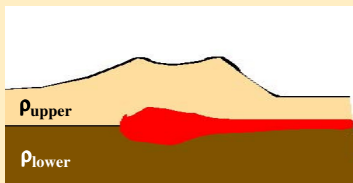


PROPAGATION HORIZONTALE

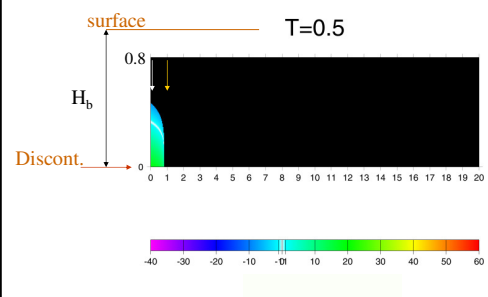
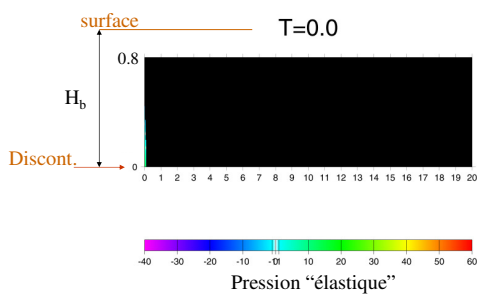


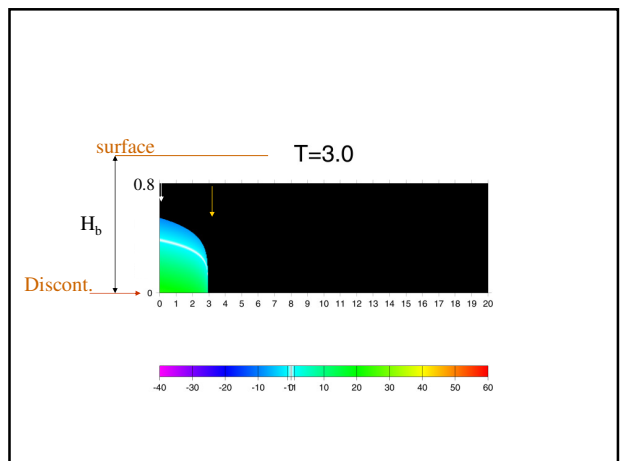
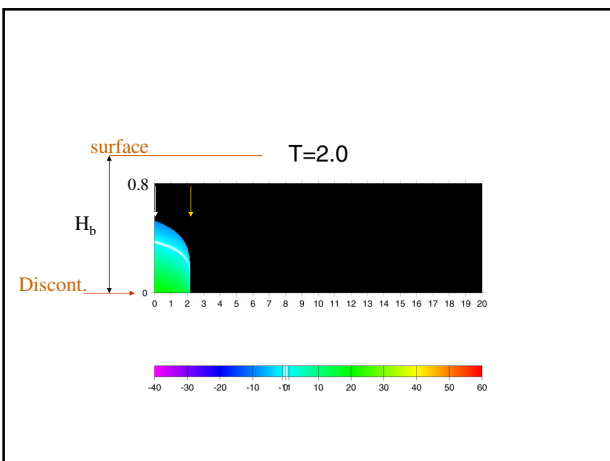
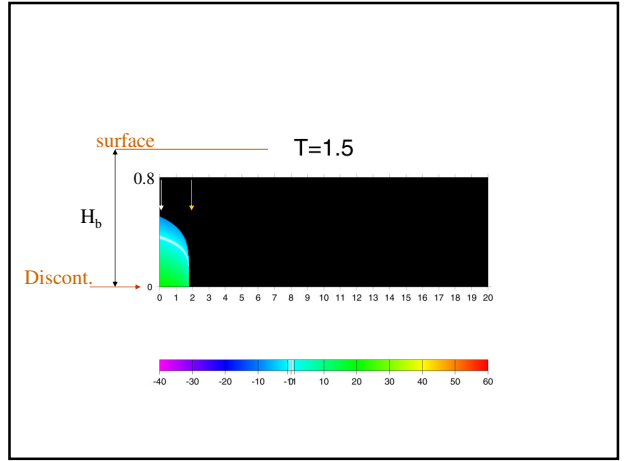
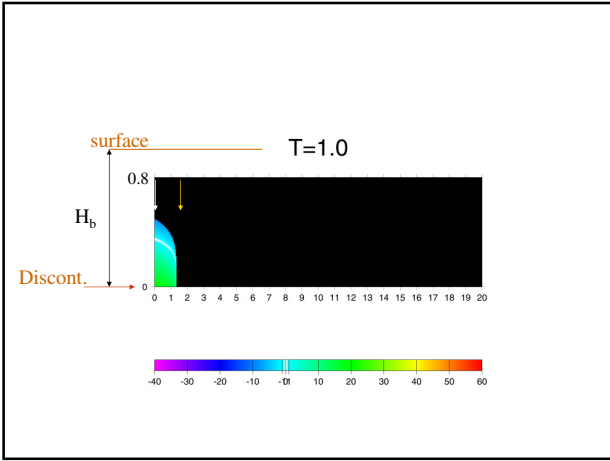
Discontinuité lithologique,
 $\rho_{upper} < \rho_{magma} < \rho_{lower}$

