

















Pull request and issue summary for acts-project/acts

December 13, 2022



acts-project/acts: PRs merged between 2022-12-06 and 2022-12-13 |












- ▶  **fix: and refactor root writer closing** (PR#1712)
by @andiwand, no assignee, merged on 2022-12-07
- ▶  **feat: MultiTrajectory track state ranges** (PR#1701)
by @paulgessinger, no assignee, merged on 2022-12-07
- ▶  **feat: Any type with configurable small buffer optimization** (PR#1695)
by @paulgessinger, no assignee, merged on 2022-12-07
- ▶  **fix: Change theta and eta calls on only 3D Vectors** (PR#1706)
by @pbutti, no assignee, merged on 2022-12-08
- ▶  **refactor: transpose vectors in AMVF logging** (PR#1719)
by @andiwand, no assignee, merged on 2022-12-08
- ▶  **fix: potential floating point over/underflow** (PR#1709)
by @andiwand, assigned to @paulgessinger, merged on 2022-12-08
- ▶  **fix: fix FPE and refactor GSF component reduction** (PR#1710)
by @benjaminhuth, no assignee, merged on 2022-12-09
- ▶  **fix: Protection against $v == 0$ in template_switch** (PR#1707)
by @CarloVarni, no assignee, merged on 2022-12-09

acts-project/acts: PRs merged between 2022-12-06 and 2022-12-13 II














- ▶  **fix: MultiTrajectory specialize DynamicColumn for bool** (PR#1730)
by @paulgessinger, no assignee, merged on 2022-12-12
- ▶  **refactor!: CKF interface change to once per seed** (PR#1705)
by @paulgessinger, no assignee, merged on 2022-12-12
- ▶  **refactor!: Add ability for cloning loggers with new name / level** (PR#1724)
by @paulgessinger, no assignee, merged on 2022-12-12
- ▶  **fix: remove 'CustomDefaultLogger.cpp'-entry from docs** (PR#1735)
by @AJPfleger, assigned to @paulgessinger, merged on 2022-12-12
- ▶  **refactor!: Switch SourceLink to container** (PR#1616)
by @paulgessinger, no assignee, merged on 2022-12-12
- ▶  **chore: Script to merge hash txt files** (PR#1728)
by @paulgessinger, no assignee, merged on 2022-12-12
- ▶  **feat: root event diff script** (PR#1737)
by @andiwand, assigned to @benjaminhuth, merged on 2022-12-13
- ▶  **feat: examples CSV track param writer** (PR#1717)
by @andiwand, no assignee, merged on 2022-12-13














acts-project/acts: PRs merged between 2022-12-06 and 2022-12-13 III

- ▶  **feat: track modifier for examples** (PR#1726)
by @andiwand, no assignee, merged on 2022-12-13
- ▶  **chore: Bump 'bundled' pybind11 to v2.10.1** (PR#1738)
by @paulgessinger, no assignee, merged on 2022-12-13





















- ▶  **test: Only run pythia8 tests if enabled** (PR#1739)
by @paulgessinger, assigned to @andiwand, updated on 2022-12-13
- ▶  **refactor!: Fitters use loggers more consistently** (PR#1727)
by @paulgessinger,  **no assignee**, updated on 2022-12-13
- ▶  **refactor: SourceLink uses custom Acts::Any** (PR#1740)
by @paulgessinger, assigned to @andiwand, updated on 2022-12-13
- ▶  **fix: Fixing navigation failures on volume boundaries edges** (PR#1722)
by @noemina, assigned to @noemina, updated on 2022-12-13
- ▶  **feat: Make Clusterization.hpp aware of grid dimensionality** (PR#1634)
by @gagnonlg,  **no assignee**, updated on 2022-12-13
- ▶  **feat: track 2d/z and track 3d signed lifetimes** (PR#1741)
by @pbutti,  **no assignee**, updated on 2022-12-13
- ▶  **feat: Floating point exception monitoring** (PR#1649)
by @paulgessinger,  **no assignee**, updated on 2022-12-13

acts-project/acts: Open PRs II
























- ▶  **fix: Energy loss function** (PR#1323)
by @beomki-yeo,  **no assignee**, updated on 2022-12-13
- ▶  **feat: align amvf config with athena** (PR#1723)
by @andiwand,  **no assignee**, updated on 2022-12-13
- ▶  **feat: Add python bindings to HoughTransform algorithm** (PR#1721)
by @tboldagh, assigned to @jahreda, updated on 2022-12-13
- ▶  **refactor: physmon vertexing** (PR#1688)
by @andiwand,  **no assignee**, updated on 2022-12-13
- ▶  **fix: GX2F: write correct chi2 to root** (PR#1725)
by @AJPfleger,  **no assignee**, updated on 2022-12-13
- ▶  **fix: remove double to bool conversion in vertexing** (PR#1673)
by @andiwand,  **no assignee**, updated on 2022-12-13
- ▶  **feat: Optionally decorate geometry dumps to json.** (PR#1732)
by @goetzgaycken,  **no assignee**, updated on 2022-12-12









