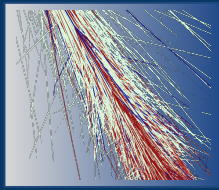
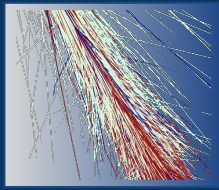


CORSIKA 8

Ralf Ulrich, 8.4.2021

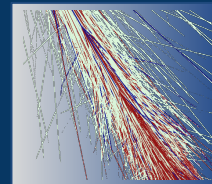


- Welcome
- New contributors / collaborators
- Ongoing work, status and updates
- Discussions



Conferences

- *CHEP 2021, 3 proceedings, acceptance notification 15th April*
- *ICRC ([gitlab link](#)), 7 abstracts, update acceptance status on gitlab*
 - *5th July: proceedings upload, video upload*
 - *31st July: final proceedings upload*



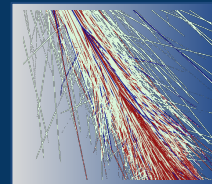
Recent updates, finished

- gitlab merge requests (finished)

UrQMD improvements 9 of 9 tasks completed I205 · opened 9 months ago by Maximilian Reininghaus Code review finished Ready for code review	MERGED ✓ 🔄 18 updated 1 day ago
Resolve "Compiler error with QuantityVector" I331 · opened 3 weeks ago by Nikos Karastathis Bug Code review finished	MERGED ⚠ 👤 Approved 🔄 2 updated 1 day ago
Resolve "Replace std::experimental::filesystem with boost::filesystem" I336 · opened 1 day ago by Maximilian Reininghaus Ready for code review	MERGED ✓ 🔄 1 updated 1 day ago
Resolve "spdlog default pattern defined twice" I325 · opened 1 month ago by Lukas Nellen Bug Code review finished Ready for code review	MERGED ✓ 👤 🔄 3 updated 1 month ago
Resolve "Multiple showers" I326 · opened 1 month ago by Matthieu Carrere Code review finished Feature request Ready for code review	MERGED ✓ 👤 🔄 3 updated 1 month ago

Mar 5, 2021 12:37am
GMT+0100

Ongoing work



- Gitlab merge requests (ongoing), 20 in total

Resolve "linker error in clang 12" 4 of 8 tasks completed

!332 · opened 3 weeks ago by Fan Hu Build System Discussion Ready for code review

7
updated 1 hour ago

readthedocs and better error messages

!334 · opened 3 days ago by Ralf Ulrich ICRC-2021 Documentation Ready for code review

6
updated 1 hour ago

Resolve "UrQMD cross-section regression"

!335 · opened 1 day ago by Maximilian Reininghaus Ready for code review

3
updated 2 hours ago

Resolve "Develop Cherenkov emission module" 4 of 8 tasks completed

!333 · opened 2 weeks ago by Matthieu Carrere First full release: CORSIKA 8.0.0 Comments requested Development Discussion Ready for code review

11
updated 2 hours ago

Output infrastructure and Python analysis library.

!317 · opened 1 month ago by Remy Prechelt ICRC-2021 Python Ready for code review

8
updated 2 hours ago

Resolve "Add number of calls in Process interface" 9 of 9 tasks completed

!276 · opened 5 months ago by Dominik Baack Project prototype structure 2 (refactoring) Code review finished Comments requested Development Feature request Ready for code review Refactory

16
updated 1 day ago

Resolve "Geometry and environment feature updates - merge to refactored version"

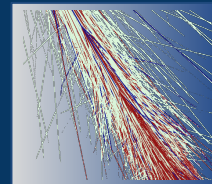
!313 · opened 2 months ago by Nikos Karastathis Comments requested Development Geometry Media Ready for code review

6
updated 1 day ago

Draft: Resolve "Add optional "weight" for particles on stack (thinning)"

!319 · opened 1 month ago by Ralf Ulrich ICRC-2021 Development Feature request Important Stack

0
updated 1 week ago



[WIP] Radio interface

I329 · opened 1 month ago by Nikos Karastathis ⌚ Radio Emission Discussion Feature request



updated 1 week ago

Draft: Resolve "New design of continuous processes"

I322 · opened 1 month ago by Maximilian Reininghaus



updated 1 week ago

Vertical_EAS - Move modules and initializations before shower's loop 8 of 8 tasks completed

I330 · opened 3 weeks ago by Matthieu Carrere Bug Code review finished Ready for code review



updated 1 week ago

[WIP] New PROPOSAL installation process. Change from gitmodules to conan.

