Flare model from Jackman et al. (2018)

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

where

$$Z_{1,2} = \frac{2B + C^2D_{1,2}}{2C} \tag{2}$$

and

$$F_2 = 1 - F_1 \tag{3}$$

erf is the scipy error function (scipy.special.erf). A is an amplitude factor and B is the position of the peak of the flare. C is the standard deviation of the Gaussian heating pulse. D_1 and D_2 are the decay timescales of the two exponentials. F_1 and F_2 are relative amplitudes of the cooling components.

I usually normalise by the flare peak before fitting. You also should have the time units in something like minutes from some time shortly before the flare, just so the code doesn't have 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.