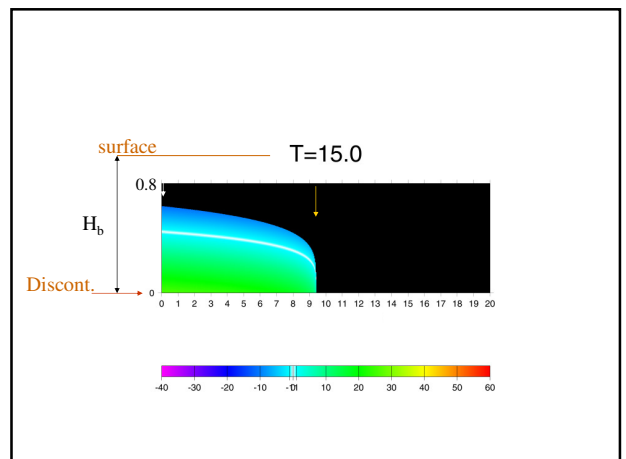
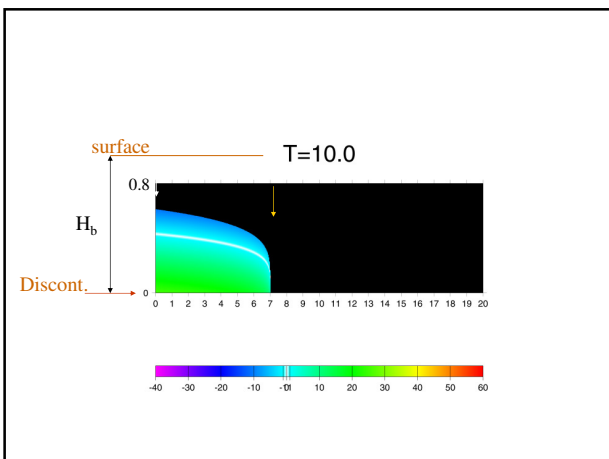
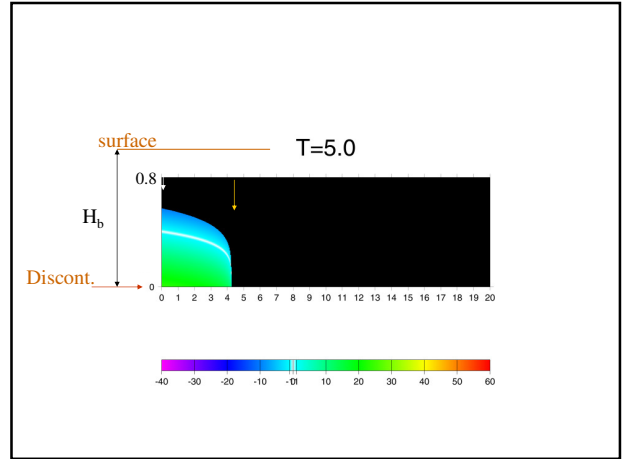
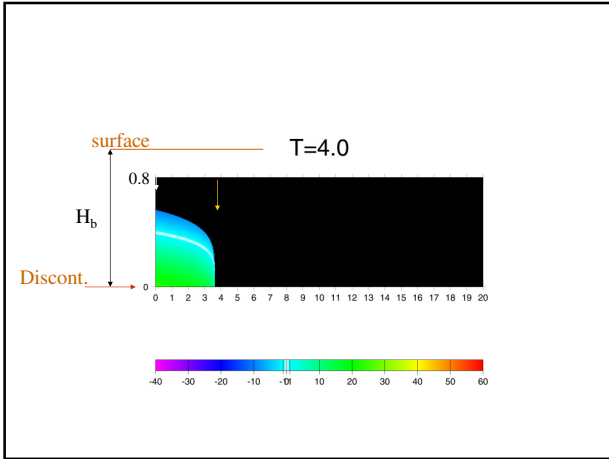
Sans édifice

