































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

October 1, 2024

















## acts-project/acts: PRs merged between 2024-09-24 and 2024-10-01 |

- ▶  **refactor: Remove Sequencer dataflow override (#3625)**  
by @paulgessinger,  reviewed by @asalzburger, merged on 2024-09-24
- ▶  **refactor!: Fuse 'Actor' and 'Aborter' (#3573)**  
by @andiwand,  reviewed by @paulgessinger, merged on 2024-09-24
- ▶  **chore: update ACTSVG version (#3643)**  
by @asalzburger,  reviewed by @niermann999, merged on 2024-09-24
- ▶  **chore: update to detray version v0.75.3 (#3646)**  
by @asalzburger,  reviewed by @niermann999, merged on 2024-09-25
- ▶  **feat: add Detray surface grid converter (#3608)**  
by @asalzburger,  reviewed by @niermann999, merged on 2024-09-25
- ▶  **refactor!: converge to naming 'sourceLink' (#3647)**  
by @AJPfleger,  reviewed by @andiwand, merged on 2024-09-25
- ▶  **refactor: Remove MPL library (#3642)**  
by @stephenswat,  reviewed by @andiwand, merged on 2024-09-25
- ▶  **fix: Reject outliers while trimming track states in Core CKF (#3644)**  
by @andiwand,  reviewed by @timadye, merged on 2024-09-25

















## acts-project/acts: PRs merged between 2024-09-24 and 2024-10-01 II

















- ▶  **feat: Add measurement emplace functions (#3627)**  
by @stephenswat,  reviewed by @andiwand, merged on 2024-09-26
- ▶  **fix: Reject material states when no measurements are found yet in Core CKF (#3648)**  
by @andiwand,  reviewed by @paulgessinger, merged on 2024-09-26
- ▶  **feat: added new SVG functionality (#3649)**  
by @asalzburger,  reviewed by @niermann999, merged on 2024-09-26
- ▶  **perf: Use sympy generated transport jacobians for sympy covariance transport (#3650)**  
by @andiwand,  reviewed by @paulgessinger, merged on 2024-09-26
- ▶  **fix: added GeoShapeSubtraction converter for the failing conversion of RPCs to SensitiveSurface (#3592)**  
by @Berggren-Jonas,  reviewed by @dimitra97, merged on 2024-09-26
- ▶  **ci: Bump core count in GitLab CI to 8 (#3651)**  
by @paulgessinger,  reviewed by @AJPfleger, merged on 2024-09-26
- ▶  **fix: kf+gsf: correct hole-tagging for edge case (#3637)**  
by @AJPfleger,  reviewed by @andiwand, merged on 2024-09-26

## acts-project/acts: PRs merged between 2024-09-24 and 2024-10-01 III















- ▶  **feat!: Track-EDM like implementation for the space points, to be used in the seeding (#3432)**  
by @CarloVarni,  reviewed by @andiwand, merged on 2024-09-27
- ▶  **feat: allow detract sterile/non-sterile propagation (#3652)**  
by @asalzburger,  reviewed by @niermann999, merged on 2024-09-27
- ▶  **refactor!: Return all track states from Core CKF (#3391)**  
by @andiwand,  reviewed by @timadye, merged on 2024-09-27
- ▶  **refactor: remove redundant 'operator!=', introduce 'operator<=>' (#3660)**  
by @AJPfleger,  reviewed by @paulgessinger, merged on 2024-09-29
- ▶  **refactor: remove 'inline' from 'constexpr' functions for clarity (#3659)**  
by @AJPfleger,  reviewed by @stephenswat, merged on 2024-09-29
- ▶  **fix: replace asctime with 'strftime' for safer date formatting (#3658)**  
by @AJPfleger,  reviewed by @stephenswat, merged on 2024-09-29
- ▶  **feat: Support seed from N space points (#3645)**  
by @CarloVarni,  reviewed by @andiwand, merged on 2024-09-30
- ▶  **feat: enable geant4 propagation xcheck (#3657)**  
by @asalzburger,  reviewed by @andiwand, merged on 2024-09-30

