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Behaviour of the EAS age parameter in the knee energy region

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We review the different definitions of the age parameter used in the lateral and longitudinal electron distributions. In order to remove ambiguities in the interpretation of the experimental data, we have compared simulations with CORSIKA carried simultaneously with the options NKG and EGS.
The effect of the positron annihilation cross section missing in the NKG approach is pointed out for small and inclined EAS, near the axis ; the consequences of the electrons coming from muon decay at large distances from axis are also underlined.
Distinguishing the longitudinal, lateral and local age parameters, correspondances and conversions between the 3 categories are inferred from the simulations.
Finally, the age parameter derived by fitting the lateral profile of the electron distribution, is confirmed as a good indicator of the primary composition and the hadronicity of the cascade as far as some conditions are fullfilled concerning bands of istances to the axis and zenith angle, dependant slightly on the primary energy (examples in the interpretation from Kascade and Akeno data).

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