































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















August 27, 2024

## acts-project/acts: PRs merged between 2024-08-13 and 2024-08-27 |















- ▶  **ci: bump histcmp to 0.6.7 to try to fix yerr issue (#3504)**  
by @paulgessinger,  reviewed by @AJPfleger, merged on 2024-08-13
- ▶  **refactor: Split 'KalmanVertexUpdater' by dimension (#3503)**  
by @paulgessinger,  reviewed by @benjaminhuth, merged on 2024-08-13
- ▶  **chore: Bump minimum GeoModel version to 6.3.0 (#3476)**  
by @andiwand,  reviewed by @AJPfleger, merged on 2024-08-14
- ▶  **fix: Ensure ODD cleanup if sequencer stops in Examples Python tests (#3471)**  
by @andiwand,  reviewed by @paulgessinger, merged on 2024-08-14
- ▶  **fix: Add missing newline for 'Sequencer' 'timing.csv' in Examples (#3508)**  
by @andiwand,  reviewed by @paulgessinger, merged on 2024-08-14
- ▶  **build: Bump minimum Eigen version to v3.4.0 (#3511)**  
by @paulgessinger,  reviewed by @benjaminhuth, merged on 2024-08-15
- ▶  **build: Cleanup cmake options, fix detray plugin (#3509)**  
by @paulgessinger,  reviewed by @benjaminhuth, merged on 2024-08-15
- ▶  **refactor: remove FPE mask #2284 (marked as #2348) (#3510)**  
by @AJPfleger,  reviewed by @paulgessinger, merged on 2024-08-16

- ▶  **perf: Drop 'stateBuffer' from Core CKF (#3458)**  
by @andiwand,  reviewed by @paulgessinger, merged on 2024-08-19
- ▶  **chore: Add cmake-format to pre-commit (#3497)**  
by @paulgessinger,  reviewed by @andiwand, merged on 2024-08-19
- ▶  **fix: add inline keyword to function PhotonConversion::generateChildren in PhotonConversion.hpp (#3516)**  
by @Biblehome,  reviewed by @andiwand, merged on 2024-08-19
- ▶  **ci: Drop LCG 104 job (DD4hep too old for current ODD) (#3512)**  
by @paulgessinger,  reviewed by @AJPfleger, merged on 2024-08-19
- ▶  **refactor: Rework projector (#3453)**  
by @andiwand,  reviewed by @paulgessinger, merged on 2024-08-19
- ▶  **fix: make boost version checks work and use optimized range insertion (#3515)**  
by @benjaminhuth,  reviewed by @andiwand, merged on 2024-08-20
- ▶  **refactor: Conditional import & refactor in python scripts related to material mapping (#3518)**  
by @benjaminhuth,  reviewed by @paulgessinger, merged on 2024-08-20

















## acts-project/acts: PRs merged between 2024-08-13 and 2024-08-27 III

- ▶  **build: Downgrade boost version error to warning (#3522)**  
by @paulgessinger,, merged on 2024-08-20
- ▶  **docs: Remove link to clang-format image from docs (#3524)**  
by @benjaminhuth,review requested, merged on 2024-08-20
- ▶  **fix: Handle missing field in 'SympyStepper' (#3525)**  
by @andiwand,  reviewed by @asalzburger, merged on 2024-08-20
- ▶  **chore: Update compiler warning flags (#3495)**  
by @paulgessinger,  reviewed by @andiwand, merged on 2024-08-20
- ▶  **feat: refactor and generalize propagation validation (#3514)**  
by @asalzburger,  reviewed by @andiwand, merged on 2024-08-21
- ▶  **revert: "refactor: Rework projector (#3453)" (#3527)**  
by @andiwand,  reviewed by @paulgessinger, merged on 2024-08-21
- ▶  **fix: Change the component reducer for the GSF (to fix navigation issues) (#3521)**  
by @benjaminhuth,  reviewed by @andiwand, merged on 2024-08-21
- ▶  **feat: Add GeoModel to G4 detector construction helper (#3530)**  
by @benjaminhuth,  reviewed by @andiwand, merged on 2024-08-21















## acts-project/acts: PRs merged between 2024-08-13 and 2024-08-27 IV

















- ▶  **feat: Bind some Gen1 geometry building functionality to python (#3448)**  
by @benjaminhuth,  reviewed by @paulgessinger, merged on 2024-08-22
- ▶  **feat: Telescope style seeding (#3300)**  
by @ssdetlab,  reviewed by @paulgessinger, merged on 2024-08-22
- ▶  **feat: GeoModelDetectorObjectFactory for flexible conversion of GeoModel objects to Acts Surfaces and Volumes (#3499)**  
by @Berggren-Jonas,  reviewed by @paulgessinger, merged on 2024-08-22
- ▶  **fix: Clang Tidy issues in GeoModel plugin (#3545)**  
by @paulgessinger,  reviewed by @stephenswat, merged on 2024-08-23
- ▶  **feat(geo): 'Surface::isOnSurface' gets tolerance parameter (#3544)**  
by @paulgessinger,  reviewed by @andiwand, merged on 2024-08-23
- ▶  **feat: Max chi2 for outliers in Core 'MeasurementSelector' (#3475)**  
by @andiwand,  comment by @timadye, merged on 2024-08-24
- ▶  **refactor: Remove 'calculateTrackQuantities' from Core CKF (#3536)**  
by @andiwand,  reviewed by @paulgessinger, merged on 2024-08-24

