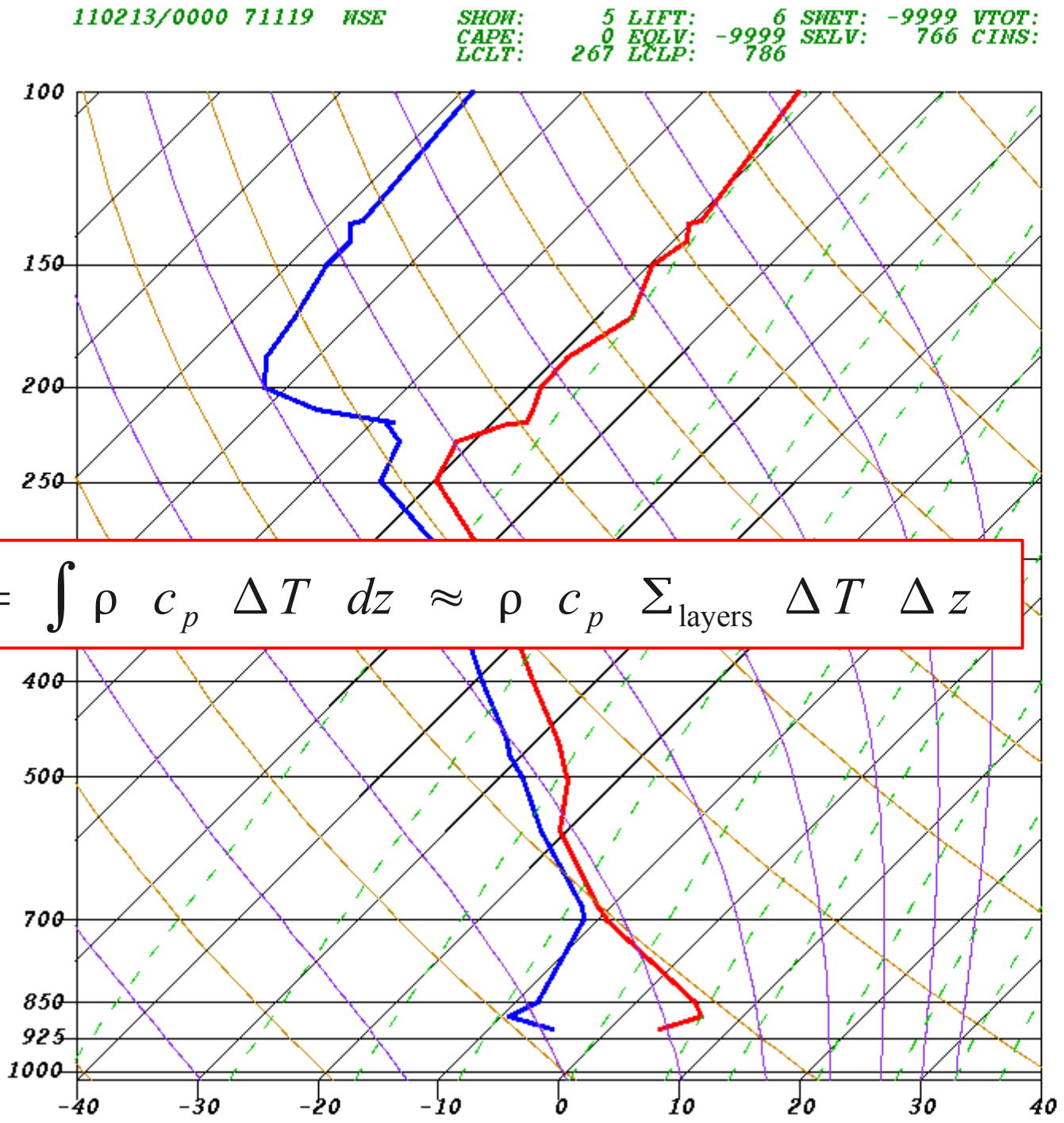
