongAi,  **no assignee**, updated on 2021-11-10
- ▶  **Stale** **Polyhedron surfaces tests are disabled** (Issue#454)  
by @msmk0, assigned to @asalzburger, updated on 2021-11-04
- ▶  **Stale** **Tracking for TPC/DC without surfaces** (Issue#165)  
by @FabianKlimpel, assigned to @asalzburger, updated on 2021-11-04
- ▶  **Stale** **BoundingBox tests fail on double precision** (Issue#752)  
by @paulgessinger, assigned to @paulgessinger, updated on 2021-11-04
- ▶  **Stale** **Debug Information in Acts Seeder** (Issue#944)  
by @osbornjd, assigned to @robertlangenberg, updated on 2021-10-21
- ▶  **Stale** **fix: avoid double-static cast** (Issue#647)  
by @asalzburger, assigned to @asalzburger, updated on 2021-10-21