
PCA equations

<https://camillejr.github.io/science-docs/>

1 PC-transport

$$\rho \frac{D\phi}{Dt} = \mathbb{D} \nabla^2 \phi + S_\phi$$

$$S_\phi(\phi) = f(T, p, Y_1, \dots, Y_{N_S-1})$$

$$\rho \frac{D\Phi}{Dt} = -\nabla(j_\Phi) + s_\Phi$$

$$\rho \frac{Dz}{Dt} = -\nabla(j_z) + s_z$$

$$\Phi \approx f_\Phi(\mathbf{Z}_q)$$

$$\Phi \approx N(0, \sigma_n^2)$$

$$\Phi = [T, p,]$$