## acts-project/acts: PRs merged between 2024-09-24 and 2024-10-01 IV













- ▶  **refactor: use 'contains' for maps and sets (#3670)**  
by @AJPfleger,  reviewed by @asalzburger, merged on 2024-09-30
- ▶  **feat: adding possibility to read flat surface container (#3668)**  
by @asalzburger,  reviewed by @AJPfleger, merged on 2024-09-30
- ▶  **build: Use 'patch' to apply patch for Annoy (#3667)**  
by @paulgessinger,  reviewed by @stephenswat, merged on 2024-10-01
- ▶  **test(gx2f): remove ToyDetectorYdirection relic (#3669)**  
by @AJPfleger,  reviewed by @andiwand, merged on 2024-10-01
- ▶  **ci: Require Sonar Analysis (#3663)**  
by @paulgessinger,  reviewed by @stephenswat, merged on 2024-10-01
- ▶  **refactor: modernise type traits (#3655)**  
by @AJPfleger,  reviewed by @paulgessinger, merged on 2024-10-01
- ▶  **refactor!: Remove mean reduction from 'MultiEigenStepperLoop' (#3671)**  
by @andiwand,  reviewed by @benjaminhuth, merged on 2024-10-01
- ▶  **build: Use tarball download for Annoy (#3672)**  
by @paulgessinger,  reviewed by @benjaminhuth, merged on 2024-10-01

- ▶  **refactor: Enhance 'RootTrackParameterWriter' with residuals and pulls (#3666)**  
by @andiwand,  reviewed by @AJPfleger, updated on 2024-10-01
- ▶  **refactor: Removed maxHits condition from ScoreBasedAmbiguitySolver (#3676)**  
by @Ragansu,  reviewed by @Corentin-Allaire, updated on 2024-10-01
- ▶  **chore: update license header (#3623)**  
by @AJPfleger,  comment by @AJPfleger, updated on 2024-10-01
- ▶  **feat: Add Clusterization With Time (second try) (#3674)**  
by @CarloVarni,  **no reviewer**, updated on 2024-10-01
- ▶  **feat(geo): TrackingVolume gets portal storage (#3673)**  
by @paulgessinger,  reviewed by @andiwand, updated on 2024-10-01
- ▶  **feat: Gen 3 portal shells (#3564)**  
by @paulgessinger,  **no reviewer**, updated on 2024-10-01
- ▶  **feat(geo): TrackingVolume gets surface storage (#3675)**  
by @paulgessinger,  **no reviewer**, updated on 2024-10-01
- ▶  **refactor: set convertMaterial as configurable (#3604)**  
by @galocco,  reviewed by @asalzburger, updated on 2024-10-01

## acts-project/acts: Open PRs II














- ▶  **feat: Conversion and chain code in tracc** (#3656)  
by @stephenswat,  comment by @asalzburger, updated on 2024-09-30
- ▶  **feat: Add support for Timed Clusterization** (#3654)  
by @CarloVarni, review requested, updated on 2024-09-30
- ▶  **refactor: Unify proxy iterator types** (#3664)  
by @stephenswat,  changes requested by @andiwand, updated on 2024-09-30
- ▶  **feat!: Add a radius bin to the grid** (#3662)  
by @CarloVarni,  **no reviewer**, updated on 2024-09-30
- ▶  **refactor: Move MLAmbiguitySolver to Core** (#3272)  
by @Corentin-Allaire,  comment by @Corentin-Allaire, updated on 2024-09-27
- ▶  **fix(gx2f): new error 'UsedUnreachableMeasurements'** (#3653)  
by @AJPfleger, review requested, updated on 2024-09-27
- ▶  **feat: tracc plugin refactor, tracc chain reconstruction only, and fixes** (#3505)  
by @fredevb,  **no reviewer**, updated on 2024-09-26
- ▶  **feat: Allow volume constrain for propagation** (#3470)  
by @andiwand,  comment by @andiwand, updated on 2024-09-25