## acts-project/acts: PRs merged between 2024-08-13 and 2024-08-27 V

- ▶  **feat(geo): Add name setter and move constructor to 'TrackingVolume'** (#3542)  
by @paulgessinger,  reviewed by @benjaminhuth, merged on 2024-08-24
- ▶  **refactor(geo): Use hidden friend for SourfaceBounds operators** (#3543)  
by @paulgessinger,  reviewed by @andiwand, merged on 2024-08-24
- ▶  **feat: Add displaced vertex generator** (#3446)  
by @AichaMattouhi,  comment by @AichaMattouhi, merged on 2024-08-24
- ▶  **refactor: Remove uses of 'std::enable\_if'** (#3484)  
by @stephenswat,  reviewed by @paulgessinger, merged on 2024-08-24
- ▶  **refactor: Remove unnecessary 'activeBranches.empty()' condition from Core CKF** (#3541)  
by @andiwand,  reviewed by @paulgessinger, merged on 2024-08-25
- ▶  **test: Assert 'onSurface' in 'Navigator'** (#3533)  
by @andiwand,  reviewed by @paulgessinger, merged on 2024-08-25
- ▶  **feat: Renavigation for Gen1** (#3437)  
by @andiwand,  reviewed by @benjaminhuth, merged on 2024-08-26
- ▶  **refactor(gx2f): logic for multipleScattering option (no effect yet)** (#3551)  
by @AJPfleger,  reviewed by @andiwand, merged on 2024-08-26
















## acts-project/acts: PRs merged between 2024-08-13 and 2024-08-27 VI

- ▶  **refactor(gx2f): remove outdated navigation abort conditions (#3552)**  
by @AJPfleger,  reviewed by @andiwand, merged on 2024-08-26
- ▶  **fix: remove outdated full chain (#3553)**  
by @AJPfleger,  reviewed by @andiwand, merged on 2024-08-26
- ▶  **fix: Handle if all branches are stopped after filtering in Core CKF (#3555)**  
by @andiwand,  reviewed by @paulgessinger, merged on 2024-08-26
- ▶  **feat(geo): Gen3 portal links (#3531)**  
by @paulgessinger,  reviewed by @andiwand, merged on 2024-08-26
- ▶  **fix(gx2f): correct trackstates for material surfaces (#3556)**  
by @AJPfleger,  reviewed by @andiwand, merged on 2024-08-27
- ▶  **feat: Add B-field accessors to Python bindings (#3554)**  
by @stephswat,  reviewed by @paulgessinger, merged on 2024-08-27
- ▶  **revert: "refactor: Remove 'calculateTrackQuantities' from Core CKF (#3536)" (#3565)**  
by @andiwand,  reviewed by @paulgessinger, merged on 2024-08-27















- ▶  **feat: GeoModel plugin changes for ITk building.** (#3519)  
by @benjaminhuth,  comment by @benjaminhuth, updated on 2024-08-27
- ▶  **feat: detray material conversion** (#3546)  
by @asalzburger,  reviewed by @EleniXoch, updated on 2024-08-27
- ▶  **refactor: Rework G4 surface mapping to make it more robust** (#3562)  
by @benjaminhuth,  comment by @benjaminhuth, updated on 2024-08-27
- ▶  **feat: Add covfie magnetic field plugin** (#3479)  
by @stephenswat,  comment by @stephenswat, updated on 2024-08-27
- ▶  **fix: Make 'RootTrackStatesWriter' FPE safe** (#3559)  
by @andiwand,  reviewed by @AJPfleger, updated on 2024-08-27
- ▶  **refactor: Add C++20 track parameter, navigator, and stepper concepts** (#3492)  
by @stephenswat,  reviewed by @andiwand, updated on 2024-08-27
- ▶  **refactor: Some refactorings around the G4 simulation** (#3532)  
by @benjaminhuth,  reviewed by @andiwand, updated on 2024-08-27
- ▶  **feat: Gen3 geometry Portals** (#3501)  
by @paulgessinger,  reviewed by @andiwand, updated on 2024-08-27


















