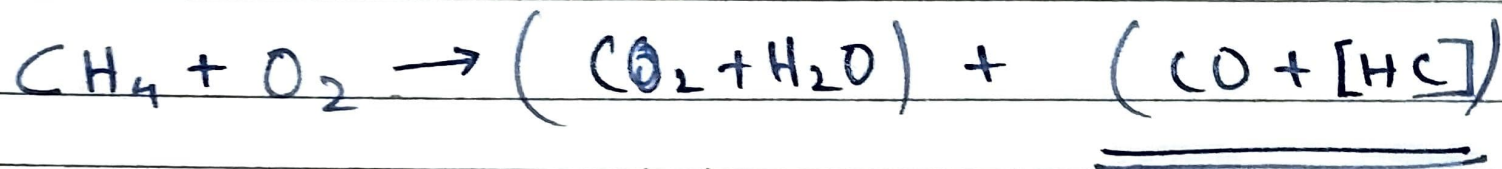


1)

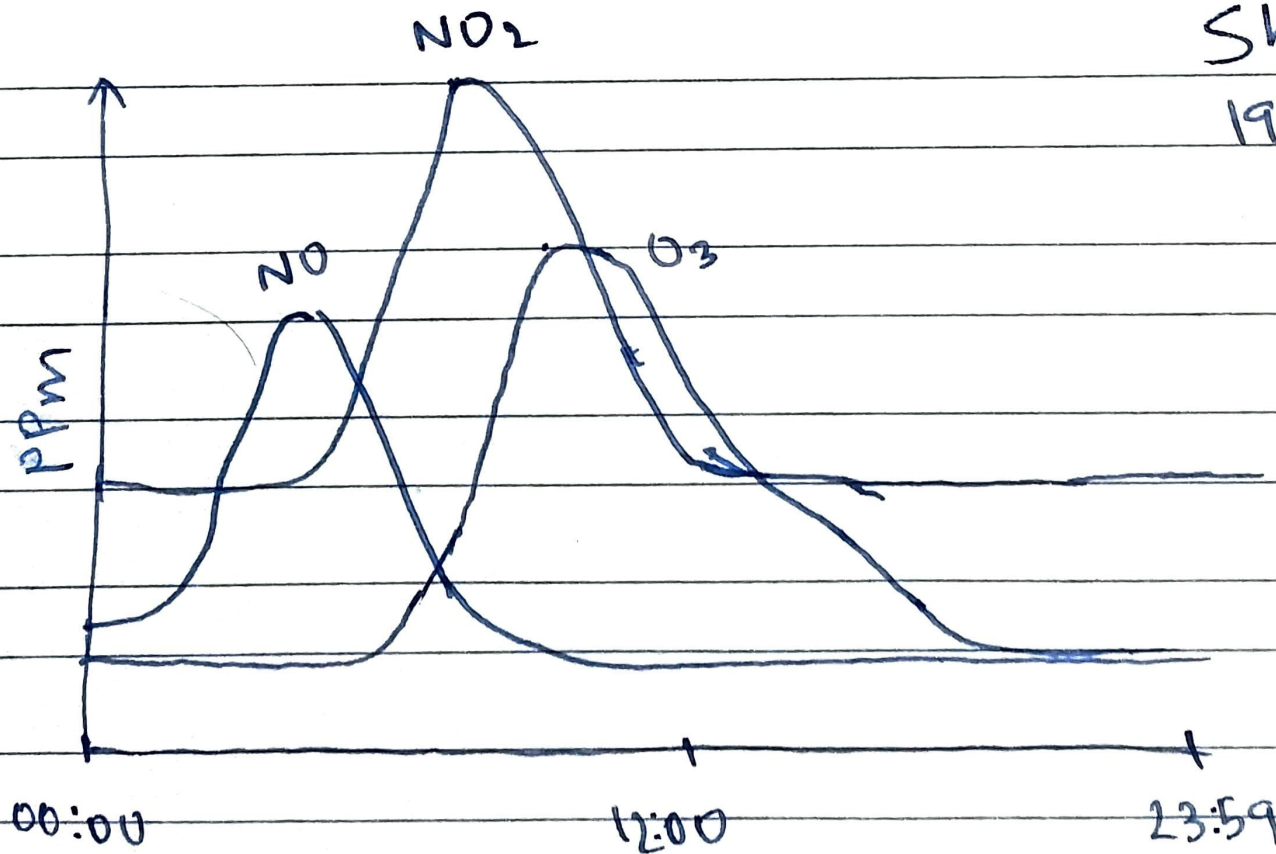
Sharon K

19MS015



where  $[\text{HC}]$  is a number of hydrocarbons.

