

































Pull request and issue summary for acts-project/acts

September 3, 2024

















acts-project/acts: PRs merged between 2024-08-27 and 2024-09-03 |

- ▶  **fix(gx2f): correct trackstates for material surfaces (#3556)**
by @AJPflegler,  reviewed by @andiwand, merged on 2024-08-27
- ▶  **feat: Add B-field accessors to Python bindings (#3554)**
by @stephenswat,  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
- ▶  **ci: Add pre-commit hooks for most of our linting (#3560)**
by @paulgessinger,  reviewed by @benjaminhuth, merged on 2024-08-27
- ▶  **refactor: Add C++20 track parameter, navigator, and stepper concepts (#3492)**
by @stephenswat,  reviewed by @andiwand, merged on 2024-08-27
- ▶  **docs: Add documentation on Spack builds (#3550)**
by @stephenswat,  reviewed by @paulgessinger, merged on 2024-08-27
- ▶  **refactor: Some refactorings around the G4 simulation (#3532)**
by @benjaminhuth,  reviewed by @paulgessinger, merged on 2024-08-28
- ▶  **refactor: Remove far limit hack from 'Layer::compatibleSurfaces' (#3558)**
by @andiwand,  reviewed by @AJPflegler, merged on 2024-08-28

















acts-project/acts: PRs merged between 2024-08-27 and 2024-09-03 II









- ▶  **fix: Make 'RootTrackStatesWriter' FPE safe (#3559)**
by @andiwand,  reviewed by @AJPfleger, merged on 2024-08-28
- ▶  **feat: detray material conversion (#3546)**
by @asalzburger,  reviewed by @EleniXoch, merged on 2024-08-28
- ▶  **chore: Make license check work with single files (#3569)**
by @paulgessinger,  reviewed by @AJPfleger, merged on 2024-08-28
- ▶  **refactor(gx2f): early exit for 'addToGx2fSums' (#3568)**
by @AJPfleger,  reviewed by @andiwand, merged on 2024-08-28
- ▶  **refactor(gx2f): early exit for the Actor (#3566)**
by @AJPfleger,  reviewed by @andiwand, merged on 2024-08-28
- ▶  **refactor: Rework G4 surface mapping to make it more robust (#3562)**
by @benjaminhuth,  reviewed by @andiwand, merged on 2024-08-29
- ▶  **feat: Add covfie magnetic field plugin (#3479)**
by @stephenswat,  reviewed by @andiwand, merged on 2024-08-29
- ▶  **refactor: Remove 'calculateTrackQuantities' from Core CKF (#3567)**
by @andiwand,  reviewed by @AJPfleger, merged on 2024-08-29

















acts-project/acts: PRs merged between 2024-08-27 and 2024-09-03 III

- ▶  **feat: Gen3 geometry Portals (#3501)**
by @paulgessinger,  reviewed by @asalzburger, merged on 2024-08-29
- ▶  **fix: Add G4 log level tweaking on algorithm initialization (#3570)**
by @benjaminhuth,  reviewed by @andiwand, merged on 2024-08-29
- ▶  **refactor: Remove target volume estimation from 'Navigator' (#3242)**
by @andiwand,  reviewed by @AJPfleger, merged on 2024-08-29
- ▶  **refactor: Remove remaining detection idiom usage (#3547)**
by @stephenswat,  reviewed by @andiwand, merged on 2024-08-29
- ▶  **feat: adding unit tests for 'DetrayGeometryConverter' and 'DetrayMaterialConverter' (#3572)**
by @asalzburger,  reviewed by @niermann999, merged on 2024-08-30
- ▶  **perf: Improve Hough Transform performance (#3461)**
by @dimitra97,  reviewed by @andiwand, merged on 2024-08-30
- ▶  **feat: introduce navigation stream (#3538)**
by @asalzburger,  reviewed by @andiwand, merged on 2024-08-30
- ▶  **fix: correct a typo in a printout in the BinningData.hpp (#3577)**
by @veprbl,  reviewed by @andiwand, merged on 2024-08-30

















acts-project/acts: PRs merged between 2024-08-27 and 2024-09-03 IV

- ▶  **refactor: Rework projector (#3529)**
by @andiwand,  reviewed by @benjaminhuth, merged on 2024-08-30
- ▶  **feat: Hashing seeding algorithm (#3148)**
by @CouthuresJeremy,  comment by @CouthuresJeremy, merged on 2024-08-30
- ▶  **feat(gx2f): material effects - multiple scattering (#3292)**
by @AJPfleger,  reviewed by @andiwand, merged on 2024-08-30
- ▶  **feat: Allow Core CKF to skip the start surface (#3535)**
by @andiwand,  reviewed by @benjaminhuth, merged on 2024-08-30
- ▶  **feat: GeoModel conversion for TGC, sTGC and MicroMega (#3540)**
by @Berggren-Jonas,  reviewed by @andiwand, merged on 2024-08-30
- ▶  **refactor: remove input source links from fitting algorithm (#3580)**
by @benjaminhuth,  reviewed by @andiwand, merged on 2024-08-31
- ▶  **refactor: Remove GX2F start volume checks (#3581)**
by @andiwand,  reviewed by @AJPfleger, merged on 2024-08-31
- ▶  **ci(physmon): fix weird numbers at end of log file (#3571)**
by @AJPfleger,  reviewed by @andiwand, merged on 2024-08-31
















