






























Pull request and issue summary for acts-project/acts

















January 14, 2025















- ▶ **⦿ Couldn't build acts library, build fails with an error (#4002)**
by @bedanar, updated on 2025-01-03
- ▶ **⦿ Kalman Filter backward pass is using measurements twice without weights (#3994)**
by @andiwand, updated on 2024-12-20
- ▶ **⦿ Kalman Filter backward pass could use a direct navigator (#3995)**
by @andiwand, updated on 2024-12-18

acts-project/acts: PRs merged between 2025-01-07 and 2025-01-14 |

















- ▶  **refactor!: Remove 'MagneticFieldProvider::getFieldGradient'** (#3983)
by @andiwand,  reviewed by @paulgessinger, merged on 2025-01-08
- ▶  **refactor!: Revise stepper state creation** (#3987)
by @andiwand,  reviewed by @paulgessinger, merged on 2025-01-08
- ▶  **feat!: Allow trimming other non measurement track states** (#3993)
by @andiwand,  reviewed by @paulgessinger, merged on 2025-01-09
- ▶  **refactor!: Revise stepper update functions and constrained step types** (#3986)
by @andiwand,  reviewed by @paulgessinger, merged on 2025-01-09
- ▶  **feat: adding extra bit to measurment writer** (#4007)
by @asalzburger,  reviewed by @andiwand, merged on 2025-01-09
- ▶  **fix: Missing parameter of particle selector in python bindings** (#4010)
by @benjaminhuth,  reviewed by @andiwand, merged on 2025-01-09
- ▶  **fix: some blocker reported sonar-cloud issues** (#4009)
by @asalzburger,  reviewed by @paulgessinger, merged on 2025-01-09
- ▶  **ci: Use correct keys for the gitlab caches** (#4008)
by @paulgessinger,  reviewed by @andiwand, merged on 2025-01-10

- ▶  **fix!: Make BinUtility constructor explicit (#3953)**
by @paulgessinger,  reviewed by @andiwand, merged on 2025-01-11
- ▶  **ci: Use CERN registry cache in GitLab CI (#4019)**
by @paulgessinger,  reviewed by @andiwand, merged on 2025-01-11
- ▶  **test: Add tests for return values from 'IAxis::visit' (#4006)**
by @paulgessinger,  reviewed by @asalzburger, merged on 2025-01-11
- ▶  **revert: "ci: Use CERN registry cache in GitLab CI" (#4022)**
by @paulgessinger,, merged on 2025-01-13
- ▶  **refactor: Remove cugraph, refactor GNN plugin cmake (#4014)**
by @benjaminhuth,  reviewed by @paulgessinger, merged on 2025-01-13
- ▶  **fix: Use forced approach for 'MultiStepperSurfaceReached' (#4025)**
by @andiwand,  reviewed by @paulgessinger, merged on 2025-01-14
- ▶  **chore!: rename BinningValue to AxisDirection (#4005)**
by @asalzburger,  reviewed by @paulgessinger, merged on 2025-01-14














- ▶  **fix: Don't reset component state in 'MultiStepperSurfaceReached'** (#4027)
by @andiwand,  comment by @coderabbitai[bot], updated on 2025-01-14
- ▶  **fix: Add portal visualization to 'TrackingVolume'** (#4029)
by @paulgessinger,  comment by @coderabbitai[bot], updated on 2025-01-14
- ▶  **feat!: Updates to GBTS for Athena Implementation** (#3882)
by @Rosie-Hasan,  comment by @noemina, updated on 2025-01-14
- ▶  **feat: Add support for CUDA streams in GNN plugin** (#4012)
by @benjaminhuth,  comment by @coderabbitai[bot], updated on 2025-01-14
- ▶  **ci: Spack** (#3980)
by @paulgessinger,  comment by @coderabbitai[bot], updated on 2025-01-14
- ▶  **refactor!: Decouple navigation and stepping** (#3449)
by @andiwand,  comment by @coderabbitai[bot], updated on 2025-01-14
- ▶  **build: CMake find directives, policy grouping** (#4026)
by @paulgessinger,  **no reviewer**, updated on 2025-01-13
- ▶  **feat: Adding efficiency vs production radius to output root files (Revision of PR #3539)** (#3981)
by @delitez,  comment by @coderabbitai[bot], updated on 2025-01-13















