Executive Summary of PoS(ICRC2021)209

What is this contribution about? We present a **signal model** and **reconstruction algorithm** for radio measurements of **inclined air showers**.

Why is it relevant / interesting? Upcoming experiments like the **AugerPrime Radio Detector** and **GRAND** will measure inclined EAS with radio antennas.

What have we done? We have used **CoREAS simulations** to develop a signal model to **symmetrize the signal distribution** and fit it with a **one-dimensional lateral distribution function**, the integral of which gives an estimator for the **electromagnetic shower energy**.

What is the result? On a 1.5 km grid, the reconstruction achieves a **resolution on the electromagnetic energy of better than 5%**.

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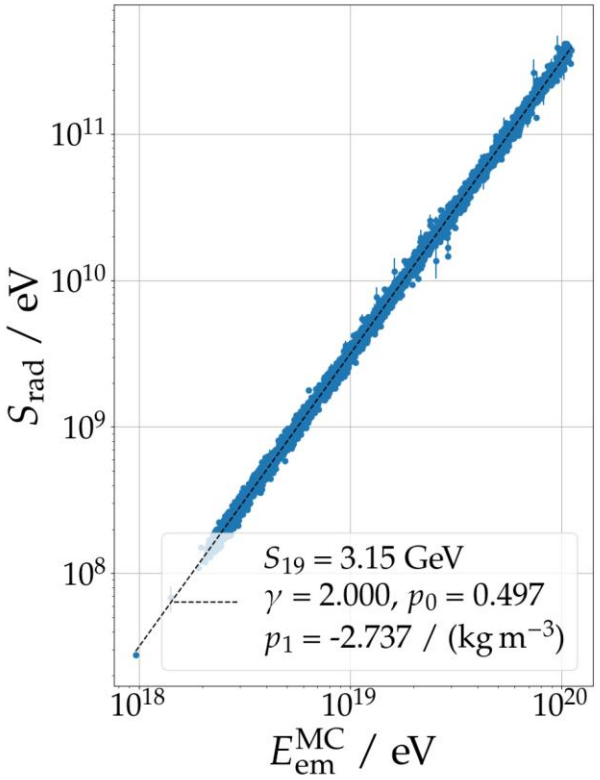
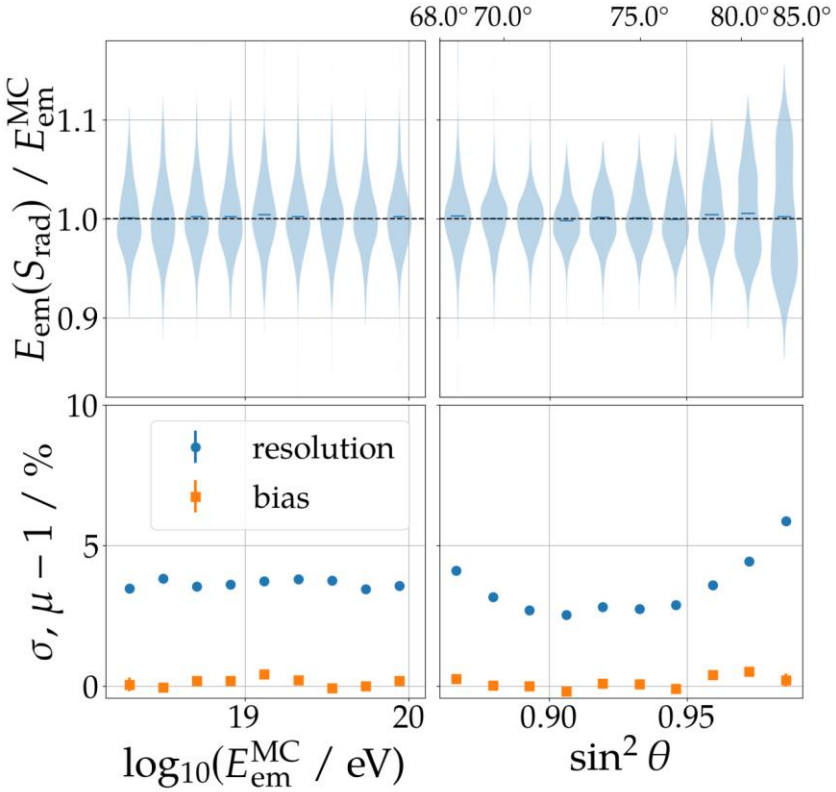
7: Test performance on 1.5 km grid simulations





- use MC start values - intrinsic resolution
- quadratic scaling
- negligible bias
- resolution <5%