## acts-project/acts: Open PRs II

- ▶  **ci: Add pre-commit hooks for most of our linting (#3560)**  
by @paulgessinger,  reviewed by @benjaminhuth, updated on 2024-08-27
- ▶  **refactor(gx2f): early exit for the Actor (#3566)**  
by @AJPfleger,  reviewed by @andiwand, updated on 2024-08-27
- ▶  **refactor: Rework projector (#3529)**  
by @andiwand, review requested, updated on 2024-08-27
- ▶  **feat: GeoModel conversion for TGC, sTGC and MicroMega (#3540)**  
by @Berggren-Jonas,  comment by @Berggren-Jonas, updated on 2024-08-27
- ▶  **fix: Further fixes to detray plugin (#3563)**  
by @stephenswat,  comment by @paulgessinger, updated on 2024-08-27
- ▶  **docs: Add documentation on Spack builds (#3550)**  
by @stephenswat,  reviewed by @paulgessinger, updated on 2024-08-27
- ▶  **refactor: Accelerating the Hough Transform (#3461)**  
by @dimitra97,  comment by @dimitra97, updated on 2024-08-27
- ▶  **fix!: make material validity checks and construction explicit (#3494)**  
by @AJPfleger,  comment by @AJPfleger, updated on 2024-08-27

















## acts-project/acts: Open PRs III

- ▶  **feat: Adding efficiency vs production radius to output root files** (#3539)  
by @AichaMattouhi,  comment by @paulgessinger, updated on 2024-08-26
- ▶  **feat: introduce navigation stream** (#3538)  
by @asalzburger,  comment by @andiwand, updated on 2024-08-26
- ▶  **feat: Hashing seeding algorithm** (#3148)  
by @CouthuresJeremy,  comment by @CouthuresJeremy, updated on 2024-08-26
- ▶  **Stale feat: speed up detector navigator** (#3435)  
by @asalzburger,  reviewed by @andiwand, updated on 2024-08-24
- ▶  **Stale feat: Introduce the usage of the geomodel converters for the Muon System** (#3348)  
by @dimitra97,  comment by @dimitra97, updated on 2024-08-23
- ▶  **Stale feat!: Track-EDM like implementation for the space points, to be used in the seeding** (#3432)  
by @CarloVarni,  **no reviewer**, updated on 2024-08-23
- ▶  **ci: Reenable some ExaTrkX tests** (#3395)  
by @benjaminhuth,  **no reviewer**, updated on 2024-08-22



















## acts-project/acts: Open PRs IV

- ▶  **fix: Require TBB to be found by cmake (#3507)**  
by @benjaminhuth,  reviewed by @timadye, updated on 2024-08-22
- ▶  **Stale refactor: Lift GenericDetector to a Plugin (#3425)**  
by @benjaminhuth, review requested, review requested, updated on 2024-08-21
- ▶  **refactor!: 'VolumeBounds' becomes a scoped enum (#3513)**  
by @paulgessinger,  **no reviewer**, updated on 2024-08-20
- ▶  **feat: GeoShapes to DetectorVolumes and GeoMaterial Converters (#3268)**  
by @Matthewharri,  comment by @Matthewharri, updated on 2024-08-19
- ▶  **Stale feat: tracc chain in examples (common chain logic and CPU chain) (#3320)**  
by @fredevb,  **no reviewer**, updated on 2024-08-15
- ▶  **feat: tracc plugin refactor, tracc chain reconstruction only, and fixes (#3505)**  
by @fredevb,  **no reviewer**, updated on 2024-08-14
- ▶  **Stale refactor: Move MLAmbiguitySolver to Core (#3272)**  
by @Corentin-Allaire,  **no reviewer**, updated on 2024-08-10
- ▶  **refactor!: SourceLink setting only via rvalue reference (#3488)**  
by @paulgessinger,  **no reviewer**, updated on 2024-08-09



















## acts-project/acts: Open PRs ▼

- ▶  **fix!: Use 'ActsScalar' in binning tools (#3482)**  
by @stephenswat,  comment by @stephenswat, updated on 2024-08-09
- ▶  **feat: allow bare Surface pointers to be written to JSON (#3493)**  
by @asalzburger,  comment by @paulgessinger, updated on 2024-08-08
- ▶  **refactor: path handling to use 'std::filesystem' (#3308)**  
by @AJPfleger,  changes requested by @stephenswat, updated on 2024-08-02
- ▶  **feat: tracc plugin (conversion) (#3281)**  
by @fredevb,  comment by @paulgessinger, updated on 2024-08-01
- ▶  **fix: detray plugin (cmake flags, CI, and compile errors) (#3363)**  
by @fredevb,  comment by @EleniXoch, updated on 2024-08-01
- ▶  **feat: covfie plugin (#3117)**  
by @fredevb,  comment by @paulgessinger, updated on 2024-08-01
- ▶  **feat!: (fix + chore) streamline nSegments usage (#3419)**  
by @asalzburger,  comment by @asalzburger, updated on 2024-07-29
- ▶  **Stale style: Update clang-format to v18 (#3319)**  
by @stephenswat,  **no reviewer**, updated on 2024-07-21




















