Pull request and issue summary for acts-project/acts

July 23, 2024

acts-project/acts: PRs merged between 2024-07-16 and 2024-07-23 I

- **fix: Fix and refactor digitization parametrization in Examples** (#3386)
  by @andiwand, ✅ reviewed by @benjaminhuth, merged on 2024-07-16
- **refactor!: use c++20 concept to define insert function for different types of seed collections** (#3367)
  by @CarloVarni, ✅ reviewed by @paulgessinger, merged on 2024-07-16
- **chore: Drop 'IWYU'** (#3390)
  by @andiwand, ✅ reviewed by @paulgessinger, merged on 2024-07-16
- **fix: Use 70% truth matching threshold for 'VertexPerformanceWriter' in Examples** (#3368)
  by @andiwand, ✅ reviewed by @paulgessinger, merged on 2024-07-16
- **refactor!: Clean up 'GainMatrixUpdater' a bit** (#3387)
  by @andiwand, ✅ reviewed by @paulgessinger, merged on 2024-07-16
- **chore: Use C++20 concepts unconditionally** (#3385)
  by @paulgessinger, ✅ reviewed by @andiwand, merged on 2024-07-16
- **refactor!: Refactor direct navigator initialization** (#3183)
  by @andiwand, ✅ reviewed by @paulgessinger, merged on 2024-07-16

acts-project/acts: PRs merged between 2024-07-16 and 2024-07-23 II

- **refactor: Refactor 'RootTrackStateWriter' in Examples** (#3374)
  by @andiwand, ✅ reviewed by @paulgessinger, merged on 2024-07-16
- **fix: Poke at Pythia8 to make it reproducible** (#3392)
  by @paulgessinger, ✅ reviewed by @andiwand, merged on 2024-07-16
- **refactor!: Move 'Navigator' external surfaces into options** (#3189)
  by @andiwand, ✅ reviewed by @paulgessinger, merged on 2024-07-17
- **refactor: Make the MagneticFieldContext & GeometryContext to be hard types** (#3349)
  by @junggjo9, ✅ reviewed by @paulgessinger, merged on 2024-07-17
- **docs: Load linkcheck ignore patterns from URL** (#3400)
  by @paulgessinger, ✅ reviewed by @AJPfleger, merged on 2024-07-17
- **feat: Allow exclusion of pdg ids in ParticleSelector** (#3394)
  by @benjaminhuth, ✅ reviewed by @andiwand, merged on 2024-07-17
- **fix: fixing division that was causing FPE** (#3397)
  by @CarloVarni, ✅ reviewed by @andiwand, merged on 2024-07-17
- **chore: Bump pybind11 to v2.13.1** (#3399)
  by @paulgessinger, ✅ reviewed by @andiwand, merged on 2024-07-18

acts-project/acts: PRs merged between 2024-07-16 and 2024-07-23 III

- **refactor: Use 'requires' in Track EDM** (#3388)
  by @paulgessinger, ✅ reviewed by @CarloVarni, merged on 2024-07-18
- **refactor!: Remove redundant variables from Seed filter state** (#3393)
  by @CarloVarni, ✅ reviewed by @andiwand, merged on 2024-07-18
- **chore: Clean LCG setup** (#3405)
  by @andiwand, ✅ reviewed by @paulgessinger, merged on 2024-07-18
- **fix: setting current surface fix for DetectorNavigator** (#3401)
  by @asalzburger, ✅ reviewed by @andiwand, merged on 2024-07-18
- **fix: Fix and enable testing for RefittingAlgorithm** (#3404)
  by @benjaminhuth, ✅ reviewed by @andiwand, merged on 2024-07-18
- **feat: new material comparison script** (#3389)
  by @asalzburger, ✅ reviewed by @benjaminhuth, merged on 2024-07-19
- **fix: Fix try all navigators after running with track finding** (#3408)
  by @andiwand, ✅ reviewed by @benjaminhuth, merged on 2024-07-19
- **feat: Make vertexing in Examples more configurable** (#3406)
  by @andiwand, ✅ reviewed by @AJPfleger, merged on 2024-07-19

