

# Cycle diurne en surface: (continents, été)

Flux radiatifs:

$F_S$ : visible

$F_L$ : infrarouge

$F^*$ : flux net

Flux de chaleur:

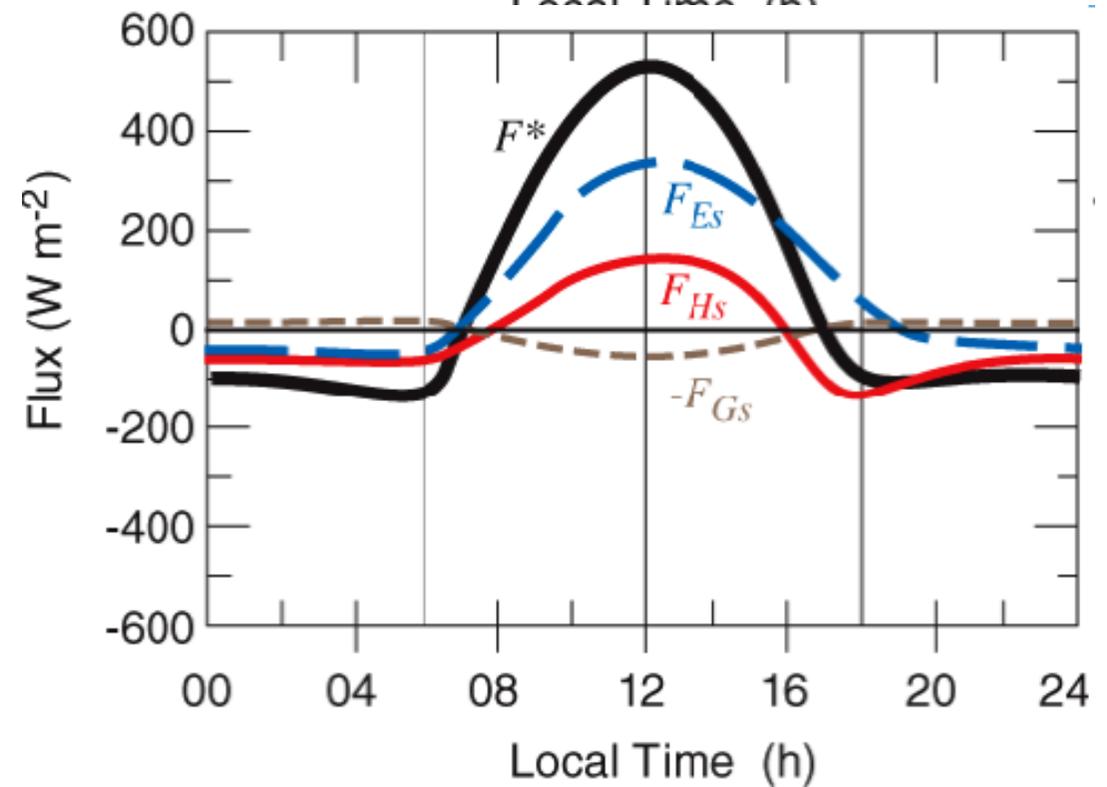
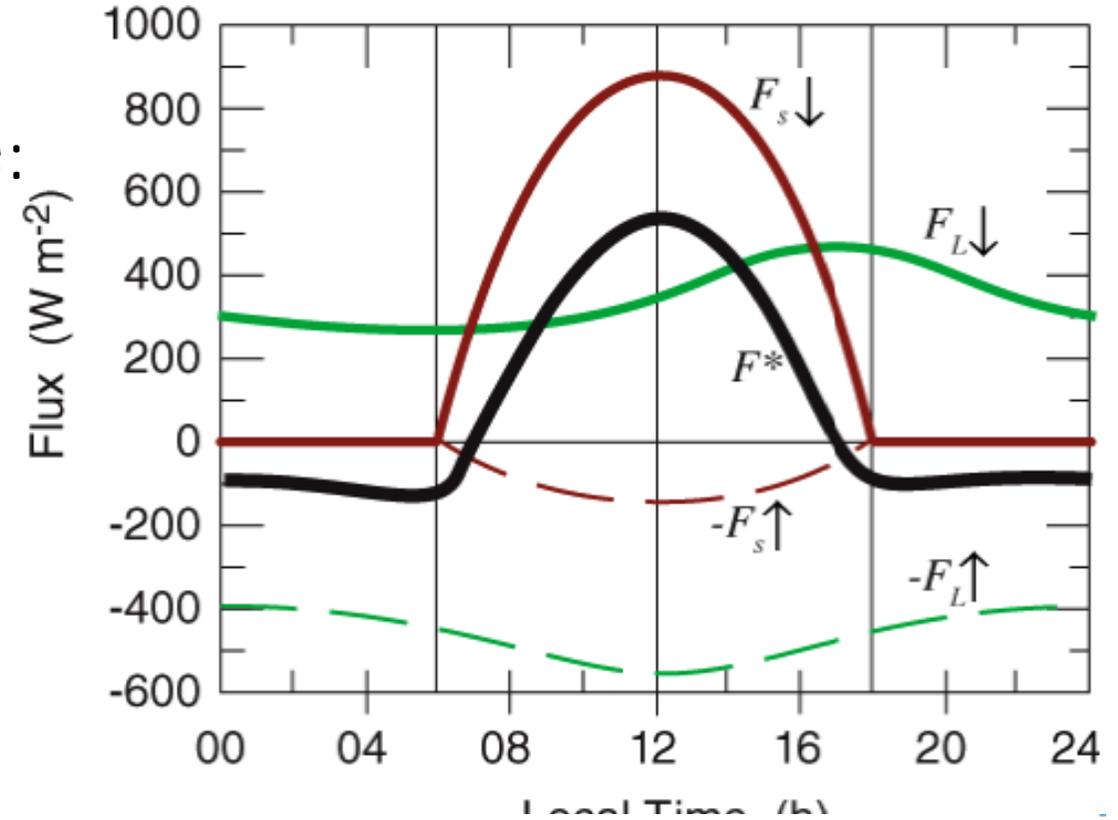
$$F^* = F_H + F_E + F_G$$