## acts-project/acts: Open PRs VI

- ▶  **Stale** feat: **Misalignment shift and test check that only selected modules are shifted** (#2843)  
by @LaraCalic,  comment by @paulgessinger, updated on 2024-07-15
- ▶  **Stale** feat: **Geometry agnostic space point maker** (#2890)  
by @Alonl14,  **no reviewer**, updated on 2024-07-06
- ▶  **Stale** feat: **introduction obj simhit writer** (#3180)  
by @asalzburger,  **no reviewer**, updated on 2024-06-15
- ▶   **WIP** feat: **Dense 'MeasurementContainer' for Examples** (#3528)  
by @andiwand,  **no reviewer**, updated on 2024-08-27
- ▶   **WIP** refactor: **Remove target volume estimation from 'Navigator'** (#3242)  
by @andiwand,  **no reviewer**, updated on 2024-08-27
- ▶   **WIP** refactor: **Return all track states from Core CKF** (#3391)  
by @andiwand,  **no reviewer**, updated on 2024-08-27
- ▶   **WIP** refactor: **Remove 'calculateTrackQuantities' from Core CKF** (#3567)  
by @andiwand,  **no reviewer**, updated on 2024-08-27






















## acts-project/acts: Open PRs VII

- ▶   refactor: Remove far limit hack from 'Layer::compatibleSurfaces' (#3558)  
by @andiwand,  reviewed by @AJPflegler, updated on 2024-08-27
- ▶   feat(gx2f): material effects - multiple scattering (#3292)  
by @AJPflegler,  no reviewer, updated on 2024-08-27
- ▶   ci: Download dependencies as tarball (#3520)  
by @paulgessinger,  no reviewer, updated on 2024-08-27
- ▶   refactor: Write unbiased states only for smoothed in 'RootTrackStatesWriter' (#3561)  
by @andiwand,  no reviewer, updated on 2024-08-27
- ▶   feat: Gen 3 portal shells (#3564)  
by @paulgessinger,  no reviewer, updated on 2024-08-27
- ▶   fix: Return 'nullptr' if outside tracking geometry in 'TrackingGeometry::lowestTrackingVolume' (#3481)  
by @andiwand,  comment by @andiwand, updated on 2024-08-26

## acts-project/acts: Open PRs VIII






















- ▶   **feat: Allow volume constrain for propagation (#3470)**  
by @andiwand,  **no reviewer**, updated on 2024-08-26
- ▶   **test: Check if we end up in the expected volume in Gen1 'Navigator' (#3442)**  
by @andiwand,  **no reviewer**, updated on 2024-08-25
- ▶   **refactor: Remove remaining detection idiom usage (#3547)**  
by @stephenswat,  **no reviewer**, updated on 2024-08-23
- ▶    **refactor: add geohook for fast digitization range selection to itk example (#2089)**  
by @niermann999,  **no reviewer**, updated on 2024-08-23
- ▶   **feat: Allow user to supply root branch to Core CKF (#3534)**  
by @andiwand,  reviewed by @timadye, updated on 2024-08-22
- ▶   **feat: Add statistics to propagation (#3450)**  
by @andiwand,  comment by @paulgessinger, updated on 2024-08-22

















## acts-project/acts: Open PRs IX

- ▶   **WIP feat: detray plugin surface grids (#3429)**  
by @EleniXoch,  comment by @EleniXoch, updated on 2024-08-22
- ▶   **WIP refactor: Bump min json ver, make json keys static (#2968)**  
by @paulgessinger, review requested, updated on 2024-08-22
- ▶   **WIP draft: Gauss vertex seeding with time (#3491)**  
by @CENcll,  comment by @andiwand, updated on 2024-08-22
- ▶   **WIP feat: Allow Core CKF to skip the start surface (#3535)**  
by @andiwand,  **no reviewer**, updated on 2024-08-22
- ▶   **WIP**  **feat: Added possibility to keep intermediate particles from PythiaGenerator**  
**WIP (#3414)**  
by @pbutti,  **no reviewer**, updated on 2024-08-22
- ▶   **WIP refactor!: Decouple navigation and stepping (#3449)**  
by @andiwand,  **no reviewer**, updated on 2024-08-21
- ▶   **WIP chore: Bump minimum boost version to 1.78.0 (#3517)**  
by @paulgessinger,  **no reviewer**, updated on 2024-08-20



























