

Electromagnetic Shower Simulation for CORSIKA 8: Executive summary

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1. What is this contribution about?

We present systematic comparisons of electromagnetic shower simulations in CORSIKA 8 with other shower simulation frameworks.

2. Why is it relevant / interesting?

CORSIKA 8 is new and still under development. Comparisons are therefore vital to understand the current status of CORSIKA 8.

3. What have we done?

We compared CORSIKA 8 to the frameworks CORSIKA 7, AIRES and ZHS MC. We looked at the theoretical descriptions used by each framework as well as shower simulations, including the longitudinal and lateral distributions, the charge excess and shower track lengths.

4. What is the result?

The results of our comparisons are promising and already show a good agreement with the other simulation frameworks. Some differences were revealed that are going to be closely investigated in the future.