

# Recent updates in CORSIKA 8: pseudorandom number generation and documentation building/hosting

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## New pseudorandom number generation facility

Random Iterator library ([https://gitlab.ikp.kit.edu/AAAlvesJr/random\\_iterator](https://gitlab.ikp.kit.edu/AAAlvesJr/random_iterator)) is now merged into master branch.

1. Now only a single seed per job
2. Very trivial changes to deploy: `RNGManager` → `template RNGManager<typename T=philox>`
3. Six sound generators now available: `philox`, `ars`, `trhreefy`, `squares3` and `squares4`
4. Each named stream operates in a non-overlapping piece of the same pseudorandom number sequence. **The indexing of the specific subsequence is determined by the stream's registration.**
5. Upcoming refinements in the interface: make indexing independent of registration order.

Merge request #370:

[https://gitlab.ikp.kit.edu/AirShowerPhysics/corsika/-/merge\\_requests/370](https://gitlab.ikp.kit.edu/AirShowerPhysics/corsika/-/merge_requests/370)

## New documentation building/hosting in ReadTheDocs

CORSIKA 8 User's Manual (User Guide) and Full Reference Documentation (Doxygen) are now available in ReadTheDocs.

- Pages are updated and rebuilt at every commit, push or merge to master.
- It is also possible to enable it for specific branches and tags.
- Page is here: <https://corsika-8.readthedocs.io/>

Open points:

- Modules Users Manual pages ?
- Developers's Manual page ?

Documentation is always a work in progress. So, contributions on this are always welcome.

Thanks