## acts-project/acts: Open PRs X






- ▶   **WIP** Stale refactor: **Rework physics performance monitoring for Examples (#3359)**  
by @andiwand,  **no reviewer**, updated on 2024-08-17
- ▶   **WIP** Stale refactor: **Move config files from ODD to Acts to ensure compatibility (#3407)**  
by @benjaminhuth,  **no reviewer**, updated on 2024-08-17
- ▶   **WIP** Stale build: **physmon for tracc chains (host and cuda) (#3403)**  
by @fredevb,  **no reviewer**, updated on 2024-08-16
- ▶   **WIP** Stale feat: **tracc cuda example (#3372)**  
by @fredevb,  **no reviewer**, updated on 2024-08-16
- ▶   **WIP** refactor: **Rework detector handling in Examples (#3498)**  
by @andiwand,  **no reviewer**, updated on 2024-08-08
- ▶   **WIP** refactor!: **Template algorithms on track container frontend 'TrackContainer' (#3193)**  
by @andiwand,  comment by @andiwand, updated on 2024-08-07
- ▶   **WIP** feat(geometry): **Allow operator« on surfaces without detector elements (#3467)**  
by @paulgessinger,  comment by @paulgessinger, updated on 2024-08-01












- ▶   **WIP**  **Stale** **refactor!: Surface returns transform by value (#2527)**  
by @asalzburger,  **no reviewer**, updated on 2024-07-22
- ▶   **WIP**  **Stale** **refactor: Some internal GSF refactorings (#2697)**  
by @benjaminhuth,  changes requested by @andiwand, updated on 2024-07-21
- ▶   **WIP**  **Stale** **feat: Add per event timing (#3124)**  
by @CouthuresJeremy,  comment by @andiwand, updated on 2024-07-11
- ▶   **WIP**  **Stale** **feat: Add GSF component momentum cut to stabilize fit (#2661)**  
by @benjaminhuth,  comment by @benjaminhuth, updated on 2024-05-25

- ▶ **🕒 Error while building Geant4 plugin (#3557)**  
by @nibir98, updated on 2024-08-27
- ▶ **🕒 Cleanup: BinningValue, AxisBounds + detray/Integration (#3549)**  
by @asalzburger, updated on 2024-08-26
- ▶ **🕒 'common' CMake preset requires ccache (#3537)**  
by @stephswat, updated on 2024-08-22
- ▶ **🕒 Proposal: surface and portal navigation (including target surfaces) for Gen3 (#3526)**  
by @asalzburger, updated on 2024-08-22



















- ▶  Stale **'MultiEigenStepperLoop'** returns position not on surface while components are (#3441)  
by @andiwand, updated on 2024-08-24
- ▶  Stale **'TrackStateType'** is easy to get wrong (#3439)  
by @andiwand, updated on 2024-08-24
- ▶  Stale **feat: speed up detector navigator** (#3435)  
by @asalzburger,  **no reviewer**, updated on 2024-08-24
- ▶  Stale **feat!: Track-EDM like implementation for the space points, to be used in the seeding** (#3432)  
by @CarloVarni,  **no reviewer**, updated on 2024-08-23
- ▶  Stale **refactor: Lift GenericDetector to a Plugin** (#3425)  
by @benjaminhuth,  **no reviewer**, updated on 2024-08-21
- ▶   WIP Stale **feat: Added possibility to keep intermediate particles from PythiaGenerator**  
**WIP** (#3414)  
by @pbutti,  **no reviewer**, updated on 2024-08-22

- ▶  **WIP** Stale refactor: Move config files from ODD to Acts to ensure compatibility (#3407)  
by @benjaminhuth,  **no reviewer**, updated on 2024-08-17
- ▶  **WIP** Stale build: physmon for tracc chains (host and cuda) (#3403)  
by @fredevb,  **no reviewer**, updated on 2024-08-16
- ▶  Stale Multiple context references are in flight for track fitters and finder (#3383)  
by @andiwand, updated on 2024-08-14
- ▶  **WIP** Stale feat: tracc cuda example (#3372)  
by @fredevb,  **no reviewer**, updated on 2024-08-16
- ▶  **WIP** Stale refactor: Rework physics performance monitoring for Examples (#3359)  
by @andiwand,  **no reviewer**, updated on 2024-08-17
- ▶  Stale feat: Introduce the usage of the geomodel converters for the Muon System (#3348)  
by @dimitra97,  **no reviewer**, updated on 2024-08-23
- ▶  Stale feat: tracc chain in examples (common chain logic and CPU chain) (#3320)  
by @fredevb,  **no reviewer**, updated on 2024-08-15

- ▶  Stale **bug: navigation suggests 'pathCorrection=inf' on cylinderSurface (#3267)**  
by @AJPfleger, updated on 2024-08-17
- ▶  Stale **TrackAtVertex trackWeight is not being written in IVF (#2149)**  
by @andiwand, updated on 2024-08-15
- ▶   WIP Stale **refactor: add geohook for fast digitization range selection to itk example (#2089)**  
by @niermann999,  **no reviewer**, updated on 2024-08-23