- ▶  **ci: Use CERN registry cache in GitLab CI - round 2 (#4023)**
by @paulgessinger,  reviewed by @andiwand, updated on 2025-01-13
- ▶  **Stale refactor: Use detector element to check if surface is sensitive (detray plugin) (#3857)**
by @paulgessinger,  **no reviewer**, updated on 2025-01-12
- ▶  **chore: automated python requirements upgrades (#3924)**
by @github-actions[bot],  changes requested by @AJPfleger, updated on 2025-01-12
- ▶  **refactor!: move source link creation, track state creation, measurement selection into a single unit outside of the CKF (#3825)**
by @goetzgaycken,  comment by @goetzgaycken, updated on 2025-01-10
- ▶  **feat: Add buffered reader (#4018)**
by @benjaminhuth,  comment by @benjaminhuth, updated on 2025-01-10
- ▶  **feat: Structured logging (#3955)**
by @paulgessinger,  comment by @coderabbitai[bot], updated on 2025-01-10
- ▶  **chore: fix more sonralcloud issues (#4017)**
by @asalzburger,  comment by @coderabbitai[bot], updated on 2025-01-10


















acts-project/acts: Open PRs III

- ▶  **ci: Run unit test + downstream on main ubuntu build (gitlab) (#4020)**
by @paulgessinger,  comment by @coderabbitai[bot], updated on 2025-01-10
- ▶  **refactor!: Strongly typed enum for 'ConstrainedStep::Type' and capital initial letter (#4013)**
by @andiwand,  comment by @andiwand, updated on 2025-01-10
- ▶  **Stale chore: Add 'google-explicit-constructor' to clang-tidy config (#3972)**
by @paulgessinger,  comment by @coderabbitai[bot], updated on 2025-01-09
- ▶  **feat: Update athena dump reader (#4011)**
by @benjaminhuth,  comment by @coderabbitai[bot], updated on 2025-01-09
- ▶  **Stale feat: External surfaces for GSF (#3970)**
by @benjaminhuth,  reviewed by @andiwand, updated on 2025-01-09
- ▶  **feat: Conversion and chain code in tracc (#3656)**
by @stephenswat,  comment by @coderabbitai[bot], updated on 2025-01-09
- ▶  **Stale refactor!: Make nlohmann::json a public dependency (#3954)**
by @paulgessinger,  comment by @coderabbitai[bot], updated on 2025-01-08
- ▶  **fix: compilation without geant4 (#4003)**
by @goetzgaycken,  comment by @paulgessinger, updated on 2025-01-07





















acts-project/acts: Open PRs IV

- ▶  **build: Only install python files for enabled components (#4004)**
by @paulgessinger, review requested, updated on 2025-01-06
- ▶  **Stale feat: Adding G4Trap converter in Geant4Converters (#3775)**
by @ldamenti,  comment by @coderabbitai[bot], updated on 2025-01-04
- ▶  **Stale feat: Add 'noexcept' specifier to 'Acts::Any' (#3743)**
by @benjaminhuth,  comment by @paulgessinger, updated on 2025-01-04
- ▶  **Stale chore: SonarCloud fixes, part 0 (#3942)**
by @asalzburger,  comment by @coderabbitai[bot], updated on 2025-01-04
- ▶  **Stale feat: bump detray version, add material tracer (#3755)**
by @asalzburger,  comment by @coderabbitai[bot], updated on 2025-01-03
- ▶  **Stale refactor!: material: 'double' for pathCorrection (#3920)**
by @AJPfleger,  comment by @coderabbitai[bot], updated on 2025-01-03
- ▶  **feat(physmon): compare GX2F vs KF truth tracking (#3889)**
by @AJPfleger,  comment by @coderabbitai[bot], updated on 2025-01-02






















