Equations

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

1 PC-transport

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

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

$$ho rac{Doldsymbol{\Phi}}{Dt} = -
abla (oldsymbol{j_{\Phi}}) + oldsymbol{s_{\Phi}}$$

$$\rho \frac{D\boldsymbol{z}}{Dt} = -\nabla(\boldsymbol{j}_z) + \boldsymbol{s}_z$$

$$rac{\partial oldsymbol{\Phi}}{\partial t} + oldsymbol{ec{V}} \cdot
abla oldsymbol{\Phi} = \mathbb{D}_{\Phi}
abla^2 oldsymbol{\Phi} + oldsymbol{S}_{\Phi}$$

$$rac{\partial \mathbf{z}}{\partial t} + \vec{V} \cdot
abla \mathbf{z} = \mathbb{D}_{\mathbf{z}}
abla^2 \mathbf{z} + \mathbf{S}_{\mathbf{z}}$$

$$z=\Phi A_{\mathfrak{q}}$$

2 Regression

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

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

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

$$\mathbf{\Phi} \approx N(0, \mathbf{K}(\mathbf{Z}_p, \mathbf{Z}_q) + \sigma_n^2 \mathbf{I})$$

3 Arrhenius law

$$k = Ae^{\frac{-E_a}{RT}}$$

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$$k = AT^n e^{\frac{-E_a}{RT}}$$

$$\tilde{E} = y_m - \bar{y}_e$$