acts-project/acts: PRs merged between 2024-07-16 and 2024-07-23 IV

- **fix: add default value to ReadOnly in ScoreBasedAmbiguityResolution** (#3418)
  by @Ragansu, ✅ reviewed by @andiwand, merged on 2024-07-19
- **refactor: RootMaterialDecorator as default for the ODD** (#3415)
  by @benjaminhuth, ✅ reviewed by @andiwand, merged on 2024-07-19
- **refactor: Rework 'particles_selected' handling in Python Examples** (#3423)
  by @andiwand, ✅ reviewed by @dimitra97, merged on 2024-07-22
- **feat: Implement modified Bryson–Frazier (mBF) smoother as alternative to 'GainMatrixSmoother'** (#3420)
  by @andiwand, ✅ reviewed by @pbutti, merged on 2024-07-22
- **fix: 'Vertex::setPosition(Vector3)' should only set position** (#3421)
  by @andiwand, ✅ reviewed by @dimitra97, merged on 2024-07-22
- **refactor: Explicit 'checkPathLength' and 'isValid' intersection check** (#3416)
  by @andiwand, ✅ reviewed by @benjaminhuth, merged on 2024-07-22
- **fix: Comparison error in DirectNavigator** (#3424)
  by @benjaminhuth, ✅ reviewed by @andiwand, merged on 2024-07-22

acts-project/acts: Open PRs I

- **chore: Tweak ‘TrackProxy::copyFrom‘** (#3426)
  by @andiwand, ✅ comment by @paulgessinger, updated on 2024-07-23
- **feat: Variable size measurement for Examples** (#3107)
  by @andiwand, ✅ comment by @paulgessinger, updated on 2024-07-23
- **fix: ‘VectorTrackContainer::removeTrack_impl‘** (#3427)
  by @andiwand, ✅ reviewed by @paulgessinger, updated on 2024-07-23
- **refactor: Single tree for ‘RootMeasurementWriter‘** (#3417)
  by @andiwand, ✅ comment by @andiwand, updated on 2024-07-23
- **fix: display vertices annulus bounds** (#3419)
  by @asalzburger, ✅ comment by @paulgessinger, updated on 2024-07-23
- **build: Remove extra minimum cmake versions, set policies** (#3398)
  by @paulgessinger, ✅ reviewed by @andiwand, updated on 2024-07-23
- **fix(sonar): move/forward, avoid slicing, noexcept destructors** (#3396)
  by @paulgessinger, ❌ changes requested by @andiwand, updated on 2024-07-23
- **refactor: Lift GenericDetector to a Plugin** (#3425)
  by @benjaminhuth,review requestedreview requested, updated on 2024-07-22

acts-project/acts: Open PRs II

- **feat: 'TruthVertexSeeder' for Examples** (#3364)
  by @andiwand, ✅ comment by @paulgessinger, updated on 2024-07-22
- **refactor: Rework initial 'qOverP' sigma in Examples** (#3422)
  by @andiwand, ⚠️ **no reviewer**, updated on 2024-07-22
- Stale **refactor: change the definition of the rotation parameters** (#2021)
  by @XiaocongAi, ✅ reviewed by @paulgessinger, updated on 2024-07-21
- Stale **style: Update clang-format to v18** (#3319)
  by @stephenswat, ⚠️ **no reviewer**, updated on 2024-07-21
- **ci: Add unit test seed filter objects – part 1** (#3402)
  by @CarloVarni, ✅ comment by @CarloVarni, updated on 2024-07-19
- **feat: GeoShapes to DetectorVolumes and GeoMaterial Converters** (#3268)
  by @Matthewharri, ✅ comment by @Matthewharri, updated on 2024-07-19
- **fix: detray plugin (cmake flags, CI, and compile errors)** (#3363)
  by @fredevb, ✅ comment by @EleniXoch, updated on 2024-07-19
- **fix(gx2f): constrain update to initial volume** (#3411)
  by @AJPfleger, ⚠️ **no reviewer**, updated on 2024-07-18