- ▶  Stale **'MultiEigenStepperLoop'** returns position not on surface while components are (#3441)  
by @andiwand, updated on 2024-08-24
- ▶  Stale **'TrackStateType'** is easy to get wrong (#3439)  
by @andiwand, updated on 2024-08-24
- ▶  Stale **feat: speed up detector navigator** (#3435)  
by @asalzburger,  **no reviewer**, updated on 2024-08-24
- ▶  Stale **feat: Introduce the usage of the geomodel converters for the Muon System** (#3348)  
by @dimitra97,  **no reviewer**, updated on 2024-08-23
- ▶  Stale **feat!: Track-EDM like implementation for the space points, to be used in the seeding** (#3432)  
by @CarloVarni,  **no reviewer**, updated on 2024-08-23
- ▶   WIP Stale **refactor: add geohook for fast digitization range selection to itk example** (#2089)  
by @niermann999,  **no reviewer**, updated on 2024-08-23

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













- ▶   **WIP** Stale **feat: Added possibility to keep intermediate particles from PythiaGenerator**  
**WIP** (#3414)  
by @pbutti,  **no reviewer**, updated on 2024-08-22
- ▶  Stale **refactor: Lift GenericDetector to a Plugin** (#3425)  
by @benjaminhuth,  **no reviewer**, updated on 2024-08-21
- ▶  Stale **bug: navigation suggests 'pathCorrection=inf' on cylinderSurface** (#3267)  
by @AJPfleger, updated on 2024-08-17
- ▶   **WIP** Stale **refactor: Rework physics performance monitoring for Examples** (#3359)  
by @andiwand,  **no reviewer**, updated on 2024-08-17
- ▶   **WIP** Stale **refactor: Move config files from ODD to Acts to ensure compatibility** (#3407)  
by @benjaminhuth,  **no reviewer**, updated on 2024-08-17
- ▶   **WIP** Stale **build: physmon for tracc chains (host and cuda)** (#3403)  
by @fredevb,  **no reviewer**, updated on 2024-08-16
- ▶   **WIP** Stale **feat: tracc cuda example** (#3372)  
by @fredevb,  **no reviewer**, updated on 2024-08-16











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

- ▶  **Stale** feat: **tracc chain in examples (common chain logic and CPU chain) (#3320)**  
by @fredevb,  **no reviewer**, updated on 2024-08-15
- ▶  **Stale** **TrackAtVertex trackWeight is not being written in IVF (#2149)**  
by @andiwand, updated on 2024-08-15
- ▶  **Stale** **Multiple context references are in flight for track fitters and finder (#3383)**  
by @andiwand, updated on 2024-08-14
- ▶  **Stale** refactor: **Move MLAmbiguitySolver to Core (#3272)**  
by @Corentin-Allaire,  **no reviewer**, updated on 2024-08-10
- ▶  **Stale** **Provide tools & setup for tracking of Heavy Ion on ITk events in standalone ACTS environment (#1778)**  
by @tboldagh, updated on 2024-07-24
- ▶   **Stale** refactor!: **Surface returns transform by value (#2527)**  
by @asalzbürger,  **no reviewer**, updated on 2024-07-22
- ▶   **Stale** refactor: **Some internal GSF refactorings (#2697)**  
by @benjaminhuth,  **no reviewer**, updated on 2024-07-21









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

- ▶  **Stale** **style: Update clang-format to v18 (#3319)**  
by @stephenswat,  **no reviewer**, updated on 2024-07-21
- ▶  **Stale** **feat: Misalignment shift and test check that only selected modules are shifted (#2843)**  
by @LaraCalic,  **no reviewer**, updated on 2024-07-15
- ▶   **Stale** **feat: Add per event timing (#3124)**  
by @CouthuresJeremy,  **no reviewer**, updated on 2024-07-11
- ▶  **Stale** **feat: Geometry agnostic space point maker (#2890)**  
by @Alonl14,  **no reviewer**, updated on 2024-07-06
- ▶  **Stale** **Project build flags are difficult to control (2024.05.29.) (#3231)**  
by @krasznaa, updated on 2024-07-04
- ▶  **Stale** **[bug] Off axis endcap with dd4hep plugin. (#942)**  
by @whit2333, updated on 2024-06-26
- ▶  **Stale** **Debug Information in Acts Seeder (#944)**  
by @osbornjd, updated on 2024-06-26












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

- ▶  **Stale** **Reproducibility test using hash checks for non-linear KF (#1246)**  
by @paulgessinger, updated on 2024-06-25
- ▶  **Stale** **Documentation update: Core (#1418)**  
by @paulgessinger, updated on 2024-06-25
- ▶  **Stale** **Documentation: hints for debugging (#1463)**  
by @timadye, updated on 2024-06-25
- ▶  **Stale** **Add Primary Vertex Label to tracks (#1544)**  
by @Lucas-Borgna, updated on 2024-06-25
- ▶  **Stale** **Create volume restricted BFieldMap (#1659)**  
by @asalzburger, updated on 2024-06-25
- ▶  **Stale** **Cmake error if ACTS\_BUILD\_PLUGIN\_ACTSVG=ON (#1818)**  
by @DraTeets, updated on 2024-06-25
- ▶  **Stale** **LCG compatibility (#2054)**  
by @paulgessinger, updated on 2024-06-25
- ▶  **Stale** **EstimateTrackParamsFromSeed does not use time of measurement (#2136)**  
by @andiwand, updated on 2024-06-25