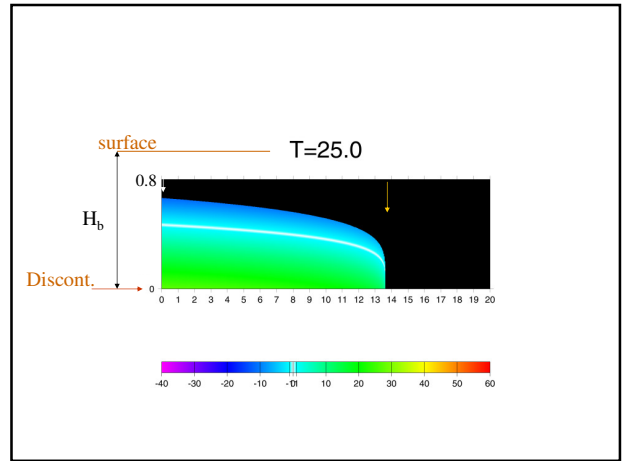
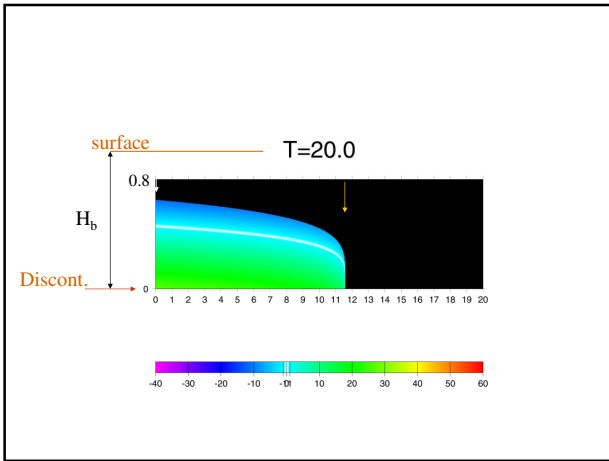
(Lister, 1990)