acts-project/acts: Open PRs III

- **feat: Use track particle double matching by default in Examples** (#3409)
  by @andiwand, ⚠️ **no reviewer**, updated on 2024-07-18
- **ci: Reenable some ExaTrkX tests** (#3395)
  by @benjaminhuth, ⚠️ **no reviewer**, updated on 2024-07-18
- **feat: Prototracks-to-Tracks converter & refactor** (#3357)
  by @benjaminhuth, ✅ comment by @paulgessinger, updated on 2024-07-18
- **feat: Introduce the usage of the geomodel converters for the Muon System** (#3348)
  by @dimitra97, ✅ comment by @dimitra97, updated on 2024-07-18
- **feat: Telescope style seeding** (#3300)
  by @ssdetlab, ✅ comment by @asalzburger, updated on 2024-07-18
- **feat: Hashing seeding algorithm** (#3148)
  by @CouthuresJeremy, ✅ comment by @paulgessinger, updated on 2024-07-18
- **feat: traccc plugin (conversion)** (#3281)
  by @fredevb, ✅ comment by @paulgessinger, updated on 2024-07-18
- **feat: traccc chain in examples (common chain logic and CPU chain)** (#3320)
  by @fredevb, ⚠️ **no reviewer**, updated on 2024-07-16

acts-project/acts: Open PRs IV

- Stale **feat: Misalignment shift and test check that only selected modules are shifted** (#2843)
  by @LaraCalic, ✅ comment by @paulgessinger, updated on 2024-07-15
- **refactor: Move MLAmbiguitySolver to Core** (#3272)
  by @Corentin-Allaire, ⚠️ **no reviewer**, updated on 2024-07-11
- **feat: covfie plugin** (#3117)
  by @fredevb, ✅ comment by @paulgessinger, updated on 2024-07-11
- Stale **feat: Geometry agnostic space point maker** (#2890)
  by @Alonl14, ⚠️ **no reviewer**, updated on 2024-07-06
- **refactor: path handling to use 'std::filesystem'** (#3308)
  by @AJPfleger, ❌ changes requested by @stephenswat, updated on 2024-07-06
- **fix: update the DD4hep requirements when the ODD is built** (#3330)
  by @Corentin-Allaire, ✅ comment by @Corentin-Allaire, updated on 2024-06-28
- Stale **refactor: Use Core CKF extrapolation after inwards extension** (#3195)
  by @andiwand, ⚠️ **no reviewer**, updated on 2024-06-21
- Stale **feat: introduction obj simhit writer** (#3180)
  by @asalzburger, ⚠️ **no reviewer**, updated on 2024-06-15

acts-project/acts: Open PRs V

- WIP **feat: Added possibility to keep intermediate particles from PythiaGenerator WIP** (#3414)
  by @pbutti, ⚠️ **no reviewer**, updated on 2024-07-23
- WIP **fix: Handle holes after measurement selection in Core CKF** (#3413)
  by @andiwand, ✅ comment by @timadye, updated on 2024-07-23
- WIP Stale **refactor: Bump min json ver, make json keys static** (#2968)
  by @paulgessinger, ⚠️ **no reviewer**, updated on 2024-07-23
- WIP **refactor: add geohook for fast digitization range selection to itk example** (#2089)
  by @niermann999, ⚠️ **no reviewer**, updated on 2024-07-23
- WIP **feat!: Space point implementation** (#1900)
  by @CarloVarni, ✅ comment by @paulgessinger, updated on 2024-07-22
- WIP Stale **refactor!: Surface returns transform by value** (#2527)
  by @asalzburger, ⚠️ **no reviewer**, updated on 2024-07-22

acts-project/acts: Open PRs VI

- WIP Stale **refactor: Some internal GSF refactorings** (#2697)
  by @benjaminhuth, ❌ changes requested by @andiwand, updated on 2024-07-21
- WIP Stale **feat: Covariance transport for dense propagation** (#2869)
  by @andiwand, ⚠ **no reviewer**, updated on 2024-07-21
- WIP Stale **feat: Add CMake presets** (#3135)
  by @andiwand, ⚠ **no reviewer**, updated on 2024-07-21
- WIP **refactor: physmon: enlarge etaRange for GX2F to match KF settings** (#3412)
  by @AJPfleger, ⚠ **no reviewer**, updated on 2024-07-18
- WIP **refactor: Remove 'ProtoTrackTruthMatcher' in Examples** (#3410)
  by @andiwand, ⚠ **no reviewer**, updated on 2024-07-18
- WIP **refactor: Move config files from ODD to Acts to ensure compatibility** (#3407)
  by @benjaminhuth, ⚠ **no reviewer**, updated on 2024-07-18
- WIP **refactor: Keep outliers and material states at the end of track in Core CKF** (#3391)
  by @andiwand, ⚠ **no reviewer**, updated on 2024-07-18