- ▶  **Stale refactor: simplify track selection logic in AlignmentAlgorithm (#3934)**
by @AJPfleger,  comment by @coderabbitai[bot], updated on 2025-01-02
- ▶  **Stale feat: tracc plugin (conversion) (#3281)**
by @fredevb,  comment by @coderabbitai[bot], updated on 2024-12-30
- ▶  **Stale feat: tracc chain in examples (common chain logic and CPU chain) (#3320)**
by @fredevb,  comment by @coderabbitai[bot], updated on 2024-12-30
- ▶  **Stale fix: detray plugin (cmake flags, CI, and compile errors) (#3363)**
by @fredevb,  comment by @coderabbitai[bot], updated on 2024-12-30
- ▶  **Stale refactor: Lift GenericDetector to a Plugin (#3425)**
by @benjaminhuth,  comment by @coderabbitai[bot], updated on 2024-12-29
- ▶  **Stale feat: tracc plugin refactor, tracc chain reconstruction only, and fixes (#3505)**
by @fredevb,  comment by @coderabbitai[bot], updated on 2024-12-29
- ▶  **Stale feat: Add a fastjet plugin (#3617)**
by @gagnonlg,  comment by @coderabbitai[bot], updated on 2024-12-29

- ▶  **add misalignment decoration for DD4hep detector (#3891)**
by @Zequun-SUN,  comment by @coderabbitai[bot], updated on 2024-12-22
- ▶  **docs: Add troubleshooting section for Spack (#3881)**
by @stephenswat,  comment by @coderabbitai[bot], updated on 2024-12-22
- ▶  **fix: Output correct track objects in GSF refitting (#3999)**
by @benjaminhuth,  reviewed by @andiwand, updated on 2024-12-20
- ▶  **feat: Add/activate reverse filter cov inflation for KF and GSF (#3996)**
by @benjaminhuth,  comment by @coderabbitai[bot], updated on 2024-12-19
- ▶   **feat: Add CUDA connected components & track building (#4015)**
by @benjaminhuth,  comment by @stephenswat, updated on 2025-01-10
- ▶   **refactor: Split particle selection in Examples (#3969)**
by @andiwand,  comment by @benjaminhuth, updated on 2025-01-10
- ▶    **refactor!: Make constructors explicit (#3975)**
by @paulgessinger, review requested, updated on 2025-01-09



















acts-project/acts: Open PRs VII



















- ▶   **feat: Add TensorRT support for GNNs (#4016)**
by @benjaminhuth,  **no reviewer**, updated on 2025-01-09
- ▶   **Stale refactor!: Explicit BoundaryTolerance constructors (#3974)**
by @paulgessinger,  comment by @paulgessinger, updated on 2025-01-09
- ▶   **Stale refactor!: Make Direction constructor explicit (#3973)**
by @paulgessinger,  comment by @andiwand, updated on 2025-01-09
- ▶   **Stale build: Make third-party libraries system dependencies (#3949)**
by @stephswat,  comment by @coderabbitai[bot], updated on 2025-01-06
- ▶   **Stale refactor: Bump min json ver, make json keys static (#2968)**
by @paulgessinger, review requested, updated on 2025-01-06
- ▶   **Stale docs: Some accumulated docs fixes (#3962)**
by @andiwand,  **no reviewer**, updated on 2025-01-05
- ▶   **Stale feat: Adding efficiency vs production radius to output root files (#3539)**
by @AichaMattouhi,  comment by @paulgessinger, updated on 2025-01-05









