

Flare equation

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$$g(t) = \left(\frac{\sqrt{\pi}AC}{2} \right) \left(F_1 \exp \left[D_1(B-t) + \frac{C^2 D_1^2}{4} \right] \left[\text{erf}(Z_1) - \text{erf} \left(Z_1 - \frac{t}{C} \right) \right] + F_2 \exp \left[D_2(B-t) + \frac{C^2 D_2^2}{4} \right] \left[\text{erf}(Z_2) - \text{erf} \left(Z_2 - \frac{t}{C} \right) \right] \right) \quad (1)$$

where

$$Z_{1,2} = \frac{2B + C^2 D_{1,2}}{2C} \quad (2)$$

and

$$F_2 = 1 - F_1 \quad (3)$$

erf is the scipy error function (scipy.special.erf). I usually normalise by the flare peak before fitting. U also have the time units in something like minutes from some time shortly before the flare, just so the code is having to work with very large or small numbers - some of the coefficients can have a tendency to run off to silly values if not watched.