acts-project/acts: Open PRs VII

- WIP **refactor: Rework physics performance monitoring for Examples** (#3359)
  by @andiwand, ⚠ **no reviewer**, updated on 2024-07-18
- WIP **build: physmon for traccc chains (host and cuda)** (#3403)
  by @fredevb, ⚠ **no reviewer**, updated on 2024-07-17
- WIP **feat: traccc cuda example** (#3372)
  by @fredevb, ⚠ **no reviewer**, updated on 2024-07-17
- WIP **refactor!: Move context from 'PropagatorOptions' to 'propagate'** (#3378)
  by @andiwand, ⚠ **no reviewer**, updated on 2024-07-15
- WIP **refactor!: Move context from fitter options to fitter calls** (#3379)
  by @andiwand, ⚠ **no reviewer**, updated on 2024-07-15
- WIP **refactor!: Move context from material mapping options to material mapping calls** (#3381)
  by @andiwand, ⚠ **no reviewer**, updated on 2024-07-15

acts-project/acts: Open PRs VIII

- WIP **refactor!: Move context from vertexing options to vertexing calls** (#3380)
  by @andiwand, ⚠ **no reviewer**, updated on 2024-07-15
- WIP **refactor!: Move context from stepper state to stepper calls** (#3382)
  by @andiwand, ⚠ **no reviewer**, updated on 2024-07-15
- WIP Stale **refactor: Remove ‘lastHierarchySurfaceReached‘ from ‘Navigator‘** (#3237)
  by @andiwand, ✅ reviewed by @paulgessinger, updated on 2024-07-14
- WIP Stale **refactor: Remove ‘forceIntersectBoundaries‘ from ‘Navigator‘** (#3238)
  by @andiwand, ✅ reviewed by @benjaminhuth, updated on 2024-07-13
- WIP Stale **refactor: Resolve surfaces on initialization in ‘Navigator‘** (#3283)
  by @andiwand, ⚠ **no reviewer**, updated on 2024-07-13
- WIP **fix(gx2f): use all states for ‘jacobianFromStart‘** (#3274)
  by @AJPfleger, ⚠ **no reviewer**, updated on 2024-07-12
- WIP Stale **feat: Add per event timing** (#3124)
  by @CouthuresJeremy, ✅ comment by @andiwand, updated on 2024-07-11

acts-project/acts: Open PRs IX

- WIP **refactor!: Template on track container frontend 'TrackContainer'** (#3193)
  by @andiwand, ✅ comment by @paulgessinger, updated on 2024-07-10
- WIP Stale **refactor: Remove target volume estimation from 'Navigator'** (#3242)
  by @andiwand, ⚠ **no reviewer**, updated on 2024-07-01
- WIP **test: Test field invariance of direction uncertainty transport** (#2983)
  by @andiwand, ⚠ **no reviewer**, updated on 2024-06-27
- WIP **feat: Reverse track finding for Examples** (#3200)
  by @andiwand, ⚠ **no reviewer**, updated on 2024-06-27
- WIP **tmp: Test pixel/strip hole branch stopper in Examples track finding** (#3273)
  by @andiwand, ⚠ **no reviewer**, updated on 2024-06-25
- WIP **feat(gx2f): material effects - multiple scattering** (#3292)
  by @AJPfleger, ⚠ **no reviewer**, updated on 2024-06-23
- WIP Stale **refactor: Replace 'EigenStepper' extension list with single extension** (#2865)
  by @andiwand, ⚠ **no reviewer**, updated on 2024-06-14