Dyke en coupe verticale







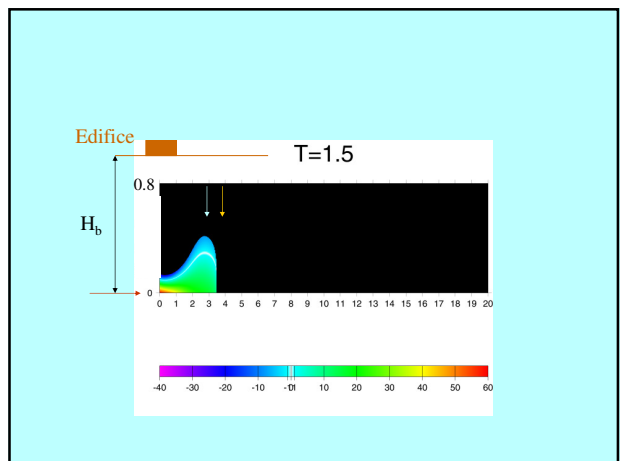
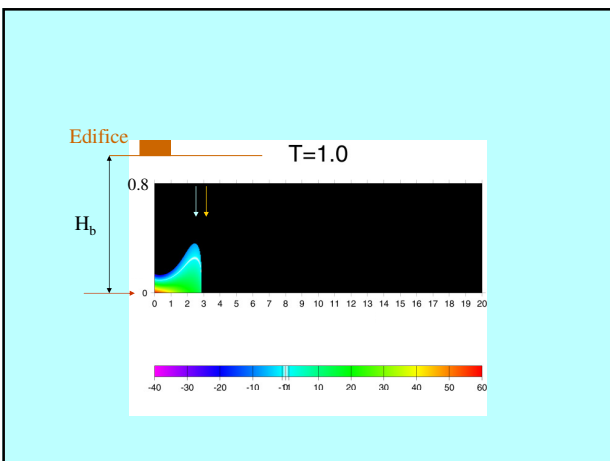
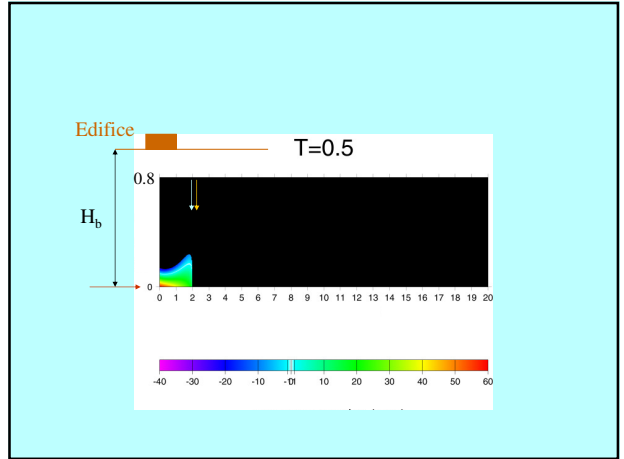
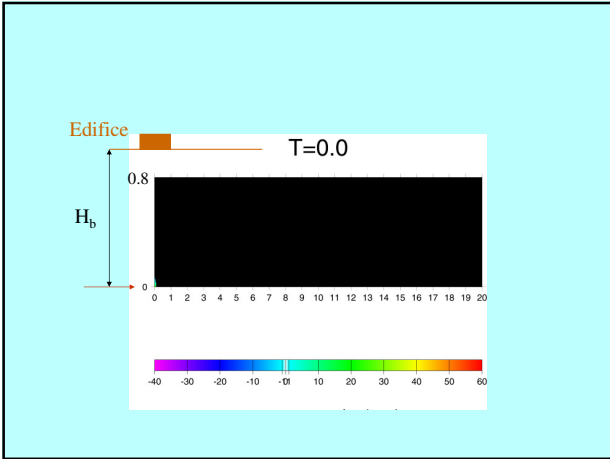