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

- ▶  **Stale Construct tracking geometry from python (#2173)**  
by @andiwand, updated on 2024-06-25
- ▶  **Stale Missing 'cmake\_minimum\_required' in 'ActsConfig.cmake.in' (#2216)**  
by @andiwand, updated on 2024-06-25
- ▶  **Stale Bug: not all tracks have fittedMomentum (#2364)**  
by @felix-russo, updated on 2024-06-25
- ▶  **Stale Bug: AMVF 'deleteLastVertex' might be wrong (#2380)**  
by @andiwand, updated on 2024-06-25
- ▶  **Stale [Bug] Fatras can't seem to handle energy loss for electrons on thin surfaces (#2498)**  
by @janheinri, updated on 2024-06-25
- ▶  **Stale [Feature Request] Padding utility for field map in case tracking volume is larger than a given field map (#2523)**  
by @janheinri, updated on 2024-06-25
- ▶  **Stale Bug: Fatras sets step size to 0 (#2543)**  
by @andiwand, updated on 2024-06-25
- ▶  **Stale Ensure Fitters use all provided measurements (#2737)**  
by @andiwand, updated on 2024-06-25









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








- ▶  **Stale bug: KF verbosity statement (#3097)**  
by @osbornjd, updated on 2024-06-20
- ▶  **Stale feat: introduction obj simhit writer (#3180)**  
by @asalzbunger,  **no reviewer**, updated on 2024-06-15
- ▶  **Stale EDM Memory usage (#1516)**  
by @paulgessinger, updated on 2024-05-25
- ▶  **Stale Detailed timing per event (#1700)**  
by @CouthuresJeremy, updated on 2024-05-25
- ▶   **Stale feat: Add GSF component momentum cut to stabilize fit (#2661)**  
by @benjaminhuth,  **no reviewer**, updated on 2024-05-25
- ▶  **Stale Question: Set a different value of eta range using ODD (#2776)**  
by @rubihason, updated on 2024-05-25
- ▶  **Stale Write Fatras documentation (#2796)**  
by @andiwand, updated on 2024-05-25
- ▶  **Stale bug: documentation always builds in '<source>' (#2798)**  
by @AJPfleger, updated on 2024-05-25

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

- ▶  **Stale bug: IVF is throwing errors in ODD full chain (#3120)**  
by @andiwand, updated on 2024-05-18
- ▶  **Stale Documentation on geometry misalignments (#2940)**  
by @paulgessinger, updated on 2024-05-17
- ▶  **Stale Bug: material map auto tuning only considers the "Default" mapping type (#2942)**  
by @plariono, updated on 2024-05-17
- ▶  **Stale bug: some dependencies in setup script wrong (#3014)**  
by @AJPfleger, updated on 2024-05-17
- ▶  **Stale perf: CKF measurement selector runs after track state creation (#3081)**  
by @andiwand, updated on 2024-05-05
- ▶  **Stale perf: CKF general (#3082)**  
by @andiwand, updated on 2024-05-05
- ▶  **Stale Some 'toStream' implementations change the state of 'std::ostream' (#3079)**  
by @andiwand, updated on 2024-05-04
- ▶  **Stale HepMC plugin looks incomplete (#3050)**  
by @andiwand, updated on 2024-04-26









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

- ▶  Stale **'EigenStepper' (and extensions) cannot be easily extended for dense environment covariance transport** (#2868)  
by @andiwand, updated on 2024-03-20
- ▶  Stale **'Stepper' and 'Navigator' cannot be configured by 'PropagatorOptions'** (#2861)  
by @andiwand, updated on 2024-02-09
- ▶  Stale **Fitters use 'PropagatorPlainOptions' and not 'PropagatorOptions'** (#2862)  
by @andiwand, updated on 2024-02-09
- ▶  Stale **'AdaptiveGridTrackDensity' has a hidden 'd0' cut** (#2840)  
by @andiwand, updated on 2024-01-17
- ▶  Stale **Duplication in 'AdaptiveGridTrackDensity' and 'GaussianGridTrackDensity'** (#2841)  
by @andiwand, updated on 2024-01-17
- ▶  Stale **EDM4hep parameter conversion should use jacobians directly** (#2813)  
by @paulgessinger, updated on 2024-01-11
- ▶  Stale **'Surface::boundToFreeJacobian' could also use 'FreeVector' parameters** (#2810)  
by @andiwand, updated on 2024-01-10
- ▶  Stale **Telescope detector cookbook** (#2800)  
by @paulgessinger, updated on 2024-01-10