2)

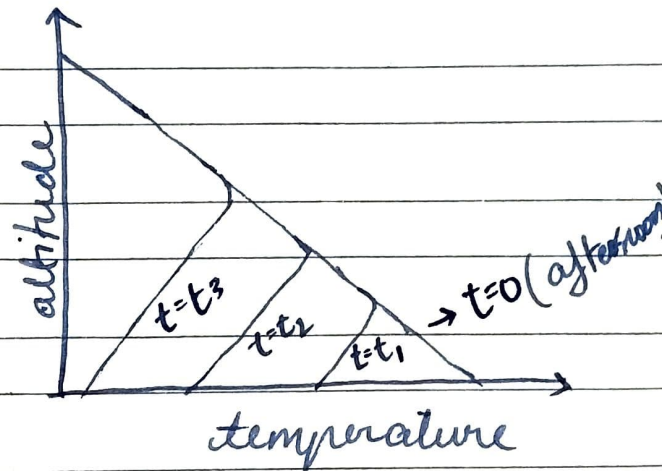


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### 3) Development of an inversion.

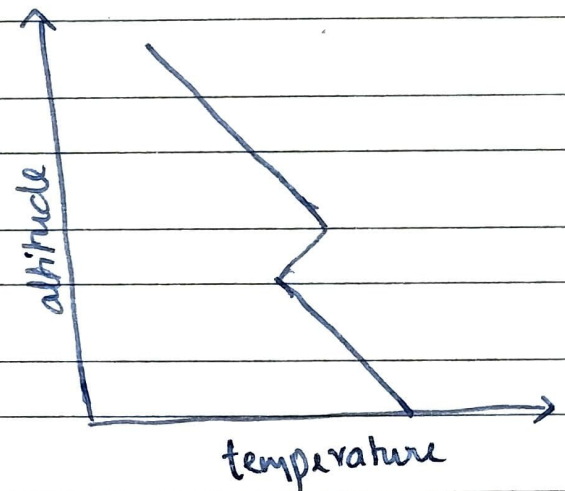
$$t_0 < t_1 < t_2 < t_3$$

the ground starts cooling in the evenings and near the ground, the temperature increases, creating an inversion.



### Breaking of the inversion.

in the morning, the ground starts heating up, and breaks the inversion.



4. emission =  $1 \text{ PCi/m}^2\text{s}$       air exchange(n) =  $2.6 \text{ ach}$

Area =  $250 \text{ m}^2$       Ambient conc =  $0$ .

height =  $2.6 \text{ m}$       decay rate =  $7.6 \times 10^{-3} \text{ hr}^{-1}$

$$C_{\infty} = \frac{S/V}{n+k} = \left( \frac{1 \text{ PCi m}^{-2} \text{ s}^{-1} \times 60 \times 60 \text{ s hr}^{-1} \times 250 \text{ m}^2}{250 \times 2.6 \text{ m}^3} \right) \frac{1}{0.9 \text{ hr}^{-1} + 7.6 \times 10^{-3} \text{ hr}^{-1}}$$

$$= \frac{1384.61 \text{ PCi/m}^3}{0.9076}$$

$$= 1525 \text{ PCi m}^{-3}$$

$$= \underline{\underline{1.525 \text{ PCi L}^{-1}}}$$



5) The most heated region of the Earth's surface is the equator at  $0^{\circ}\text{N}$ .

The Hadley cells that arise in this region, descend at  $30^{\circ}\text{N}$  and  $30^{\circ}\text{S}$ .

The descent creates a very high pressure zone at those ~~latitudes~~ latitudes and results in a lack of clouds.

This causes a decrease in clouds and thus results in low rainfall. This causes the formation of deserts.

Sahara, Great deserts in Australia.