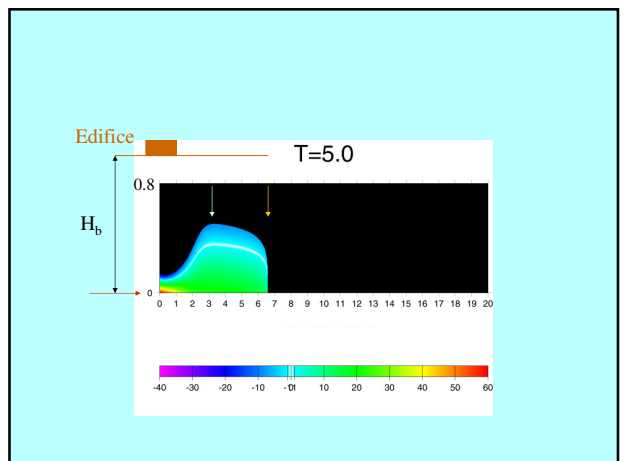
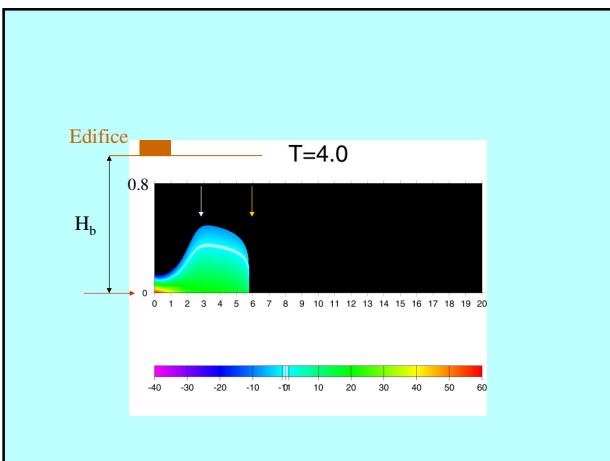
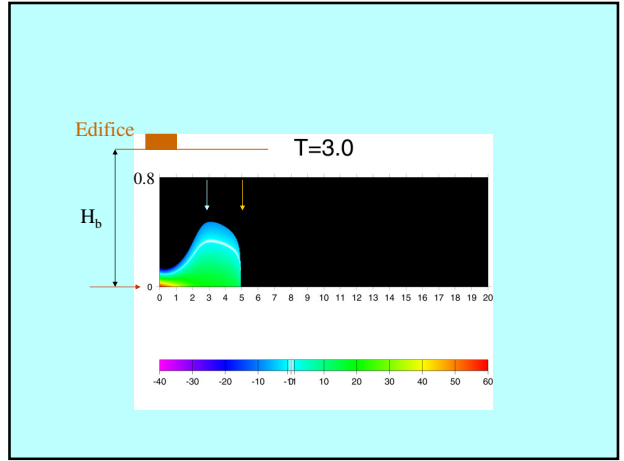
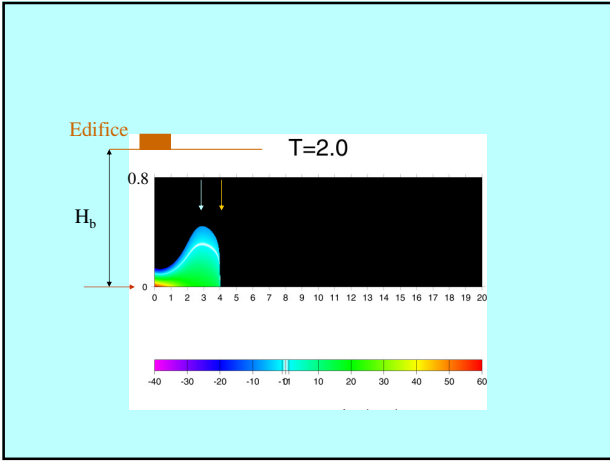
Sans édifice :