## acts-project/acts: Open PRs III















- ▶  **perf: Use MBF smoother by default in 'TrackHelpers' in Examples track finding (#3582)**  
by @andiwand,  comment by @paulgessinger, updated on 2024-09-25
- ▶  **Stale ci: Reenable some ExaTrkX tests (#3395)**  
by @benjaminhuth,  **no reviewer**, updated on 2024-09-21
- ▶  **Stale fix: Require TBB to be found by cmake (#3507)**  
by @benjaminhuth,  reviewed by @timadye, updated on 2024-09-21
- ▶  **refactor: modernise map utils (#3615)**  
by @AJPfleger,  comment by @andiwand, updated on 2024-09-20
- ▶  **Stale feat: GeoShapes to DetectorVolumes and GeoMaterial Converters (#3268)**  
by @Matthewharri,  comment by @Matthewharri, updated on 2024-09-18
- ▶  **feat: Add a fastjet plugin (#3617)**  
by @gagnonlg,  **no reviewer**, updated on 2024-09-17
- ▶  **refactor: use 'std::ranges::find', 'find\_if', 'find\_if\_not' (#3614)**  
by @AJPfleger,  comment by @paulgessinger, updated on 2024-09-17
- ▶  **refactor: use 'std::ranges::all\_of', 'any\_of', 'none\_of' (#3593)**  
by @AJPfleger,  reviewed by @stephenswat, updated on 2024-09-10


























## acts-project/acts: Open PRs IV

- ▶  **fix!: Use 'ActsScalar' in binning tools (#3482)**  
by @stephenswat,  comment by @stephenswat, updated on 2024-09-10
- ▶  **Stale feat: allow bare Surface pointers to be written to JSON (#3493)**  
by @asalzburger,  comment by @paulgessinger, updated on 2024-09-07
- ▶  **Stale feat: tracc plugin (conversion) (#3281)**  
by @fredevb,  comment by @paulgessinger, updated on 2024-08-31
- ▶  **Stale fix: detray plugin (cmake flags, CI, and compile errors) (#3363)**  
by @fredevb,  comment by @EleniXoch, updated on 2024-08-31
- ▶  **Stale feat!: (fix + chore) streamline nSegments usage (#3419)**  
by @asalzburger,  comment by @asalzburger, updated on 2024-08-28
- ▶  **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 refactor: Lift GenericDetector to a Plugin (#3425)**  
by @benjaminhuth,review requestedreview requested, updated on 2024-08-21





















## acts-project/acts: Open PRs ▼

- ▶  Stale **feat: tracc chain in examples (common chain logic and CPU chain) (#3320)**  
by @fredevb,  **no reviewer**, updated on 2024-08-15
- ▶  Stale **feat: introduction obj simhit writer (#3180)**  
by @asalzburger,  **no reviewer**, updated on 2024-06-15
- ▶  WIP **fix: Correct initial 'q/p' covariance term in 'TrackParamsEstimationAlgorithm' in Examples (#3665)**  
by @andiwand,  reviewed by @asalzburger, updated on 2024-09-30
- ▶  WIP **ci: Download dependencies as tarball (#3520)**  
by @paulgessinger,  **no reviewer**, updated on 2024-09-30
- ▶  WIP Stale **feat: Adding efficiency vs production radius to output root files (#3539)**  
by @AichaMattouhi,  comment by @paulgessinger, updated on 2024-09-28
- ▶  WIP Stale **refactor: Detector Element refactoring proposal (#3574)**  
by @benjaminhuth,  comment by @asalzburger, updated on 2024-09-28
- ▶  WIP **fix: TrackSelector remove broken m\_noEtaCuts (#3640)**  
by @timadye,  comment by @timadye, updated on 2024-09-24



