acts-project/acts: Open PRs VIII

- ▶   **Stale** **ci: Add extra build job with clang 19 (#3943)**
by @stephenswat,  comment by @coderabbitai[bot], updated on 2025-01-04
- ▶   **refactor: Some internal GSF refactorings (#2697)**
by @benjaminhuth,  changes requested by @andiwand, updated on 2025-01-03
- ▶   **Stale** **perf: add 2d perf plots (#3893)**
by @XiaocongAi,  **no reviewer**, updated on 2025-01-03
- ▶   **Stale** **refactor: avoid 'addWhiteboardAlias' in truth tracking examples (#3936)**
by @AJPfleger,  comment by @andiwand, updated on 2025-01-02
- ▶   **Stale** **refactor: reduce complexity of highly nested blocks (#3633)**
by @AJPfleger,  comment by @AJPfleger, updated on 2025-01-01
- ▶   **Stale** **refactor: Add helper for Transform inversion (#3750)**
by @paulgessinger,  **no reviewer**, updated on 2025-01-01
- ▶   **Stale** **feat: Add GSF component momentum cut to stabilize fit (#2661)**
by @benjaminhuth,  comment by @benjaminhuth, updated on 2024-12-30

























acts-project/acts: Open PRs IX

- ▶   **WIP** Stale **refactor!: Middle range strategy (#3719)**
by @CarloVarni,  comment by @paulgessinger, updated on 2024-12-28
- ▶   **WIP** Stale **refactor!: Seed Finders create collection of 'Seed<external_spacepoint_t>' instead of 'Seed<Proxy<external_spacepoint_t>'** (#3729)
by @CarloVarni,  comment by @coderabbitai[bot], updated on 2024-12-28
- ▶   **WIP** **feat: Add closest point and distance computation to 'SurfaceBounds' (#3990)**
by @andiwand,  comment by @paulgessinger, updated on 2024-12-19
- ▶   **WIP** **feat: Marking Edgeholes during track finding (#3988)**
by @pbutti,  comment by @goetzgaycken, updated on 2024-12-18
- ▶   **WIP** **refactor!: Always return a magnetic field vector (#3951)**
by @andiwand,  comment by @andiwand, updated on 2024-12-17
- ▶   **WIP** **fix: Prefer external surface candidates in Navigation (#3989)**
by @andiwand,  comment by @benjaminhuth, updated on 2024-12-16


















- ▶   **refactor!: explicit constructors (#3762)**
by @AJPflegler,  **no reviewer**, updated on 2024-12-16
- ▶   **Stale feat: Add per event timing (#3124)**
by @CouthuresJeremy,  comment by @andiwand, updated on 2024-11-29
- ▶   **Stale feat: tracc cuda example (#3372)**
by @fredevb,  **no reviewer**, updated on 2024-11-29
- ▶   **Stale build: physmon for tracc chains (host and cuda) (#3403)**
by @fredevb,  **no reviewer**, updated on 2024-11-29
- ▶   **Stale feat: Added possibility to keep intermediate particles from PythiaGenerator
WIP (#3414)**
by @pbutti,  **no reviewer**, updated on 2024-11-29
- ▶   **Stale refactor: Move config files from ODD to Acts to ensure compatibility (#3407)**
by @benjaminhuth,  **no reviewer**, updated on 2024-11-29

- ▶    **chore: Bump minimum boost version to 1.78.0 (#3517)**
by @paulgessinger,  **no reviewer**, updated on 2024-11-29
- ▶    **refactor: Detector Element refactoring proposal (#3574)**
by @benjaminhuth,  comment by @asalzburger, updated on 2024-11-29














- ▶ **🕒 KalmanFitterError:1 results in segmentation violation v37.4.0 and above (#4028)**
by @plariono, updated on 2025-01-14
- ▶ **🕒 FPE FLTINV in G4 (EventRecording) (#4021)**
by @paulgessinger, updated on 2025-01-13
- ▶ **🕒 FPE: FLTINV and FLTDIV in Eigen::Spline interpolation (#4024)**
by @paulgessinger, updated on 2025-01-13

