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The JEM-EUSO energy and X_{max} reconstruction performances

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JEM-EUSO is an international collaboration committed to the development of space based ultra high energy cosmic ray observatories. In this framework we are carrying out an extensive simulation study in order to evaluate the performances of the mission. In this contribution we focus on the energy and X_{max} reconstruction performances. We therefore simulated several samples of cosmic ray events and we produced the detector response following a detailed simulation of the optics and of the detector. After the issue of a trigger flag we analyze the received data to extract the basic shower parameters like direction, energy and X_{max} . In this work we briefly describe the algorithms to reconstruct the energy and X_{max} . We then present a study to assess the energy reconstruction performances in a set of fixed conditions and on the whole field of view. We also present preliminary results on the X_{max} reconstruction in the center of the field of view. We then evaluate the fraction of good quality events with respect to the triggered events.

Collaboration

JEM-EUSO

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