

# Simulations of radio emission from air showers with CORSIKA 8

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## - What is this contribution about?

This contribution is about the architecture of the radio module as an integral part of CORSIKA 8 and the first simulations produced with it, along with comparisons with CORSIKA 7 and ZHAireS.

## - Why is it relevant / interesting?

CORSIKA 8 is a framework based on modularity and flexibility. The radio module takes full advantage of it by using a software design that allows simulations on more realistic and sophisticated environments and geometries needed for next generation experiments.

## - What have we done?

We have fully implemented the functionality of CORSIKA 7 and ZHAireS into CORSIKA 8. Hence, we present our first results compared with reference pulses and we directly compare the “CoREAS” and “ZHS” algorithms on the exact same shower.

## - What is the result?

We find good agreement between CORSIKA 8, CORSIKA 7 and ZHAireS, although we further need to investigate the tracking algorithm of CORSIKA 8. “CoREAS” and “ZHS” algorithms exhibit a very good agreement, which allows us to move further into implementing more complicated cases.