$F^*$  radiatif

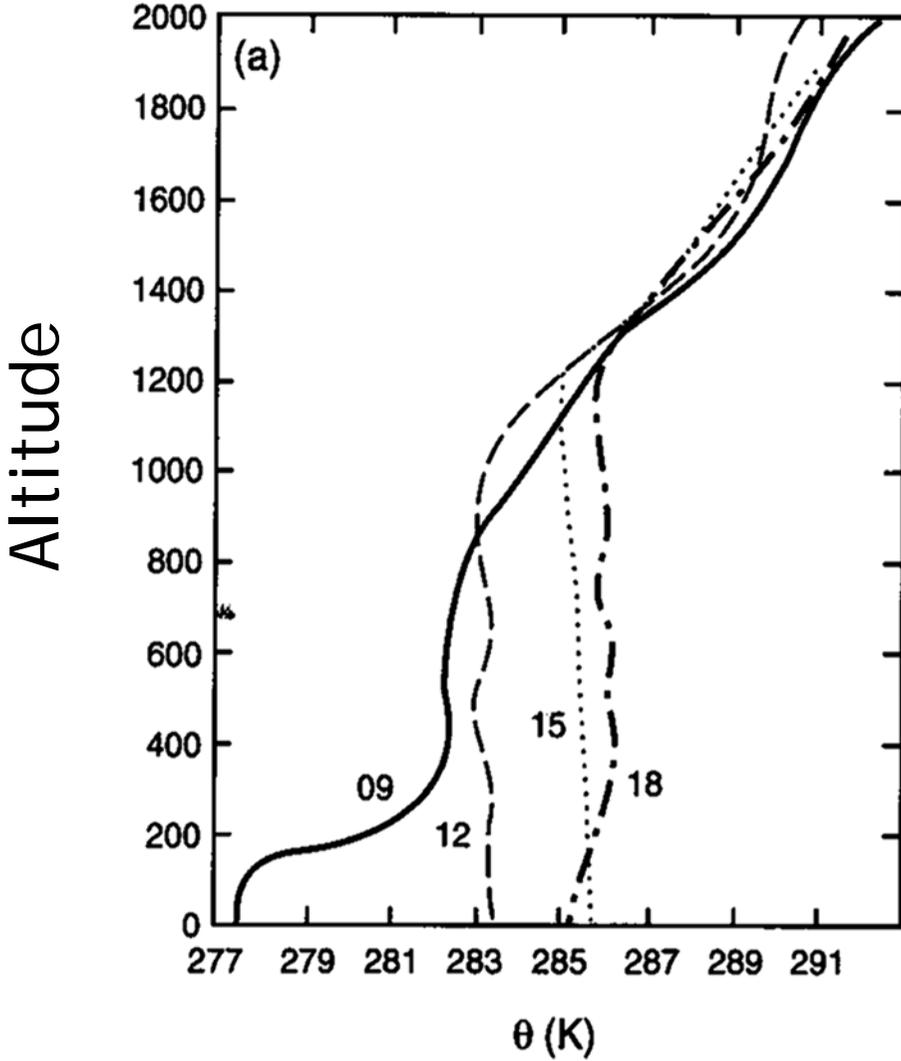
$F_H$  sensible

$F_E$  latent

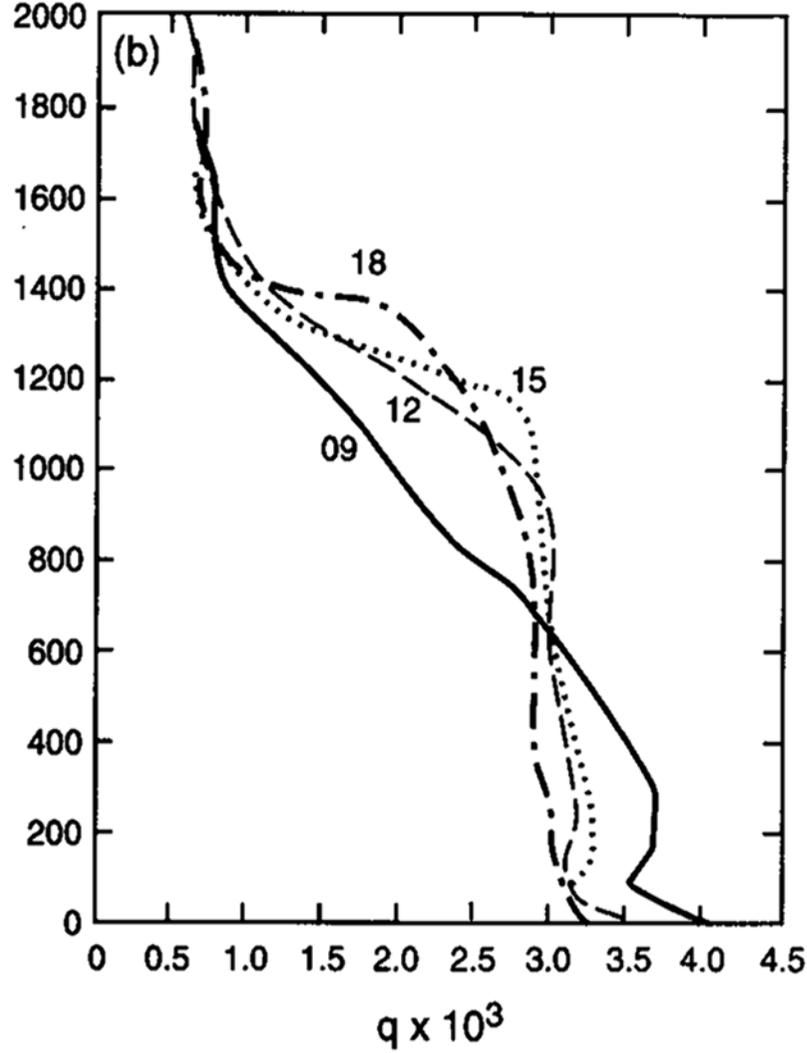
$F_G$  sous-sol



# Couche limite: cycle diurne.



Température potentielle



Rapport de mélange