acts-project/acts: Open PRs X

- 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 2024-07-16 I

- Stale **style: Update clang-format to v18** (#3319)
  by @stephenswat, ⚠ **no reviewer**, updated on 2024-07-21
- 🚧 WIP Stale **feat: Add CMake presets** (#3135)
  by @andiwand, ⚠ **no reviewer**, updated on 2024-07-21
- 🚧 WIP Stale **refactor: Bump min json ver, make json keys static** (#2968)
  by @paulgessinger, ⚠ **no reviewer**, updated on 2024-07-23
- 🚧 WIP Stale **feat: Covariance transport for dense propagation** (#2869)
  by @andiwand, ⚠ **no reviewer**, updated on 2024-07-21
- 🚧 WIP Stale **refactor: Some internal GSF refactorings** (#2697)
  by @benjaminhuth, ⚠ **no reviewer**, updated on 2024-07-21
- 🚧 WIP Stale **refactor!: Surface returns transform by value** (#2527)
  by @asalzburger, ⚠ **no reviewer**, updated on 2024-07-22
- Stale **refactor: change the definition of the rotation parameters** (#2021)
  by @XiaocongAi, ⚠ **no reviewer**, updated on 2024-07-21

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

- WIP Stale **refactor: Bump min json ver, make json keys static** (#2968)
  by @paulgessinger, ⚠ **no reviewer**, updated on 2024-07-23
- 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, ⚠ **no reviewer**, updated on 2024-07-21
- WIP Stale **feat: Covariance transport for dense propagation** (#2869)
  by @andiwand, ⚠ **no reviewer**, updated on 2024-07-21
- WIP Stale **feat: Add CMake presets** (#3135)
  by @andiwand, ⚠ **no reviewer**, updated on 2024-07-21
- Stale **refactor: change the definition of the rotation parameters** (#2021)
  by @XiaocongAi, ⚠ **no reviewer**, updated on 2024-07-21
- Stale **style: Update clang-format to v18** (#3319)
  by @stephenswat, ⚠ **no reviewer**, updated on 2024-07-21

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

- Stale **feat: Misalignment shift and test check that only selected modules are shifted** (#2843)
  by @LaraCalic, ⚠ **no reviewer**, updated on 2024-07-15
- WIP Stale **refactor: Remove 'lastHierarchySurfaceReached' from 'Navigator'** (#3237)
  by @andiwand, ⚠ **no reviewer**, updated on 2024-07-14
- WIP Stale **refactor: Remove 'forceIntersectBoundaries' from 'Navigator'** (#3238)
  by @andiwand, ⚠ **no reviewer**, updated on 2024-07-13
- WIP Stale **refactor: Resolve surfaces on initialization in 'Navigator'** (#3283)
  by @andiwand, ⚠ **no reviewer**, updated on 2024-07-13
- WIP 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

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

- WIP Stale **refactor: Remove target volume estimation from 'Navigator'** (#3242)
  by @andiwand, ⚠ **no reviewer**, updated on 2024-07-01
- 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 IV

- Stale **Cmake error if ACTS_BUILD_PLUGIN_ACTSVG=ON** (#1818)
  by @DraTeots, 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

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- 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 **refactor: Use Core CKF extrapolation after inwards extension** (#3195)
  by @andiwand, ⚠ **no reviewer**, updated on 2024-06-21
- 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
- WIP Stale **refactor: Replace 'EigenStepper' extension list with single extension** (#2865)
  by @andiwand, ⚠ **no reviewer**, updated on 2024-06-14

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
- 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
- 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

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- 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

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

- Stale **Describe replacements of TrackingGeometry, TrackingVolume etc and how the classes map to one another.** (#2786)
  by @paulgessinger, updated on 2024-01-10
- Stale **Describe how the legacy geometry used to work and how it differs from the layerless geometry** (#2787)
  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 **FPE: RootTrajectoryStatesWriter** (#2348)
  by @paulgessinger, updated on 2023-09-03
- Stale **FPE: RootTrajectorySummaryWriter** (#2284)
  by @paulgessinger, updated on 2023-08-12
- 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 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

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- 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: Unpredicatable 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

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- 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 **Full chain vertexing with AMVF** (#1406)
  by @paulgessinger, updated on 2022-10-01
- Stale **Vertexing produces unexpectedly poor efficiency** (#1362)
  by @paulgessinger, updated on 2022-09-20
- 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

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- Stale **Some writers performs their writes in the destructor** (#881)
  by @paulgessinger, updated on 2022-08-11
- Stale **Vertexing issues observed in python vertexing example** (#1091)
  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 globaly installed acts** (#1139)
  by @gagnonlg, updated on 2022-02-22
- Stale **Add example (+test) for vertex fitting with constraints** (#1100)
  by @paulgessinger, updated on 2022-01-07
- 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

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- 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