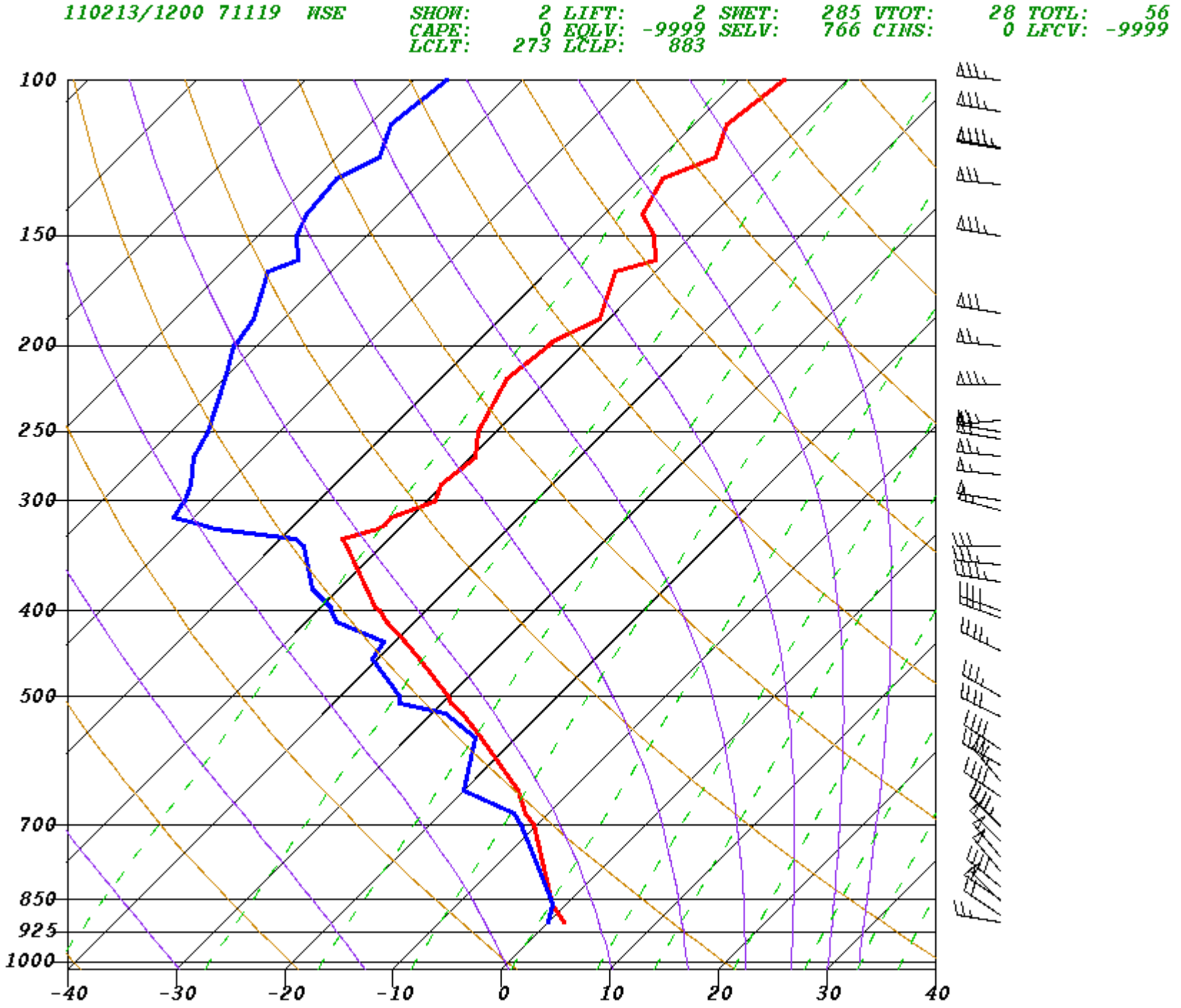


