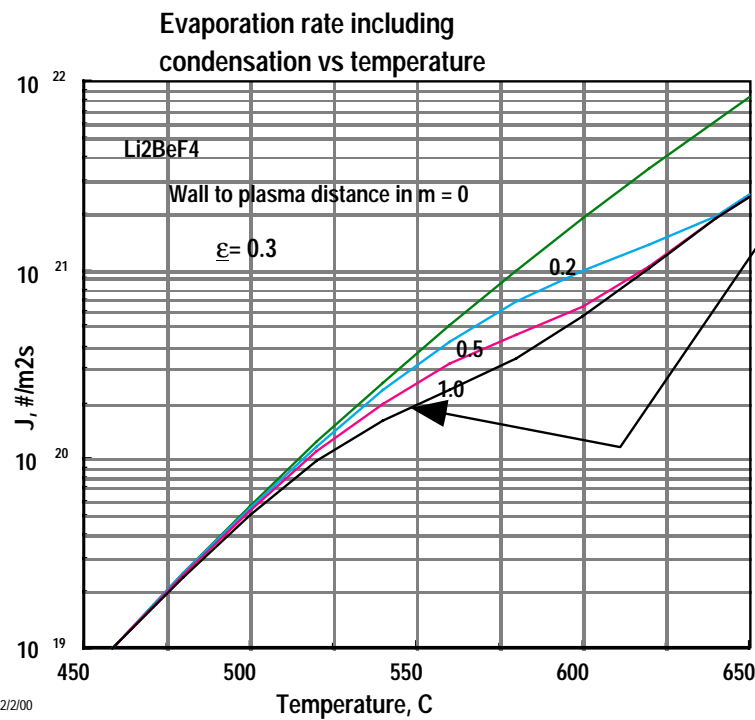


Strategies to minimize evaporation from Flibe will need to minimize the surface temperature

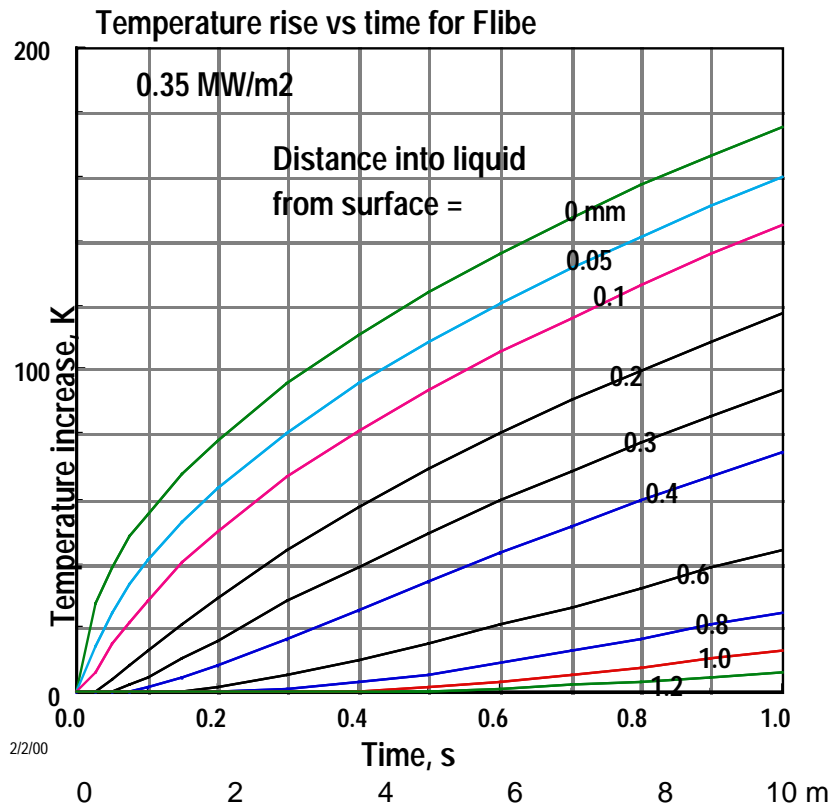


Evaporation is a strong function of temperature even with condensation included.