I327 · opened 1 month ago by Maximilian Sackel Build System Comments requested Development Discussion EM In Progress



updated 3 weeks ago

Draft: Resolve "Assumption of no continuous between two stochastic losses"

I271 · opened 5 months ago by Maximilian Reininghaus Discussion



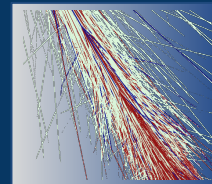
updated 1 month ago

Draft: Resolve "EPOS is missing"

I318 · opened 1 month ago by Ralf Ulrich ⌚ ICRC-2021 Development Feature request



updated 1 month ago



Interface to the TAUOLA library for tau lepton decays.

!200 · opened 10 months ago by Remy Prechelt ⌚ Project prototype structure 2 (refactoring) Code review finished Development Ready for code review

⊗ 👤 Approved 📄 20
updated 4 months ago

WIP: Resolve "Provide simple process example"

!154 · opened 1 year ago by Maximilian Reininghaus Documentation Feature request

⊗ ⚠️ 👍 1 📄 4
updated 5 months ago

WIP: Initial implementation of (draft) radio emission interface class.

!202 · opened 10 months ago by Remy Prechelt ⌚ Radio Emission Comments requested Discussion radio workshop discussion

⊗ 📄 45
updated 5 months ago

WIP: Initial implementation of a C8 Python interface with working EAS example.

!221 · opened 8 months ago by Remy Prechelt Comments requested

⊗ 📄 11
updated 5 months ago

WIP: Initial example of python as script language from C++

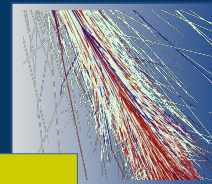
!234 · opened 8 months ago by Dominik Baack 🧑 rprechelt-python-interface Comments requested

⊗ 📄 2
updated 5 months ago

WIP: simplified process sequence based on std::tuple

!158 · opened 1 year ago by Hans Dembinski

⊗ ⚠️ 📄 14
updated 8 months ago



Recent work, Roadmap

- First e.m. physics
- Magnetic fields
- New structure, build system
- New dependency management
- Fast logging

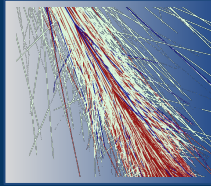
Slide from 11.2.2021
→ we are on track

Today

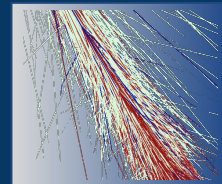
- Output file generation
- Further work on e.m. / hadron / muon physics
- Radio emission
- Cherenkov emission
- Documentation

ICRC

First release (validation and testing)



- We need several tiers:
 - In source code and next to source code
 - doxygen as full API reference (gitlab pages status?)
 - sphinx for formatted web and pdf technical docs (readthedocs)
 - Specific latex, pdf to be published, maybe loosely based on sphinx.
 - Users guide.
- Please try, comment and improve doxygen and sphinx
 - <https://corsika-8.readthedocs.io/en/hp/index.html>



Next meetings

All meeting agendas collected at: <https://indico.scc.kit.edu/category/28/>

- Next general phone call:
 - May 6th <https://indico.scc.kit.edu/event/2367/>
- Next topical phone calls (Thursdays 2:30 CEST):
 - Parallelization, next week
 - E.M. showers, in three weeks
 - Open slot, in two weeks (discuss open MRs)
 - Radio , Fridays (9:30am CEST)