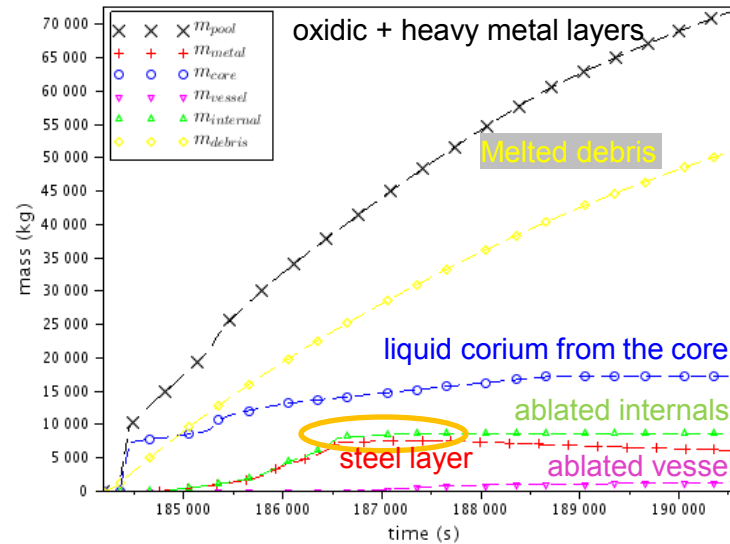
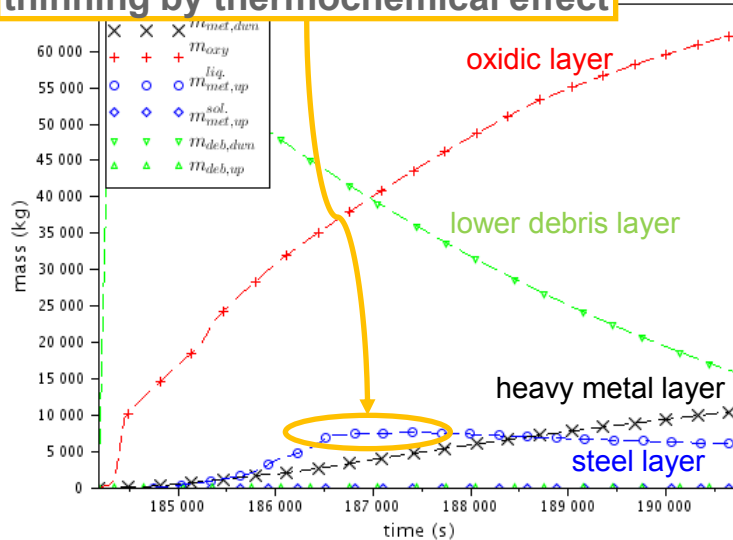


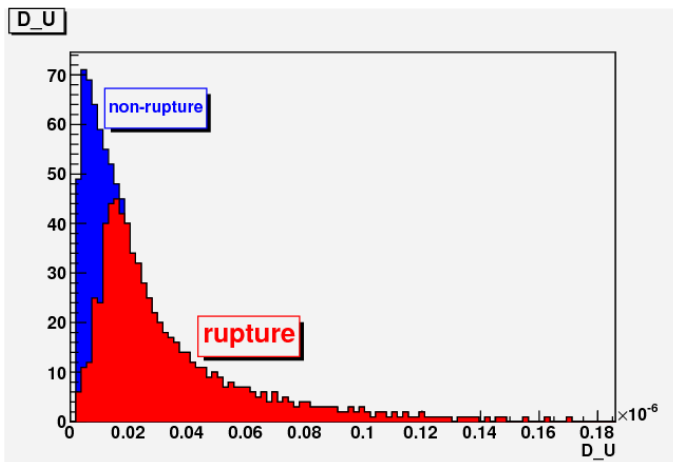
SENSITIVITY ANALYSES REGARDING THE VESSEL FAILURE

Transient focusing effect : thermochemically-driven “mode”

thinning by thermochemical effect



■ Important parameter regarding this mode of vessel rupture : D_m parameter



- U diffusivity in the oxidic layer
- log-triangular law [1.8E-9, 1.8E-8, 1.8E-7]
(Stokes-Einstein formula : $1.81E-8 \text{ m}^2\text{s}^{-1}$)
- lower value → slower thinning of the steel layer

Associated perspectives for experiments/modeling

- Effect of oxide/metal crust on mass transfer kinetics
- Diffusivities of the species in oxidic/metallic phases