# Analyse en ordre de grandeur 2

Mouvements verticaux.  $H=10\text{km}$ ,  $P_0=10^5\text{ Pa}$

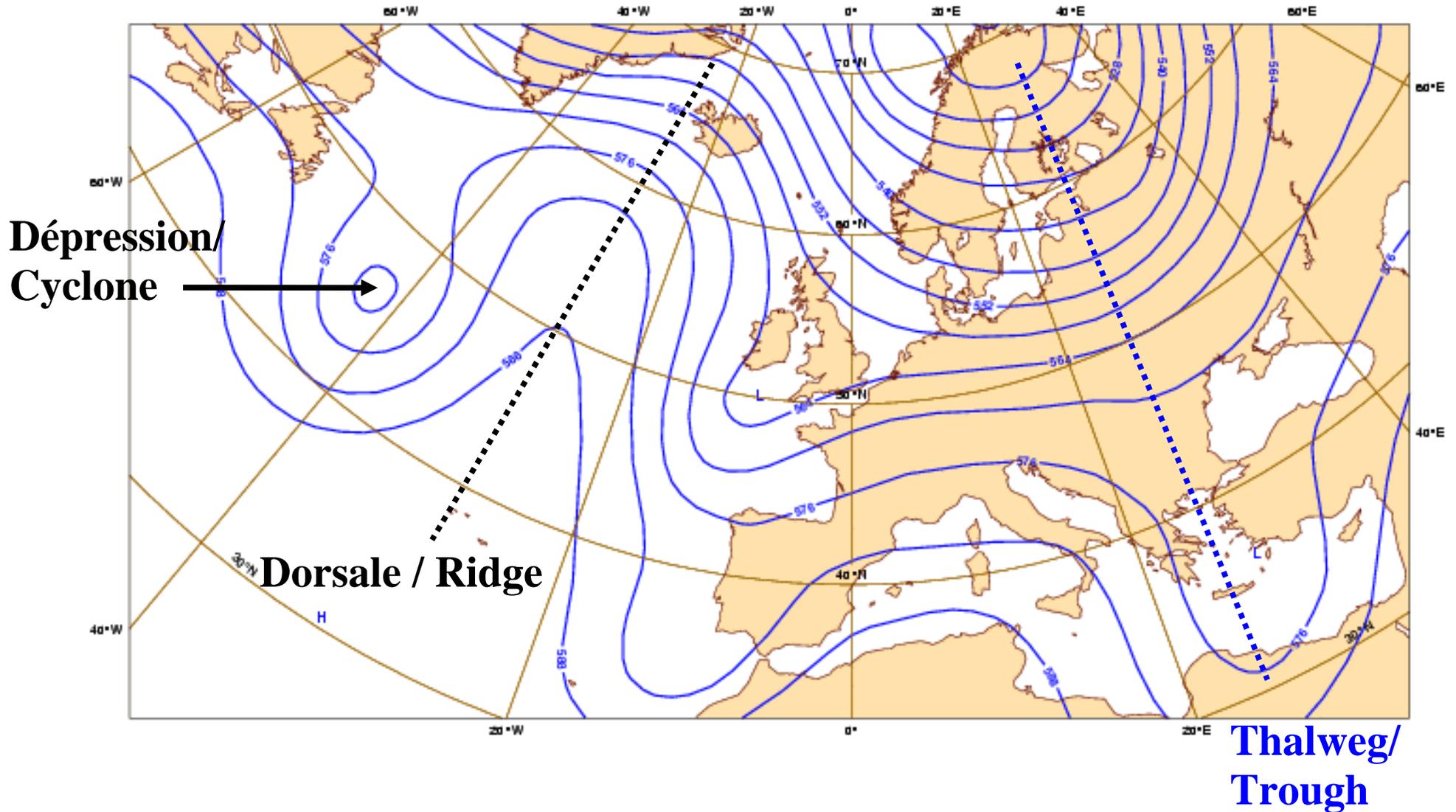
**Table 2.2** *Scale Analysis of the Vertical Momentum Equation*

<i>z</i> -Eq.	$Dw/Dt$	$-2\Omega u \cos \phi$	$-(u^2 + v^2)/a$	$= -\rho^{-1} \partial p / \partial z$	$-g$	$+F_{rz}$
Scales	$UW/L$	$f_0 U$	$U^2/a$	$P_0/(\rho H)$	$g$	$\nu WH^{-2}$
$\text{m s}^{-2}$	$10^{-7}$	$10^{-3}$	$10^{-5}$	10	10	$10^{-15}$

