

The equation to implement is:

$$\Delta T(r, z = 0, t) = \frac{aq}{2k} \int_0^{+\infty} J_0(\lambda r) \times J_1(\lambda a) \times \operatorname{erf} \left[ \lambda(\alpha t)^{\frac{1}{2}} \right] \frac{d\lambda}{\lambda}$$

$J_0$  and  $J_1$  are Bessel functions of the first kind of order 0 and 1.

$\operatorname{erf}$  is the error function.

$r$  the radius can be defined in COMSOL as  $\sqrt{x^2+y^2}$  and  $t$  is the time.

$a$ ,  $q$ ,  $k$  and  $\alpha$  are constants.

$\lambda$  is an integration parameter. It does not depend on the geometry or the time.