- ▶   **WIP**  **Stale refactor!: Make constructors explicit (#3975)**
by @paulgessinger,  **no reviewer**, updated on 2025-01-09
- ▶   **WIP**  **Stale refactor!: Explicit BoundaryTolerance constructors (#3974)**
by @paulgessinger,  **no reviewer**, updated on 2025-01-09
- ▶   **WIP**  **Stale refactor!: Make Direction constructor explicit (#3973)**
by @paulgessinger,  **no reviewer**, updated on 2025-01-09
- ▶   **Stale chore: Add 'google-explicit-constructor' to clang-tidy config (#3972)**
by @paulgessinger,  **no reviewer**, updated on 2025-01-09
- ▶   **Stale feat: External surfaces for GSF (#3970)**
by @benjaminhuth,  **no reviewer**, updated on 2025-01-09
- ▶   **Stale refactor!: Make nlohmann::json a public dependency (#3954)**
by @paulgessinger,  **no reviewer**, updated on 2025-01-08
- ▶   **Stale refactor: Use detector element to check if surface is sensitive (detray plugin) (#3857)**
by @paulgessinger,  **no reviewer**, updated on 2025-01-12

















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

- ▶  **Stale refactor: Use detector element to check if surface is sensitive (detray plugin) (#3857)**
by @paulgessinger,  **no reviewer**, updated on 2025-01-12
- ▶   **Stale refactor!: Make constructors explicit (#3975)**
by @paulgessinger,  **no reviewer**, updated on 2025-01-09
- ▶  **Stale chore: Add 'google-explicit-constructor' to clang-tidy config (#3972)**
by @paulgessinger,  **no reviewer**, updated on 2025-01-09
- ▶   **Stale refactor!: Explicit BoundaryTolerance constructors (#3974)**
by @paulgessinger,  **no reviewer**, updated on 2025-01-09
- ▶   **Stale refactor!: Make Direction constructor explicit (#3973)**
by @paulgessinger,  **no reviewer**, updated on 2025-01-09
- ▶  **Stale feat: External surfaces for GSF (#3970)**
by @benjaminhuth,  **no reviewer**, updated on 2025-01-09
- ▶  **Stale refactor!: Make nlohmann::json a public dependency (#3954)**
by @paulgessinger,  **no reviewer**, updated on 2025-01-08


















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

- ▶  **WIP** Stale **build: Make third-party libraries system dependencies (#3949)**
by @stephenswat,  **no reviewer**, updated on 2025-01-06
- ▶  Stale **'Pythia8Generator' produces different results with multi-threading (#3963)**
by @andiwand, updated on 2025-01-06
- ▶  **WIP** Stale **refactor: Bump min json ver, make json keys static (#2968)**
by @paulgessinger,  **no reviewer**, updated on 2025-01-06
- ▶  **WIP** Stale **docs: Some accumulated docs fixes (#3962)**
by @andiwand,  **no reviewer**, updated on 2025-01-05
- ▶  **WIP** Stale **feat: Adding efficiency vs production radius to output root files (#3539)**
by @AichaMattouhi,  **no reviewer**, updated on 2025-01-05
- ▶  Stale **feat: Adding G4Trap converter in Geant4Converters (#3775)**
by @ldamenti,  **no reviewer**, updated on 2025-01-04
- ▶  Stale **feat: Add 'noexcept' specifier to 'Acts::Any' (#3743)**
by @benjaminhuth,  **no reviewer**, updated on 2025-01-04