Evaporation rate at various temperatures for Flibe

Temp C	n BeF ₂ /m ³	J, x=0 #/m ² s	J, x=0.2 m #/m ² s	J, x=0.5 #/m ² s
500	3.9x10 ¹⁷	5.70x10 ¹⁹	5.56x10 ¹⁹	5.36x10 ¹⁹
505	4.8x10 ¹⁷	7.07x10 ¹⁹	6.85x10 ¹⁹	6.53x10 ¹⁹
550	2.4x10 ¹⁸	3.66x10 ²⁰	3.14x10 ²⁰	2.56x10 ²⁰
555	2.9x10 ¹⁸	4.41x10 ²⁰	3.67x10 ²⁰	2.88x10 ²⁰

Surface temperature can be kept near bulk temperature if only a little mixing takes place very near ($\ll 1$ mm) the surface.



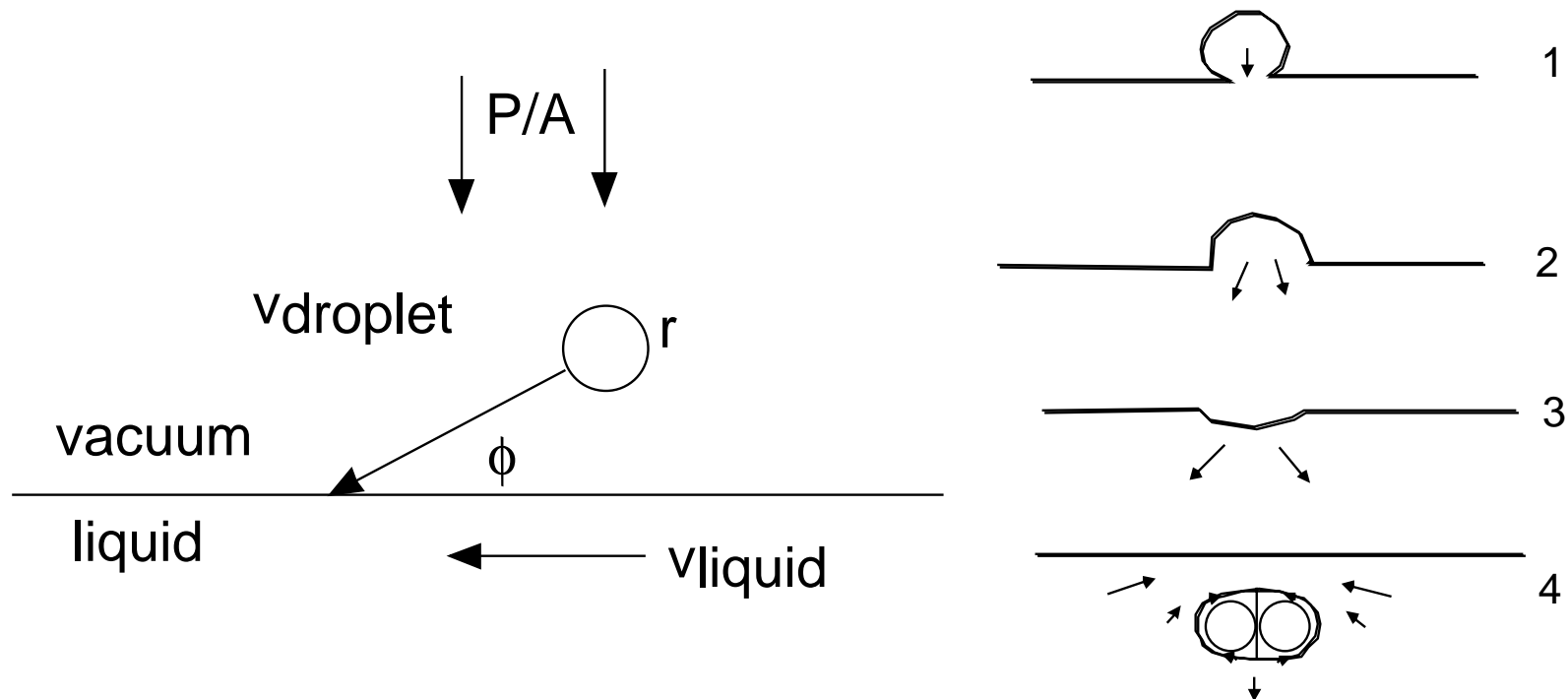
Distance from entrance nozzle along the flow path