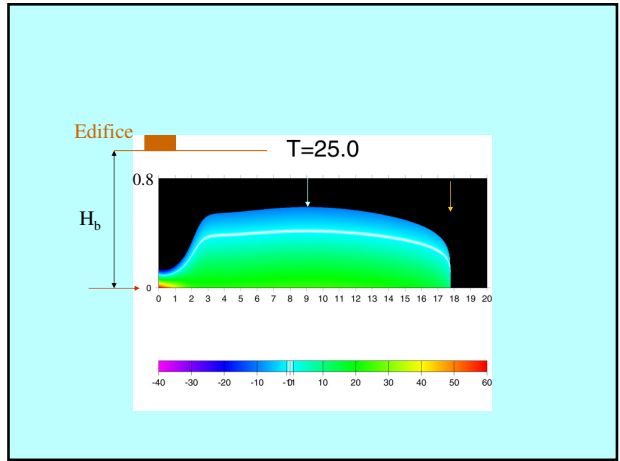
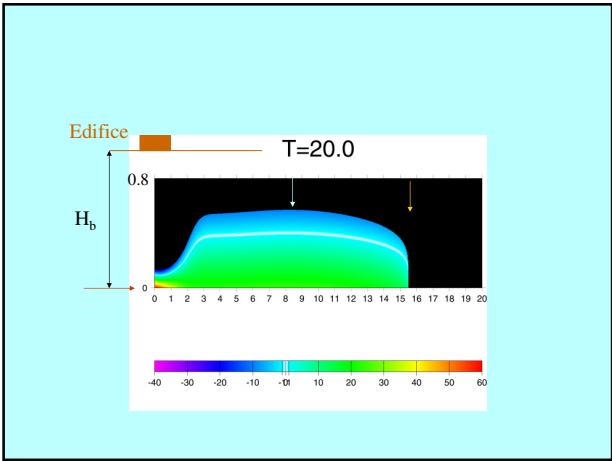
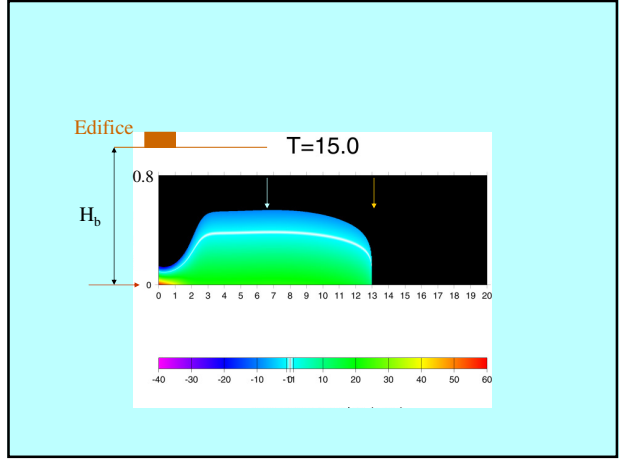
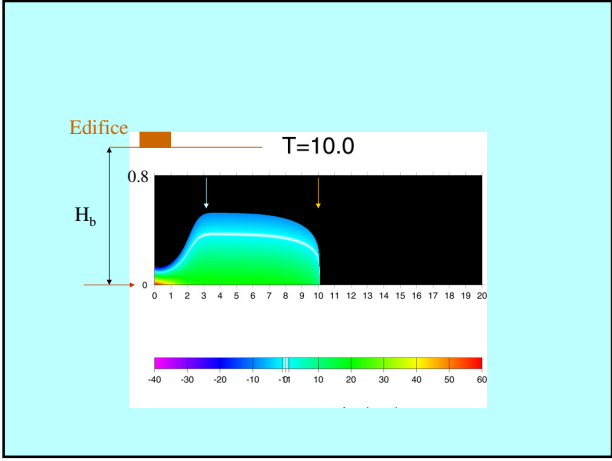
le dyke est le plus haut
au droit de l'injection (à l'axe)

en conséquence:
l'éruption (si elle a lieu) se peut se produire
que dans la zone axiale

Avec un édifice



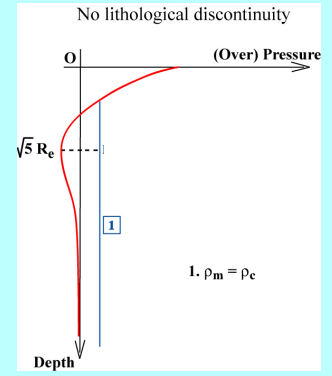




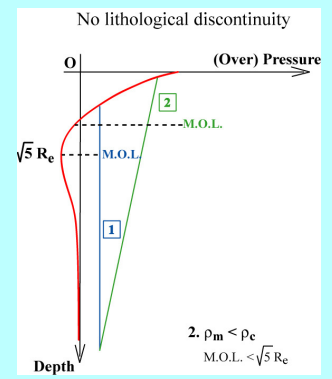
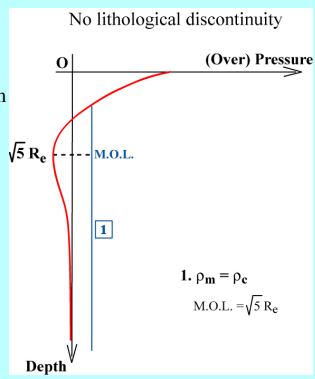
UN MAGMA QUI TROP DENSE POUR ETRE
EMIS DANS LA ZONE AXIALE :

SE PROPAGE-T-IL HORIZONTALEMENT
OU
S'ACCUMULE-T-IL DANS UN RESERVOIR ?