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








- ▶   WIP Stale **ci: Add extra build job with clang 19 (#3943)**
by @stephenswat,  **no reviewer**, updated on 2025-01-04
- ▶  Stale **chore: SonarCloud fixes, part 0 (#3942)**
by @asalzburger,  **no reviewer**, updated on 2025-01-04
- ▶  Stale **feat: bump detray version, add material tracer (#3755)**
by @asalzburger,  **no reviewer**, updated on 2025-01-03
- ▶  Stale **refactor!: material: 'double' for pathCorrection (#3920)**
by @AJPfleger,  **no reviewer**, updated on 2025-01-03
- ▶   WIP Stale **perf: add 2d perf plots (#3893)**
by @XiaocongAi,  **no reviewer**, updated on 2025-01-03
- ▶  Stale **improvement: use Geant4 nuclear interactions in FATRAS (#3939)**
by @AJPfleger, updated on 2025-01-02
- ▶   WIP Stale **refactor: avoid 'addWhiteboardAlias' in truth tracking examples (#3936)**
by @AJPfleger,  **no reviewer**, updated on 2025-01-02

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














- ▶  **Stale** refactor: **simplify track selection logic in AlignmentAlgorithm** (#3934)
by @AJPfleger,  **no reviewer**, updated on 2025-01-02
- ▶   **Stale** refactor: **reduce complexity of highly nested blocks** (#3633)
by @AJPfleger,  **no reviewer**, updated on 2025-01-01
- ▶   **Stale** refactor: **Add helper for Transform inversion** (#3750)
by @paulgessinger,  **no reviewer**, updated on 2025-01-01
- ▶   **Stale** feat: **Add GSF component momentum cut to stabilize fit** (#2661)
by @benjaminhuth,  **no reviewer**, updated on 2024-12-30
- ▶  **Stale** feat: **tracc plugin (conversion)** (#3281)
by @fredevb,  **no reviewer**, updated on 2024-12-30
- ▶  **Stale** feat: **tracc chain in examples (common chain logic and CPU chain)** (#3320)
by @fredevb,  **no reviewer**, updated on 2024-12-30
- ▶  **Stale** fix: **detray plugin (cmake flags, CI, and compile errors)** (#3363)
by @fredevb,  **no reviewer**, updated on 2024-12-30

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










- ▶  **Stale refactor: Lift GenericDetector to a Plugin (#3425)**
by @benjaminhuth,  **no reviewer**, updated on 2024-12-29
- ▶  **Stale feat: tracc plugin refactor, tracc chain reconstruction only, and fixes (#3505)**
by @fredevb,  **no reviewer**, updated on 2024-12-29
- ▶  **Stale feat: Add a fastjet plugin (#3617)**
by @gagnonlg,  **no reviewer**, updated on 2024-12-29
- ▶   **Stale refactor!: Middle range strategy (#3719)**
by @CarloVarni,  **no reviewer**, updated on 2024-12-28
- ▶   **Stale refactor!: Seed Finders create collection of 'Seed<external_spacepoint_t>' instead of 'Seed<Proxy<external_spacepoint_t>'** (#3729)
by @CarloVarni,  **no reviewer**, updated on 2024-12-28
- ▶  **Stale Avoid direct inversion of covariance matrices for numerical stability (#3910)**
by @coderabbitai[bot], updated on 2024-12-26
- ▶  **Stale nHoles different in KF and GX2F (#3906)**
by @AJPfleger, updated on 2024-12-25

- ▶  **Stale** **FLTUND in KF in physmon at 'PointwiseMaterialInteraction::covarianceContributions'** (#3890)
by @AJPfleger, updated on 2024-12-22
- ▶  **Stale** **'common' CMake preset requires ccache** (#3537)
by @stephenswat, updated on 2024-12-21
- ▶  **Stale** **GSF throws warnings regularly with ODD** (#3738)
by @andiwand, updated on 2024-12-21
- ▶  **Stale** **test: some bounding box test cases fail on macOS ci** (#3847)
by @AJPfleger, updated on 2024-12-21
- ▶  **Stale** **docs: Sphinx '>=7.4.0' breaks warning ignore script** (#3879)
by @AJPfleger, updated on 2024-12-21
- ▶  **Stale** **Gen3 geometry** (#3502)
by @paulgessinger, updated on 2024-12-18
- ▶  **Stale** **Potential Dangling Pointers in Function** (#3813)
by @coderabbitai[bot], updated on 2024-12-05









