$$A(x,y) = \frac{\Gamma(x+x_0+y)\Gamma(x+x_0-y)}{\Gamma(x+x_0)^2} \tag{1}$$

$$\Gamma(z) = \int I(\omega,x,y)\exp\left[-i\omega z\right]d\omega \tag{2}$$

$$x_0 = 0.6 \tag{3}$$

$$I = 0 \text{ for } \quad |\omega| > 0.2, \tag{4}$$

$$|x|,|y| > 0.05 \tag{5}$$

$I(\omega,x,y)$ varies fairly rapidly over ω slowly over x,y, except that it has abrupt changes of sign. I need to show $[A(x,y)-1] << 0.2$ over that range of x,y and ω. Numerically, for my fully modelled and rather complex I, it appears to be within that everywhere.