- ▶  **fix: Return 'nullptr' if outside tracking geometry in 'TrackingGeometry::lowestTrackingVolume'** (#3481)
by @andiwand,  reviewed by @AJPfleger, merged on 2024-08-31
- ▶  **test: Check if we end up in the expected volume in Gen1 'Navigator'** (#3442)
by @andiwand,  reviewed by @AJPfleger, merged on 2024-09-01
- ▶  **fix: clear the m_r vector** (#3583)
by @asalzburger,  reviewed by @andiwand, merged on 2024-09-02
- ▶  **refactor: Write smoothed states in GX2F** (#3584)
by @andiwand,  reviewed by @AJPfleger, merged on 2024-09-03

- ▶  **feat: detrayer geometry/material conversion in examples (#3579)**
by @asalzburger,  comment by @asalzburger, updated on 2024-09-03
- ▶  **feat: generalized conversion of FullPhysicalVolume (#3585)**
by @Berggren-Jonas,  comment by @Berggren-Jonas, updated on 2024-09-03
- ▶  **refactor: Changed the GeoModelToDetectorVolume to be able to return Acts::Volumes (#3576)**
by @Berggren-Jonas,  comment by @dimitra97, updated on 2024-09-03
- ▶  **refactor!: Remove 'Utilities/detail/Subspace.hpp' (#3589)**
by @andiwand,  reviewed by @AJPfleger, updated on 2024-09-03
- ▶  **refactor: Write unbiased states only for smoothed in 'RootTrackStatesWriter' (#3561)**
by @andiwand,  reviewed by @AJPfleger, updated on 2024-09-03
- ▶  **refactor!: Remove 'EventData/TrackHelpers.hpp' (#3588)**
by @andiwand,  reviewed by @AJPfleger, updated on 2024-09-03
- ▶  **refactor: Rework tracklet handling in Examples track finding (#3587)**
by @andiwand,  reviewed by @timadye, updated on 2024-09-03
- ▶  **fix: Allow resetting reference surface in Track EDM (#3586)**
by @andiwand,  reviewed by @timadye, updated on 2024-09-03















acts-project/acts: Open PRs II

- ▶  **ci(sonarcloud): fix shallow clone (#3590)**
by @AJPfleger,  reviewed by @andiwand, updated on 2024-09-03
- ▶  **refactor!: Template algorithms on track container frontend 'TrackContainer' (#3193)**
by @andiwand,  comment by @andiwand, updated on 2024-09-03
- ▶  **feat: Memory dense 'MeasurementContainer' for Examples (#3528)**
by @andiwand,  comment by @andiwand, updated on 2024-09-03
- ▶  **fix!: make material validity checks and construction explicit (#3494)**
by @AJPfleger,  comment by @AJPfleger, updated on 2024-08-31
- ▶  **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
- ▶  **fix: Further fixes to detray plugin (#3563)**
by @stephenswat,  reviewed by @andiwand, updated on 2024-08-31
- ▶  **refactor: Move MLAmbiguitySolver to Core (#3272)**
by @Corentin-Allaire,  comment by @Corentin-Allaire, updated on 2024-08-30






















acts-project/acts: Open PRs III

- ▶  **feat!: Track-EDM like implementation for the space points, to be used in the seeding (#3432)**
by @CarloVarni,  **no reviewer**, updated on 2024-08-28
- ▶  **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
- ▶  **ci: Reenable some ExaTrkX tests (#3395)**
by @benjaminhuth,  **no reviewer**, updated on 2024-08-22
- ▶  **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






















acts-project/acts: Open PRs IV

- ▶  **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
- ▶  refactor!: **SourceLink setting only via rvalue reference** (#3488)
by @paulgessinger,  **no reviewer**, updated on 2024-08-09
- ▶  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
- ▶  **Stale** style: **Update clang-format to v18** (#3319)
by @stephenswat,  **no reviewer**, updated on 2024-07-21
- ▶  **Stale** feat: **introduction obj simhit writer** (#3180)
by @asalzburger,  **no reviewer**, updated on 2024-06-15






















