1 Meteorites-Radiation

NOTE:

field: Give $N_p(t) = e^{-\frac{t-t_0}{\tau_m}} N_p(t_0)$, derive $N_d(t)$.

field:

$$N_p(t) = e^{-\frac{t-t_0}{\tau_m}} N_p(t_0)$$

$$N_d(t) = N_d(t_0) + (N_p(t_0) - N_p(t))$$

$$N_d(t) = N_d(t_0) + (N_p(t_0) - e^{-\frac{t-t_0}{\tau_m}} N_p(t_0))$$

$$N_d(t) = N_d(t_0) + N_p(t_0)(1 - e^{-\frac{t-t_0}{\tau_m}})$$

Substitute: $N_p(t_0) = N_p(t)e^{\frac{t-t_0}{\tau_m}}$:

$$N_d(t) = N_d(t_0) + N_p(t)e^{\frac{t-t_0}{\tau_m}}(1 - e^{-\frac{t-t_0}{\tau_m}})$$

$$N_d(t) = N_d(t_0) + N_p(t)e^{\frac{t-t_0}{\tau_m}} - N_p(t)e^{\frac{t-t_0}{\tau_m}}e^{-\frac{t-t_0}{\tau_m}}$$

$$N_d(t) = N_d(t_0) + N_p(t)e^{\frac{t-t_0}{\tau_m}} - N_p(t)$$

$$N_d(t) = N_d(t_0) + N_p(t)(e^{\frac{t-t_0}{\tau_m}} - 1)$$