Can droplets sprayed onto the surface produce the needed mixing and do so without causing splash?

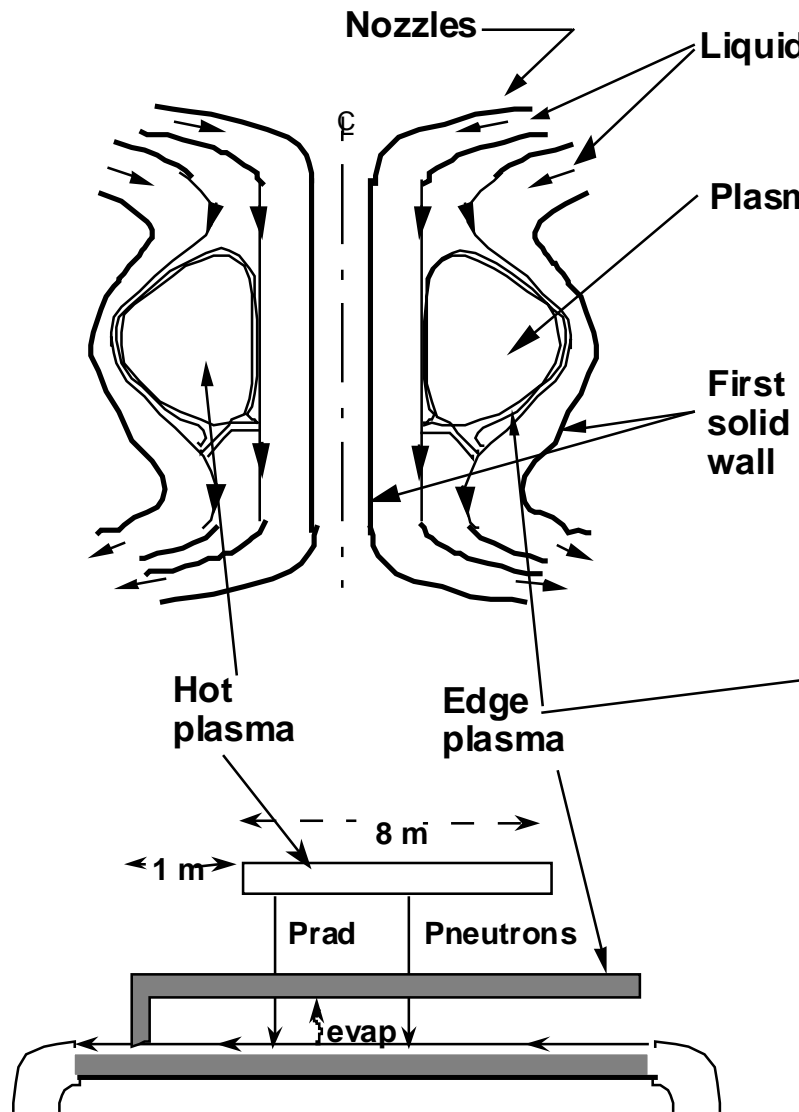
Can effective mixing take place to a depth of 0.2 mm for each 1 m of travel?

Can the surface temperature be kept to <5 °C of the bulk temperature? <25 °C? <50 °C?

Will droplets injected onto the free surface induce significant convection of cool liquid near the surface and do it without causing splash?



Liquid wall tokamak



Liquid wall spheromak