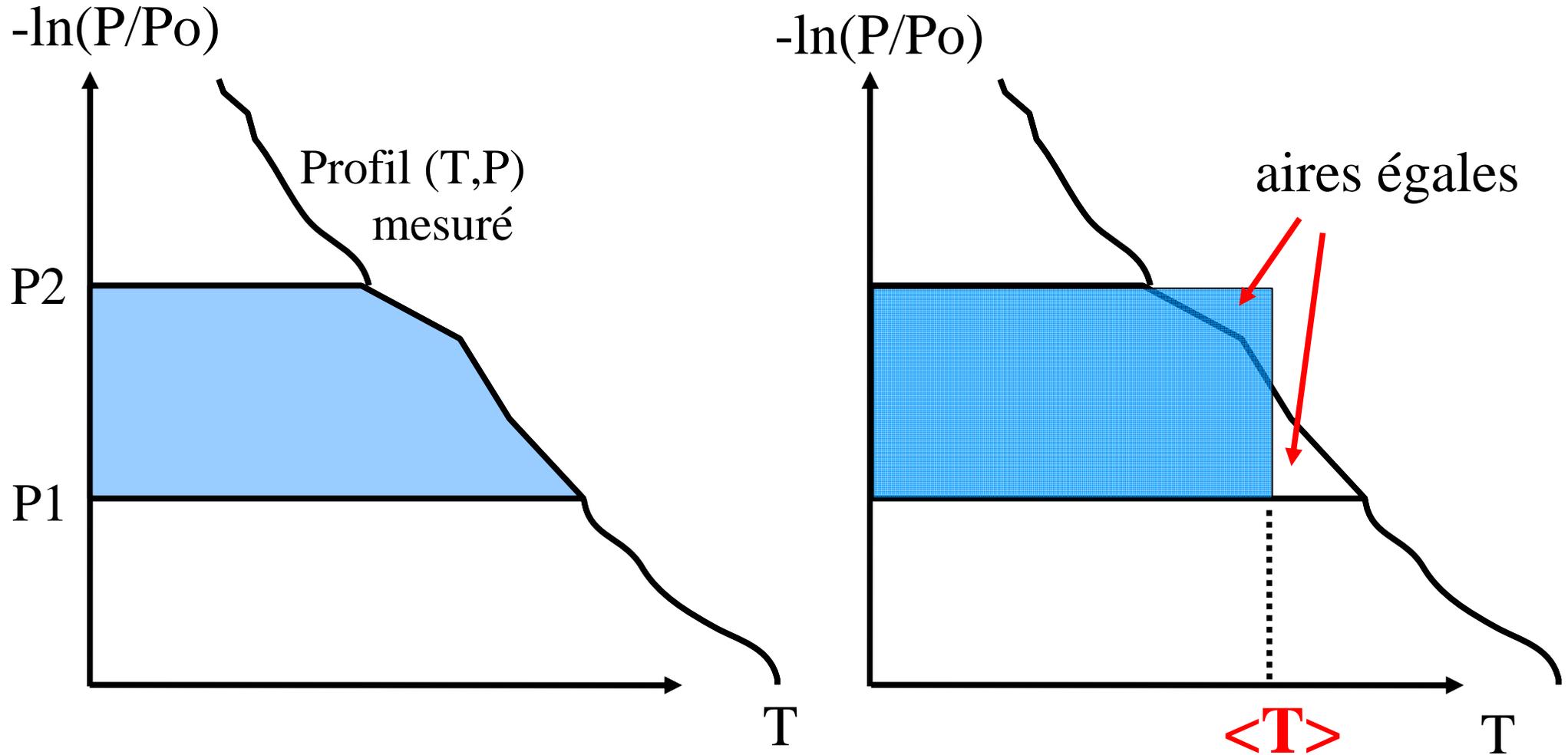


# Altitude à 500hPa (lignes isohypses)

Tuesday 13 September 2005 12UTC ©ECMWF Forecast t+072 VT: Friday 16 September 2005 12UTC  
500 hPa Height



# Méthode graphique pour la température moyenne sur une couche ( $P_1, P_2$ )



Les aires ombrées sont égales

# Altitude à 500hPa et température à 850hPa

Tuesday 13 September 2005 12UTC ©ECMWF Forecast t+072 VT: Friday 16 September 2005 12UTC  
850 hPa Temperature / 500 hPa Geopotential

