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A. F. Barghouty* (abdunnasser.f.barghouty@nasa.gov), Huntsville, AL 35812. *Modeling the radiation quality factor as a linear 'time'-dependent Ornstein-Uhlenbeck process.*

In addition to its radio-biological effects, modeling of dose and risk associated with space radiation exposure are made difficult by the inherent complexity and variability in characterizing the radiation environment as well as its passage and interaction with matter. The empirical variability in the so-called radiation quality factor, or Q, which is typically used to differentiate among radio-biological effects, is a primary source of uncertainty in dose and risk estimates. This talk will present a stochastic dynamic model for Q based on a linear but 'time'-dependent Ornstein-Uhlenbeck process. (Received February 01, 2015)