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

- ▶  **Stale** **Potential Dangling Pointers in 'createTree' Function (#3814)**
by @coderabbitai[bot], updated on 2024-12-05
- ▶  **WIP** **Stale feat: Add per event timing (#3124)**
by @CouthuresJeremy,  **no reviewer**, updated on 2024-11-29
- ▶  **WIP** **Stale feat: tracc cuda example (#3372)**
by @fredevb,  **no reviewer**, updated on 2024-11-29
- ▶  **WIP** **Stale build: physmon for tracc chains (host and cuda) (#3403)**
by @fredevb,  **no reviewer**, updated on 2024-11-29
- ▶  **WIP** **Stale feat: Added possibility to keep intermediate particles from PythiaGenerator WIP (#3414)**
by @pbutti,  **no reviewer**, updated on 2024-11-29
- ▶  **WIP** **Stale refactor: Move config files from ODD to Acts to ensure compatibility (#3407)**
by @benjaminhuth,  **no reviewer**, updated on 2024-11-29
- ▶  **WIP** **Stale chore: Bump minimum boost version to 1.78.0 (#3517)**
by @paulgessinger,  **no reviewer**, updated on 2024-11-29









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

- ▶  **WIP** Stale **refactor: Detector Element refactoring proposal (#3574)**
by @benjaminhuth,  **no reviewer**, updated on 2024-11-29
- ▶  Stale **bug: navigation suggests 'pathCorrection=inf' on cylinderSurface (#3267)**
by @AJPfleger, updated on 2024-10-31
- ▶  Stale **Common shared measurement computation? (#3618)**
by @gagnonlg, updated on 2024-10-26
- ▶  Stale **TrackAtVertex trackWeight is not being written in IVF (#2149)**
by @andiwand, updated on 2024-09-27
- ▶  Stale **Multiple context references are in flight for track fitters and finder (#3383)**
by @andiwand, updated on 2024-09-27
- ▶  Stale **'TrackStateType' is easy to get wrong (#3439)**
by @andiwand, updated on 2024-09-26
- ▶  Stale **Cleanup: BinningValue, AxisBounds + detrays/Integration (#3549)**
by @asalzbürger, updated on 2024-09-25
- ▶  Stale **Proposal: surface and portal navigation (including target surfaces) for Gen3 (#3526)**
by @asalzbürger, updated on 2024-09-21









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- ▶  **Stale FPE: RootTrajectoryStatesWriter (#2348)**
by @paulgessinger, updated on 2024-09-15
- ▶  **Stale 'GlobalChiSquareFitter' produces parameters in wrong volume (#3444)**
by @andiwand, updated on 2024-09-05
- ▶  **Stale Bug: `_acts_dfelibs_version` unset in `CMakeLists.txt` (#3457)**
by @wdconinc, updated on 2024-09-05
- ▶  **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 [bug] Off axis endcap with dd4hep plugin. (#942)**
by @whit2333, updated on 2024-06-26
- ▶  **Stale Reproducibility test using hash checks for non-linear KF (#1246)**
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









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- ▶  **Stale Create volume restricted BFieldMap (#1659)**
by @asalzburger, updated on 2024-06-25
- ▶  **Stale EstimateTrackParamsFromSeed does not use time of measurement (#2136)**
by @andiwand, updated on 2024-06-25
- ▶  **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









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- ▶  **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
- ▶  **Stale bug: KF verbosity statement (#3097)**
by @osbornjd, updated on 2024-06-20
- ▶  **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 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

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- ▶  **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

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- ▶  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

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- ▶  **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-Heithler 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









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- ▶  **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 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

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- ▶ **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: How-to (core) (#1422)**
by @paulgessinger, updated on 2022-11-23
- ▶ **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

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- ▶  **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