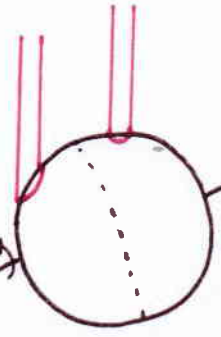
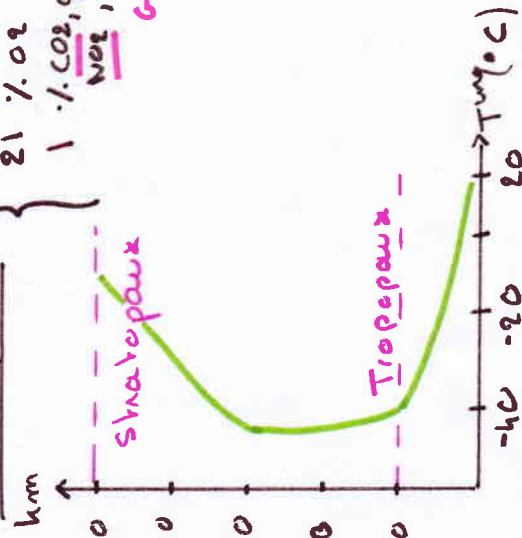


Flux solaire: 342 W.m^{-2}

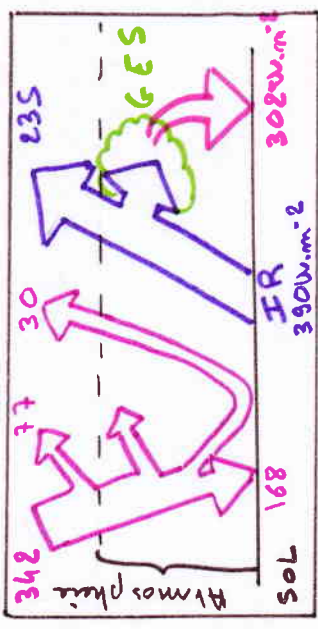


Inégale répartition

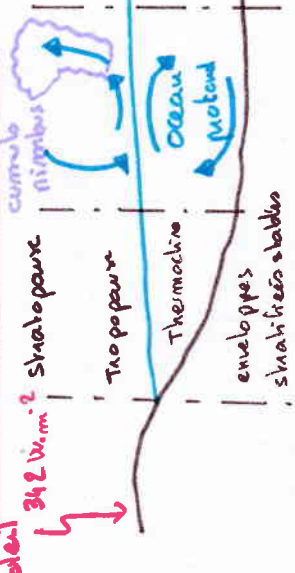
Atmosphère
 78 % N₂
 21 % O₂
 1 % CO₂, CH₄,
 NO₂, O₃...
 GES



Bilan radiatif. (W.m^{-2})



Transferts de chaleur

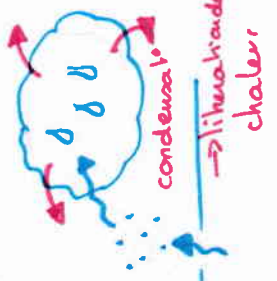


Transfert radiatif

Conduction

Convection

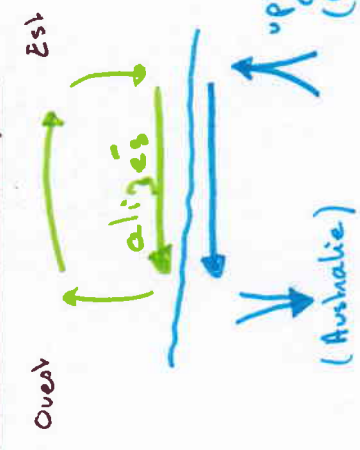
Variation d'enthalpie



78 % N₂
 21 % O₂
 1 % CO₂, CH₄,
 NO₂, O₃...
 GES

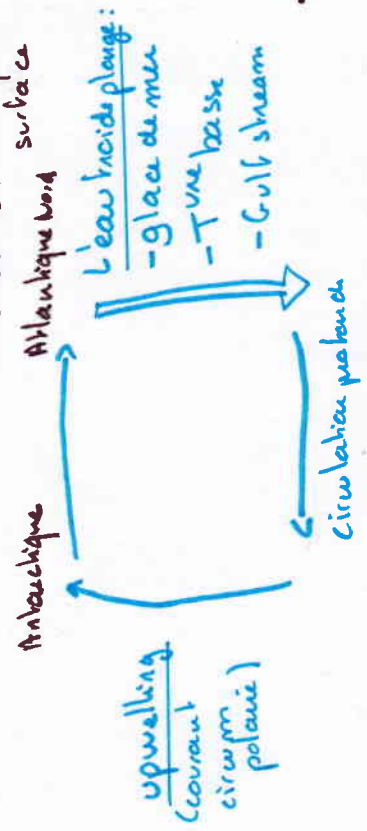
Couplage Océans - Atmosphère:
 circulation océanique de surface.

• Equateur - tropiques: ϕ Coriolis $r = \text{km.h}^{-1}$

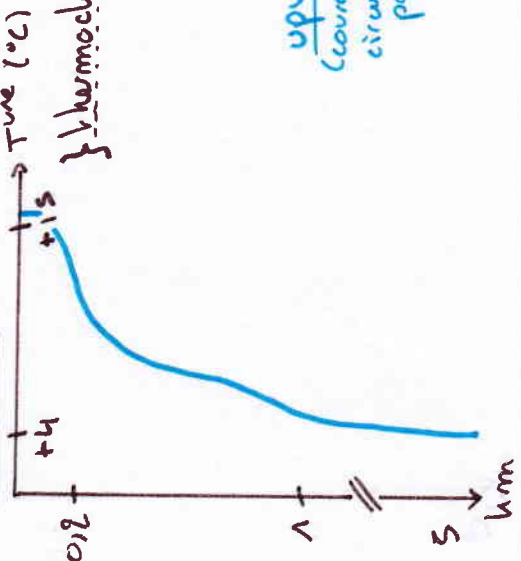


Circulation profonde

$\approx 99 \text{ km.an}^{-1}$
 10 à 100 fois + lent qu'en surface



Océans



• Latitudes > tropiques: spirale d'Ekman (Chémisphère Nord)