## acts-project/acts: Open PRs VI



- ▶   **refactor!: Clean track EDM projector (#3605)**  
by @andiwand,  **no reviewer**, updated on 2024-09-24
- ▶   **refactor: Bump min json ver, make json keys static (#2968)**  
by @paulgessinger, review requested, updated on 2024-09-24
- ▶    **feat: Add statistics to propagation (#3450)**  
by @andiwand,  comment by @paulgessinger, updated on 2024-09-21
- ▶    **draft: Gauss vertex seeding with time (#3491)**  
by @CENcll,  comment by @andiwand, updated on 2024-09-21
- ▶   **refactor: use structured bindings (#3632)**  
by @AJPflegler,  changes requested by @stephenswat, updated on 2024-09-20
- ▶   **refactor: reduce complexity of highly nested blocks (#3633)**  
by @AJPflegler,  comment by @andiwand, updated on 2024-09-20
- ▶    **chore: Bump minimum boost version to 1.78.0 (#3517)**  
by @paulgessinger,  **no reviewer**, updated on 2024-09-19

## acts-project/acts: Open PRs VII













- ▶   **refactor(material)!: update slabs from 'float' to 'double' (#3609)**  
by @AJPfleger,  **no reviewer**, updated on 2024-09-12
- ▶    **refactor: Rework detector handling in Examples (#3498)**  
by @andiwand,  **no reviewer**, updated on 2024-09-07
- ▶   **refactor!: Decouple navigation and stepping (#3449)**  
by @andiwand,  **no reviewer**, updated on 2024-09-06
- ▶   **feat: detray plugin surface grids (#3429)**  
by @EleniXoch,  comment by @EleniXoch, updated on 2024-09-04
- ▶   **feat: GeoModel plugin changes for ITk building. (#3519)**  
by @benjaminhuth,  comment by @paulgessinger, updated on 2024-09-03
- ▶    **feat(geometry): Allow operator« on surfaces without detector elements (#3467)**  
by @paulgessinger,  comment by @paulgessinger, updated on 2024-08-31

## acts-project/acts: Open PRs VIII











- ▶   **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: 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** 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

## acts-project/acts: New stale Issues / PRs since 2024-09-24 |

















- ▶   WIP Stale refactor: **Detector Element refactoring proposal** (#3574)  
by @benjaminhuth,  **no reviewer**, updated on 2024-09-28
- ▶  Stale **Error while building Geant4 plugin** (#3557)  
by @nibir98, updated on 2024-09-29
- ▶  Stale **Cleanup: BinningValue, AxisBounds + detray/Integration** (#3549)  
by @asalzbuerger, updated on 2024-09-25
- ▶   WIP Stale feat: **Adding efficiency vs production radius to output root files** (#3539)  
by @AichaMattouhi,  **no reviewer**, updated on 2024-09-28
- ▶  Stale **'TrackStateType' is easy to get wrong** (#3439)  
by @andiwand, updated on 2024-09-26
- ▶  Stale **Multiple context references are in flight for track fitters and finder** (#3383)  
by @andiwand, updated on 2024-09-27
- ▶  Stale **bug: navigation suggests 'pathCorrection=inf' on cylinderSurface** (#3267)  
by @AJPfleger, updated on 2024-09-27
- ▶  Stale **TrackAtVertex trackWeight is not being written in IVF** (#2149)  
by @andiwand, updated on 2024-09-27

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













- ▶  **Stale** **Error while building Geant4 plugin (#3557)**  
by @nibir98, updated on 2024-09-29
- ▶  **WIP** **Stale** **feat: Adding efficiency vs production radius to output root files (#3539)**  
by @AichaMattouhi,  **no reviewer**, updated on 2024-09-28
- ▶  **WIP** **Stale** **refactor: Detector Element refactoring proposal (#3574)**  
by @benjaminhuth,  **no reviewer**, updated on 2024-09-28
- ▶  **Stale** **TrackAtVertex trackWeight is not being written in IVF (#2149)**  
by @andiwand, updated on 2024-09-27
- ▶  **Stale** **bug: navigation suggests 'pathCorrection=inf' on cylinderSurface (#3267)**  
by @AJPfleger, 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 @asalzburger, updated on 2024-09-25




