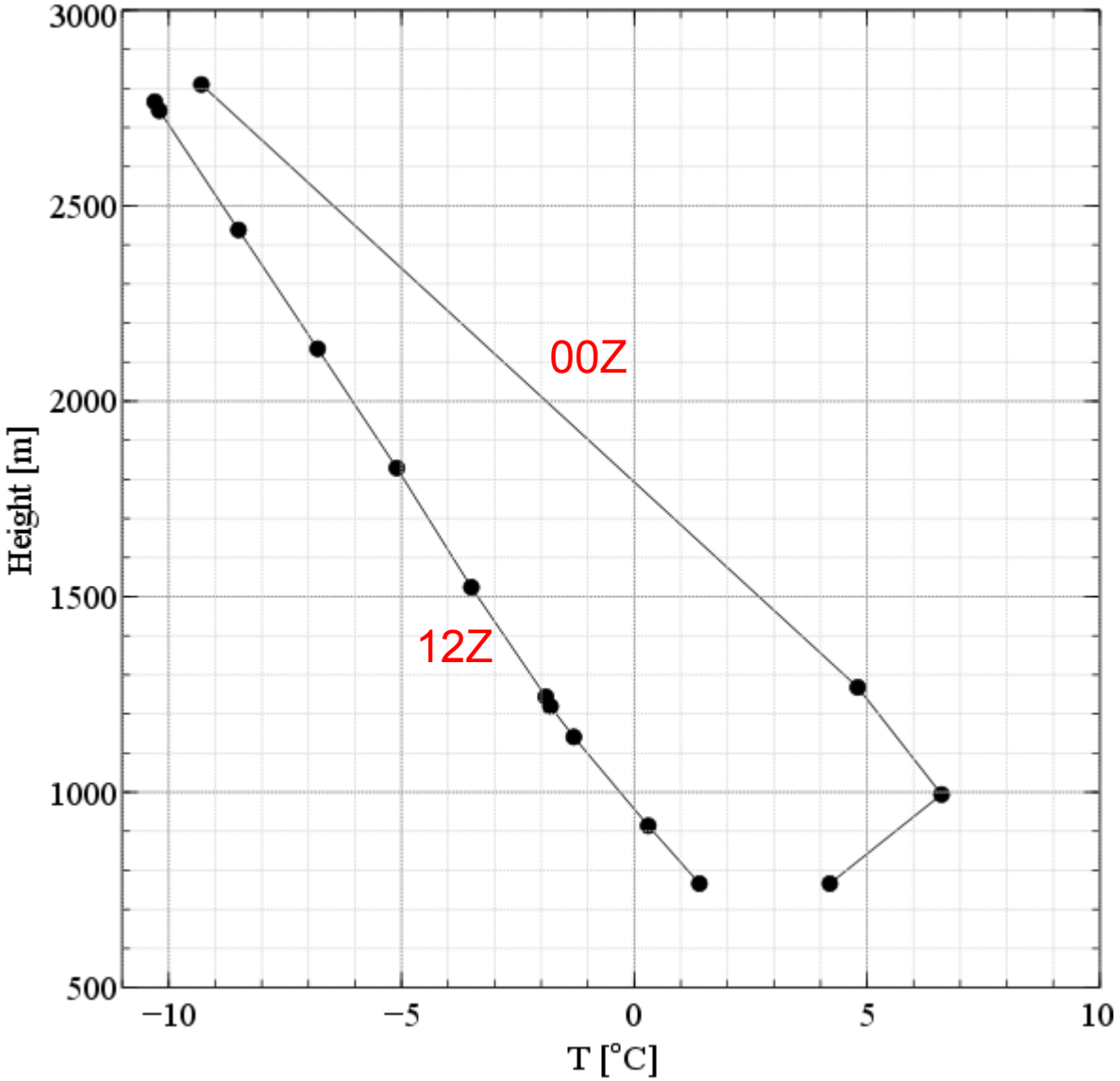
$$\Delta E = \int \rho \; c_p \; \Delta T \; dz \approx \rho \; c_p \; \Sigma_{\text{layers}} \; \Delta T \; \Delta z$$

Estimate the sensible heat loss [Joules m^{-2}] below 700 hPa corresponding to this pair of soundings...

Method:

Obtain the underlying data and plot *T* versus *z* for each (on the same graph)... the area enclosed by the two soundings, multiplied by an approximate value for $\rho \; c_p$, is the energy loss ΔE


110213/1200 71119 WSE
SHOW: 2 LIFT: 2 SWET: 285 VTOT: 28 TOTL: 56
CAPE: 0 EQLV: -9999 SELV: 766 CINS: 0 LFCV: -9999
LCLT: 273 LCLP: 883
100
150
200
250
300
400
500
700
850
925
1000
-40
-30
-20
-10
0
10
20
30
40



Each square represents 100 x 1 [K m] and there are about 90 of them enclosed between the two profiles. Taking ρ as unity, we have $\Delta E \approx 1 \, x \, 1000 \, x \, 90 \, x \, 100 = 9 \, x \, 10^{6} \; [\mathrm{J \; m^{-2}}]$

And if we divide by 12 x 3600 s, the implied flux is about 200 W m^{-2}