

Determination of primary energy spectra by EAS size spectra in knee region

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The unfolding of the energy spectra from Extensive Air Shower measurements requires satisfactory knowledge on the overall effects of different distortions. Recently applied to KASCADE experiment data methodology of event-by-event analysis of individual showers opens perspectives to reconstruct energy spectra of 3 species of Primary Cosmic Ray flux.

Such reconstruction will require both detailed account of detector effects and distortions due to multiple migrations between two dimensional "energy-primary" bins.

We'll discuss Bayesian and "inverse-matrix based" approaches for solving this inverse problem. An example based on the ANI experiment energy spectra reconstruction also will be presented.