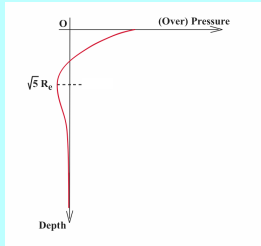
SURPRESSION DANS UN DYKE
(dans une colonne verticale de magma)



Niveau de surpression maximum
(M.O.L.)
=
Niveau de l'injection
horizontale

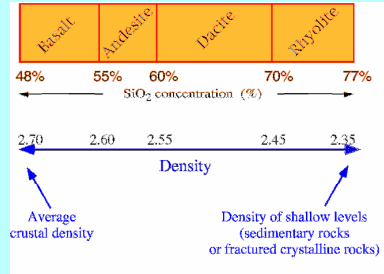


AVEC UNE DISCONTINUITÉ LITHOLOGIQUE

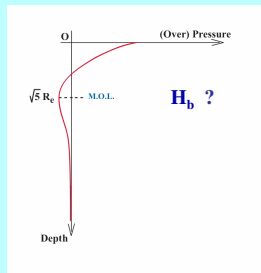


3 densités à considérer
 ρ_u niveaux supérieurs
 ρ_l niveaux inférieurs
 ρ_m magma

Afin de confiner le dyke :
 $\rho_u < \rho_m < \rho_l$

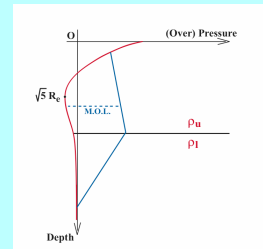


AVEC UNE DISCONTINUITÉ LITHOLOGIQUE (à la profondeur H_b)



$$H_b > \sqrt{5} R_c$$

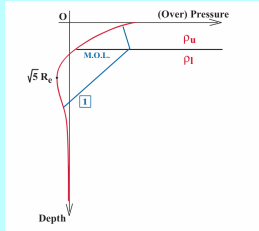
PETIT EDIFICE OU DISCONTINUITÉ PROFONDE



Le M.O.L. coïncide avec la discontinuité.

$$H_b < \sqrt{5} R_e$$

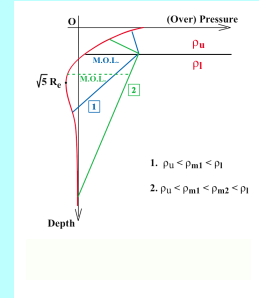
GRAND EDIFICE OU DISCONTINUTE SUPERFICIELLE



Le M.O.L. est sous la discontinuité.

$$H_b < \sqrt{5} R_e$$

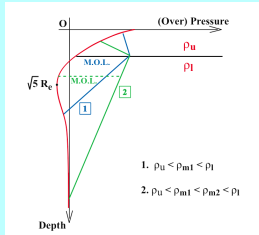
GRAND EDIFICE OU DISCONTINUTE SUPERFICIELLE



1. $\rho_u < \rho_{m1} < \rho_l$
2. $\rho_u < \rho_{m1} < \rho_{m2} < \rho_l$

$$H_b < \sqrt{5} R_e$$

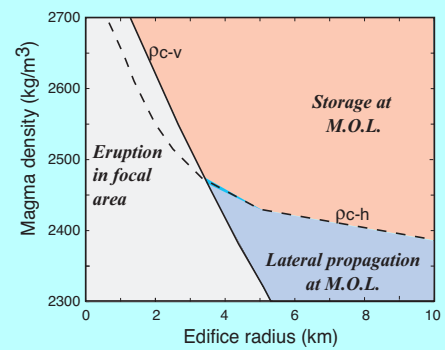
GRAND EDIFICE OU DISCONTINUTE SUPERFICIELLE



1. $\rho_u < \rho_{m1} < \rho_l$
2. $\rho_u < \rho_{m1} < \rho_{m2} < \rho_l$

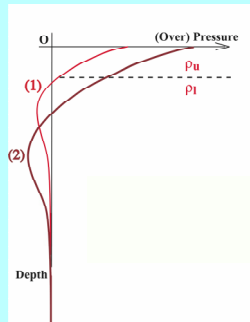
Le magma le plus dense:
est maintenu à

des profondeurs plus importantes sur des épaisseurs plus importantes:
plus de stockage, moins de propagation horizontale.



(Attention: les domaines varient
en fonction des densités des roches encaissantes)

EFFET D'UN EDIFICE



La croissance d'un édifice "repousse" les magmas vers des profondeurs de plus en plus importantes

CROISSANCE DE L'EDIFICE