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

- ▶  **Stale**  **ci: Reenable some ExaTrkX tests (#3395)**  
by @benjaminhuth,  **no reviewer**, updated on 2024-09-21
- ▶   **Stale** **feat: Add statistics to propagation (#3450)**  
by @andiwand,  **no reviewer**, updated on 2024-09-21
- ▶   **Stale** **draft: Gauss vertex seeding with time (#3491)**  
by @CENcll,  **no reviewer**, updated on 2024-09-21
- ▶  **Stale** **Proposal: surface and portal navigation (including target surfaces) for Gen3 (#3526)**  
by @asalzburger, updated on 2024-09-21
- ▶  **Stale** **'common' CMake preset requires ccache (#3537)**  
by @stephenswat, updated on 2024-09-21
- ▶  **Stale** **fix: Require TBB to be found by cmake (#3507)**  
by @benjaminhuth,  **no reviewer**, updated on 2024-09-21
- ▶   **Stale** **chore: Bump minimum boost version to 1.78.0 (#3517)**  
by @paulgessinger,  **no reviewer**, updated on 2024-09-19



















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

- ▶  **Stale** **feat: GeoShapes to DetectorVolumes and GeoMaterial Converters (#3268)**  
by @Matthewharri,  **no reviewer**, updated on 2024-09-18
- ▶  **Stale** **FPE: RootTrajectoryStatesWriter (#2348)**  
by @paulgessinger, updated on 2024-09-15
- ▶   **Stale** **refactor: Rework detector handling in Examples (#3498)**  
by @andiwand,  **no reviewer**, updated on 2024-09-07
- ▶  **Stale** **feat: allow bare Surface pointers to be written to JSON (#3493)**  
by @asalzburger,  **no reviewer**, updated on 2024-09-07
- ▶  **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** **feat: tracc plugin (conversion) (#3281)**  
by @fredevb,  **no reviewer**, updated on 2024-08-31









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

- ▶  **Stale** **fix: detray plugin (cmake flags, CI, and compile errors) (#3363)**  
by @fredevb,  **no reviewer**, updated on 2024-08-31
- ▶   **Stale** **feat(geometry): Allow operator« on surfaces without detector elements (#3467)**  
by @paulgessinger,  **no reviewer**, updated on 2024-08-31
- ▶  **Stale** **feat!: (fix + chore) streamline nSegments usage (#3419)**  
by @asalzbürger,  **no reviewer**, updated on 2024-08-28
- ▶  **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: 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** **refactor: Rework physics performance monitoring for Examples (#3359)**  
by @andiwand,  **no reviewer**, updated on 2024-08-17









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

- ▶   **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
- ▶  **Stale feat: tracc chain in examples (common chain logic and CPU chain) (#3320)**  
by @fredevb,  **no reviewer**, updated on 2024-08-15
- ▶  **Stale Provide tools & setup for tracking of Heavy Ion on ITk events in standalone ACTS environment (#1778)**  
by @tboldagh, updated on 2024-07-24
- ▶   **WIP** **Stale refactor: Some internal GSF refactorings (#2697)**  
by @benjaminhuth,  **no reviewer**, updated on 2024-07-21
- ▶   **WIP** **Stale feat: Add per event timing (#3124)**  
by @CouthuresJeremy,  **no reviewer**, updated on 2024-07-11













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

- ▶  **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
- ▶  **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









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

- ▶  **Stale Cmake error if ACTS\_BUILD\_PLUGIN\_ACTSVG=ON (#1818)**  
by @DraTeets, 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

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









- ▶  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 **feat: introduction obj simhit writer (#3180)**  
by @asalzburger,  **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
- ▶   **WIP** 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

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- ▶  **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
- ▶  **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










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- ▶  **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
- ▶  **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

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- ▶  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
- ▶  **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









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- ▶ **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
- ▶ **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 Ixplus** (#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

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- ▶  **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

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- ▶  **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