- ▶  **feat: Add BoundingBox to DetectorVolume** (PR#1733)
by @Matthewharri,  **no assignee**, updated on 2022-12-12
- ▶  **perf: Improve performance of k-d tree** (PR#1714)
by @stephenswat,  **no assignee**, updated on 2022-12-12
- ▶  **refactor!: Refactored SeedFinder to avoid the need to recreate it for every event** (PR#1693)
by @tboldagh,  **no assignee**, updated on 2022-12-09
- ▶  **feat: Add Geometry ID hook for the endcap strip of the ODD** (PR#1696)
by @Corentin-Allaire, assigned to @benjaminhuth, updated on 2022-12-08
- ▶  **refactor: python reconstruction trajectory writing** (PR#1718)
by @andiwand,  **no assignee**, updated on 2022-12-08
- ▶  **fix: Correct degeneracy check for 'Range1D'** (PR#1715)
by @stephenswat,  **no assignee**, updated on 2022-12-08
- ▶  **fix: If ITk module splitting is enabled also split back side modules.** (PR#1716)
by @goetzgaycken,  **no assignee**, updated on 2022-12-07








acts-project/acts: Open PRs IV

- ▶  **feat: geometry id delegate (Experimental)** (PR#1684)
by @asalzburger,  **no assignee**, updated on 2022-11-28
- ▶  **perf: Tile 8x8 covariance matrix multiplication** (PR#1181)
by @stephenswat,  **no assignee**, updated on 2022-11-21
- ▶   **feat!: Track class first iteration** (PR#1729)
by @paulgessinger,  **no assignee**, updated on 2022-12-13
- ▶   **build: Add -Wconversion to compiler warnings** (PR#1676)
by @benjaminhuth,  **no assignee**, updated on 2022-11-22
- ▶    **docs: adding Fatras description** (PR#1402)
by @asalzburger, assigned to @asalzburger, updated on 2022-11-12
- ▶    **refactor: Create and use Acts::SpacePoint as input for public interface of Seedfinder!** (PR#1394)
by @robertlangenber,  **no assignee**, updated on 2022-11-12
- ▶   **refactor: modernize & add checks to 'Acts::TrackingGeometryBuilder'** (PR#1656)
by @benjaminhuth,  **no assignee**, updated on 2022-11-07













acts-project/acts: Open PRs V

- ▶   **ci: test exatrkx training ci** (PR#1505)
by @benjaminhuth,  **no assignee**, updated on 2022-11-03
- ▶   **feat: Python documentation** (PR#1633)
by @benjaminhuth,  **no assignee**, updated on 2022-10-28
- ▶   **feat: port RootNTupleReader** (PR#1620)
by @andiwand,  **no assignee**, updated on 2022-10-27
- ▶    **docs: first brush over the geometry pages** (PR#1395)
by @asalzburger, assigned to @asalzburger, updated on 2022-10-16
- ▶    **docs: polish tgeo plugin doc** (PR#1397)
by @niermann999, assigned to @niermann999, updated on 2022-10-16
- ▶    **fix: B-field interpolation errors** (PR#1467)
by @timadye,  **no assignee**, updated on 2022-10-12
- ▶    **feat: Enable more fine-grained digitization configuration** (PR#1272)
by @benjaminhuth,  **no assignee**, updated on 2022-10-03













- ▶   **WIP**  **Stale** **feat: Adding unit tests for perigee propagation outside beam pipe (PR#1354)**
by @asalzbürger,  **no assignee**, updated on 2022-09-09
- ▶   **WIP**  **Stale** **feat!: Allow regional seeding configuration (PR#1187)**
by @Corentin-Allaire,  **no assignee**, updated on 2022-07-30

- ▶  **Drop 'boost progress' from examples where it is not used** (Issue#1736)
by @tboldagh,  **no assignee**, updated on 2022-12-12
- ▶  **Remove 'volumeSignature' from geometry building** (Issue#1731)
by @paulgessinger,  **no assignee**, updated on 2022-12-12
- ▶  **Rare navigator failure causing overflow FPE** (Issue#1720)
by @noemina, assigned to @noemina, updated on 2022-12-08
- ▶  **Python: Missing seedFinderOptions for Orthogonal Seeding** (Issue#1713)
by @CouthuresJeremy,  **no assignee**, updated on 2022-12-06

















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

- ▶  **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
- ▶   **WIP** **Stale** **docs: adding Fatras description** (PR#1402)
by @asalzburger, assigned to @asalzburger, updated on 2022-11-12
- ▶  **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 II













- ▶  **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** **docs: first brush over the geometry pages** (PR#1395)
by @asalzburger, assigned to @asalzburger, updated on 2022-10-16
- ▶   **WIP** **Stale** **docs: polish tgeo plugin doc** (PR#1397)
by @niermann999, assigned to @niermann999, updated on 2022-10-16

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












- ▶   WIP Stale **fix: B-field interpolation errors (PR#1467)**
by @timadye,  **no assignee**, updated on 2022-10-12
- ▶   WIP Stale **feat: Enable more fine-grained digitization configuration (PR#1272)**
by @benjaminhuth,  **no assignee**, updated on 2022-10-03
- ▶  Stale **Monitor Floating Point Exceptions in CI (Issue#1481)**
by @paulgessinger,  **no assignee**, updated on 2022-10-01
- ▶  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 **KalmanFilter error: No measurement detected during the propagation (Issue#1328)**
by @CarloVarni,  **no assignee**, updated on 2022-09-21






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

- ▶  **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 @asalzburger,  **no assignee**, updated on 2022-09-20
- ▶  **WIP** **Stale** **feat: Adding unit tests for perigee propagation outside beam pipe** (PR#1354)
by @asalzburger,  **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
- ▶   **WIP** **Stale** **feat!: Allow regional seeding configuration** (PR#1187)
by @Corentin-Allaire,  **no assignee**, updated on 2022-07-30
- ▶  **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
- ▶  **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

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

- ▶  **Stale** **ci: Coverage job is broken with gcovr \geq 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
- ▶  **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 @asalzbürger, updated on 2021-11-04
- ▶  **Stale** **Tracking for TPC/DC without surfaces** (Issue#165)
by @FabianKlimpel, assigned to @asalzbürger, 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 @asalzbürger, assigned to @asalzbürger, updated on 2021-10-21