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The Noble Element Simulation Technique

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NEST (Noble Element Simulation Technique) is a comprehensive, semi-empirical standalone package for the complete and accurate simulation of both the scintillation light and ionization yields of Xenon and Argon for many particle types (nuclear recoils, electron recoils, alphas, other interactions) as well as resolution and pulse shapes.

A significant number of updates to the NEST models, which substantially improved the package, are presented. Practically all data on interactions in liquid, gas, even solid Xe media available worldwide have been taken into consideration in development of the current approaches. Also, the first NEST liquid Ar empirical models for mean yields for different particles and their comparison to most available data worldwide will be presented, and lastly future plans will be discussed.

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