- ▶  **Stale Write CKF documentation (#2794)**  
by @paulgessinger, updated on 2024-01-10
- ▶  **Stale Add description of Blueprint tree and how it can be used to create layerless detector. (#2785)**  
by @paulgessinger, updated on 2024-01-10
- ▶  **Stale 'SurfaceReached' aborter is messing with the step size (#2738)**  
by @andiwand, updated on 2023-12-28
- ▶  **Stale Propagation state cannot be initialized outside the propagation (#2736)**  
by @andiwand, updated on 2023-12-28
- ▶  **Stale FPE: AMVF keepNewVertex (#2590)**  
by @andiwand, updated on 2023-11-26
- ▶  **Stale Track finding rework (#2320)**  
by @paulgessinger, updated on 2023-11-11
- ▶  **Stale Propagator step count limit reached and Step size adjustment exceeds maximum trials (#2469)**  
by @CarloVarni, updated on 2023-11-11


















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






- ▶  **Stale [Feature Request] Reference surface for tracking algorithm is hardcoded to be at origin (#2525)**  
by @janheinri, updated on 2023-11-09
- ▶  **Stale Incorrect material interaction in backward propagation ? (#2429)**  
by @Corentin-Allaire, updated on 2023-10-06
- ▶  **Stale Expand TrackingGeometry building from DD4hep with user given input (#2403)**  
by @asalzburger, updated on 2023-09-27
- ▶  **Stale FPE: Bethe-Heitler gamma\_distribution (#2346)**  
by @paulgessinger, updated on 2023-09-03
- ▶  **Stale FPE: GaussianMixtureReduction (#2347)**  
by @paulgessinger, updated on 2023-09-03
- ▶  **Stale Inconsistent use of 'VolumeMaterialInteraction' thickness (#2279)**  
by @andiwand, updated on 2023-08-05
- ▶  **Stale Move some Digitization code from FATRAS to Core? (#2230)**  
by @benjaminhuth, updated on 2023-07-28
- ▶  **Stale MultiTrajectory buffer default constructible (#2154)**  
by @tboldagh, updated on 2023-07-20

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

- ▶  **Stale Track nDoF only returns the sum of calibrated size and not the actual DoFs. (#2076)**  
by @pbutti, updated on 2023-06-22
- ▶  **Stale Track parameter estimation algorithm return parameter on the first seed SP surface (#2037)**  
by @Corentin-Allaire, updated on 2023-05-25
- ▶  **Stale Expose individual steps of track reconstruction in full\_chain python scripts (#1997)**  
by @tboldagh, updated on 2023-05-20
- ▶  **Stale Different results for full\_chain\_itk when running locally vs lxplus (#1819)**  
by @CarloVarni, updated on 2023-05-09
- ▶  **Stale Bug: Probable Issues in Bevelled Cylinder Implementation (#1238)**  
by @rahmans1, updated on 2023-05-09
- ▶  **Stale Physmon throws many WARNINGS on Bethe-Heitler approximation (#1748)**  
by @paulgessinger, updated on 2023-05-09
- ▶  **Stale SpacePoint EDM design (#1971)**  
by @CarloVarni, updated on 2023-05-09
- ▶  **Stale vertex fitting and duplicate tracks (#1992)**  
by @rubihason, updated on 2023-05-09

- ▶  **Stale Estimate Track Parameters from Seeds use only one surface. What about strips? (#1895)**  
by @CarloVarni, updated on 2023-05-09
- ▶  **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 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
- ▶  **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 Documentation update: Plugins (#1421)**  
by @paulgessinger, updated on 2022-10-22

- ▶  **Stale** **Vertexing produces vertex candidates that are unreasonable (#1361)**  
by @paulgessinger, updated on 2022-10-22
- ▶  **Stale** **Optionally have the vertex finding recalculate perigee parameters relative to consistent reference (#1482)**  
by @paulgessinger, updated on 2022-10-01
- ▶  **Stale** **Ambiguous perigees with low momentum (#1386)**  
by @andiwand, updated on 2022-09-20
- ▶  **Stale** **Fatras: Bethe-Heitler calculation wrong? (#1437)**  
by @asalzburger, updated on 2022-09-20
- ▶  **Stale** **Some writers performs their writes in the destructor (#881)**  
by @paulgessinger, updated on 2022-08-11
- ▶  **Stale** **Magnetic Field Storage (#1239)**  
by @osbornjd, updated on 2022-06-12
- ▶  **Stale** **Cut tube segment dd4hep conversion tests (#1146)**  
by @rahmans1, updated on 2022-05-25

- ▶  **Stale Bug: issue on first build after DD4hep update on system with globally installed acts (#1139)**  
by @gagnonlg, updated on 2022-02-22
- ▶  **Stale Should seed finding tools have a higher-level interface? (#988)**  
by @stephenswat, updated on 2021-11-25
- ▶  **Stale Improvement: Estimate track parameters from seed at perigee surface (#1036)**  
by @XiaocongAi, updated on 2021-11-10
- ▶  **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