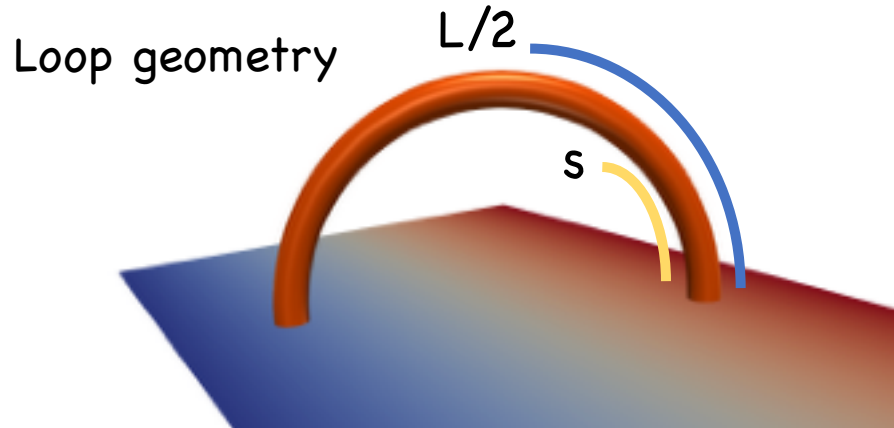
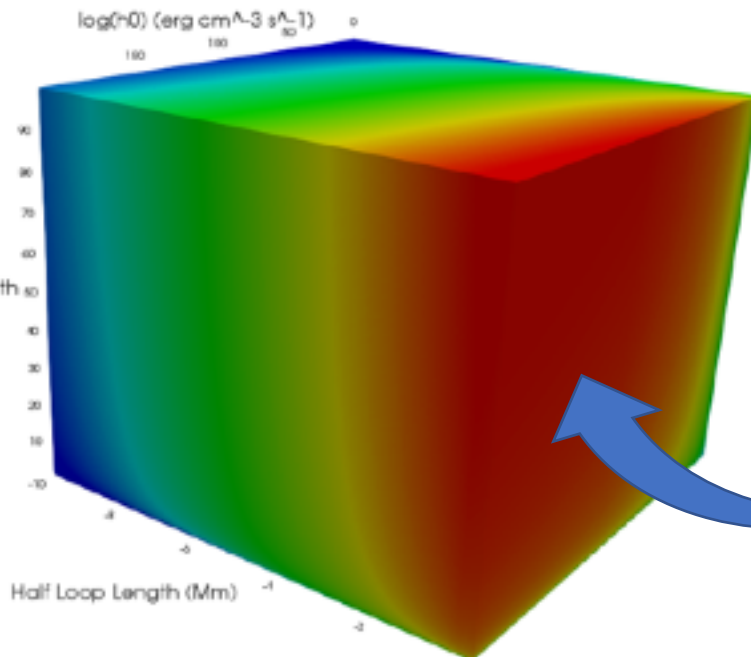


The plasma response to the heating



Solution set: $T(h_0, L, s, \mathcal{R})$, $P(h_0, L, s, \mathcal{R})$



Equilibrium loop

$$\begin{cases} -\frac{P^2}{4k_B^2 T^2} \Lambda(T) + \frac{\partial}{\partial s} \left(\kappa \frac{\partial T}{\partial s} \right) + h(s) = 0 \\ \frac{dP(s)}{ds} = -\frac{g_\odot \bar{m}}{k_B T(s)} P(s) \cos\left(\pi \frac{s}{L}\right) \end{cases}$$

$$\begin{cases} 2 \int_0^{L/2} h(s) ds = \frac{F_p + F_n}{2} \\ h(s) = h_0 \exp\left(-\frac{s}{\mathcal{R}L/2}\right) \end{cases}$$

$$\begin{cases} T(0) = 10^4 \text{ K} \\ \kappa \frac{\partial T}{\partial s} \Big|_{s=L/2} = 0 \end{cases}$$

Here we have another free parameter \mathcal{R} in the equilibrium loop.

Loop solution