acts-project/acts: Open PRs V

- ▶   **refactor!: path handling to use 'std::filesystem' (#3308)**
by @AJPfleger,  changes requested by @stephenswat, updated on 2024-09-03
- ▶   **refactor!: Remove deprecated API (#3591)**
by @andiwand,  **no reviewer**, updated on 2024-09-03
- ▶   **refactor!: Decouple navigation and stepping (#3449)**
by @andiwand,  **no reviewer**, updated on 2024-09-03
- ▶   **refactor!: Replace 'EigenStepper' extension list with single extension (#2865)**
by @andiwand,  **no reviewer**, updated on 2024-09-03
- ▶   **feat: Allow user to supply root branch to Core CKF (#3534)**
by @andiwand,  changes requested by @timadye, updated on 2024-09-03
- ▶   **feat: GeoModel plugin changes for ITk building. (#3519)**
by @benjaminhuth,  comment by @paulgessinger, updated on 2024-09-03
- ▶   **refactor!: Return all track states from Core CKF (#3391)**
by @andiwand,  **no reviewer**, updated on 2024-09-02






















acts-project/acts: Open PRs VI





- ▶   **Stale feat(geometry): Allow operator« on surfaces without detector elements (#3467)**
by @paulgessinger,  comment by @paulgessinger, updated on 2024-08-31
- ▶   **perf: Use MBF smoother by default in 'TrackHelpers' (#3582)**
by @andiwand,  **no reviewer**, updated on 2024-08-30
- ▶   **refactor!: Fuse 'Actor' and 'Aborter' (#3573)**
by @andiwand,  reviewed by @stephenswat, updated on 2024-08-30
- ▶   **feat: Allow volume constrain for propagation (#3470)**
by @andiwand,  **no reviewer**, updated on 2024-08-30
- ▶   **refactor: Detector Element refactoring proposal (#3574)**
by @benjaminhuth,  comment by @asalzburger, updated on 2024-08-29
- ▶   **feat: Adding efficiency vs production radius to output root files (#3539)**
by @AichaMattouhi,  comment by @paulgessinger, updated on 2024-08-29
- ▶   **feat: Gen 3 portal shells (#3564)**
by @paulgessinger,  **no reviewer**, updated on 2024-08-28

acts-project/acts: Open PRs VII

- ▶   **ci: Download dependencies as tarball (#3520)**
by @paulgessinger,  **no reviewer**, updated on 2024-08-27
- ▶   **feat: Add statistics to propagation (#3450)**
by @andiwand,  comment by @paulgessinger, updated on 2024-08-22
- ▶   **feat: detrify plugin surface grids (#3429)**
by @EleniXoch,  comment by @EleniXoch, updated on 2024-08-22
- ▶   **refactor: Bump min json ver, make json keys static (#2968)**
by @paulgessinger, review requested, updated on 2024-08-22
- ▶   **draft: Gauss vertex seeding with time (#3491)**
by @CENcll,  comment by @andiwand, updated on 2024-08-22
- ▶    **feat: Added possibility to keep intermediate particles from PythiaGenerator**
WIP (#3414)
by @pbutti,  **no reviewer**, updated on 2024-08-22
- ▶   **chore: Bump minimum boost version to 1.78.0 (#3517)**
by @paulgessinger,  **no reviewer**, updated on 2024-08-20














acts-project/acts: Open PRs VIII

- ▶   **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** 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: Issues opened since 2024-08-27 |



















- ▶  **Version 37 (#3575)**
by @andiwand, updated on 2024-09-03

- ▶   **WIP**  **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 @asalzburger,  **no reviewer**, updated on 2024-08-28
- ▶   **Stale** **fix: detray plugin (cmake flags, CI, and compile errors) (#3363)**
by @fredevb,  **no reviewer**, updated on 2024-08-31
- ▶   **Stale** **feat: tracc plugin (conversion) (#3281)**
by @fredevb,  **no reviewer**, updated on 2024-08-31












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

- ▶  **Stale** **feat: tracc plugin (conversion)** (#3281)
by @fredevb,  **no reviewer**, updated on 2024-08-31
- ▶  **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









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









- ▶   **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
- ▶  **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

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











- ▶  **Stale** **style: Update clang-format to v18 (#3319)**
by @stephenswat,  **no reviewer**, updated on 2024-07-21
- ▶   **Stale** **feat: Add per event timing (#3124)**
by @CouthuresJeremy,  **no reviewer**, updated on 2024-07-11
- ▶  **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

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









- ▶  **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
- ▶  **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
- ▶  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









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

- ▶  **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
- ▶   **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
- ▶  **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








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

- ▶  **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
- ▶  **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









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

- ▶  **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









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- ▶  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









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- ▶  **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
- ▶  **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









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- ▶  **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
- ▶  **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

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- ▶  **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

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- ▶  **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 @stephswat, 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