

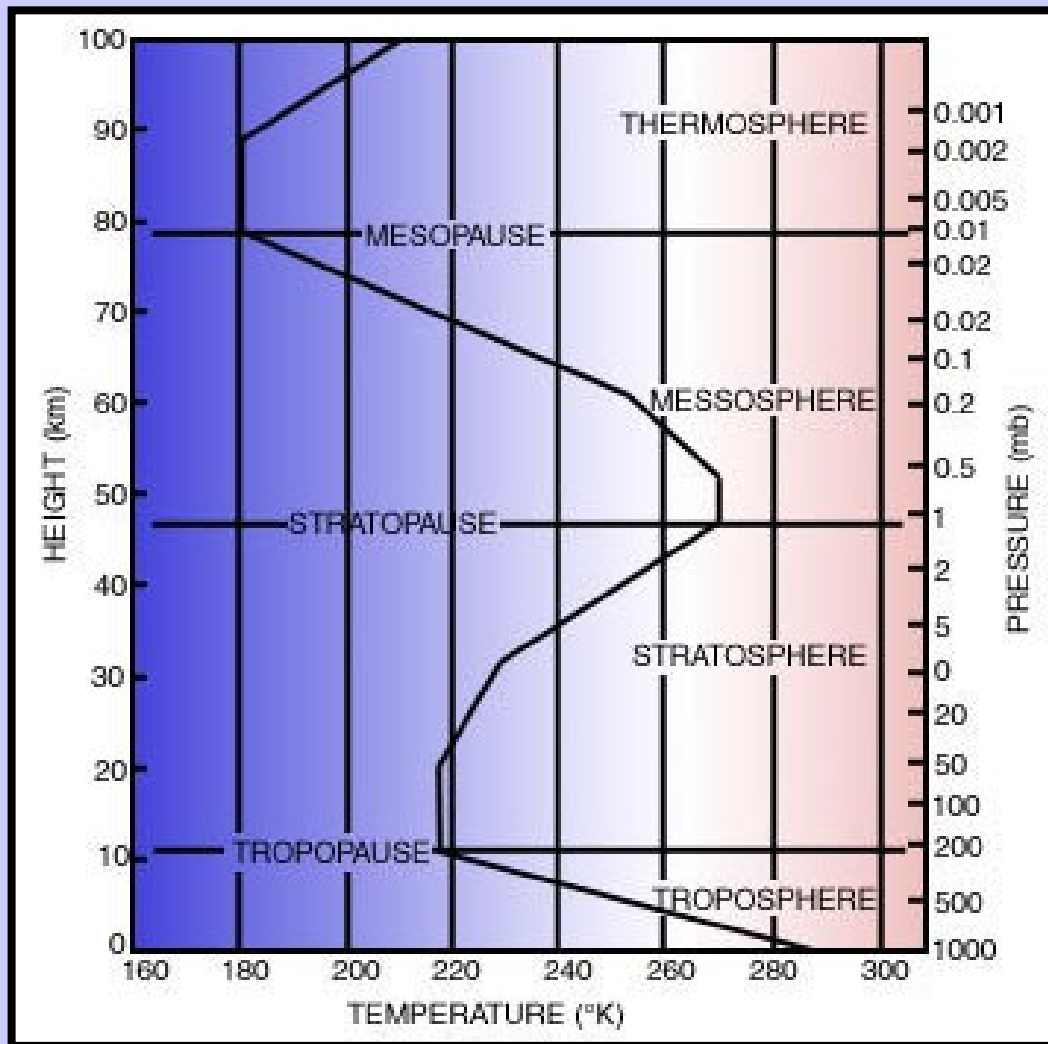
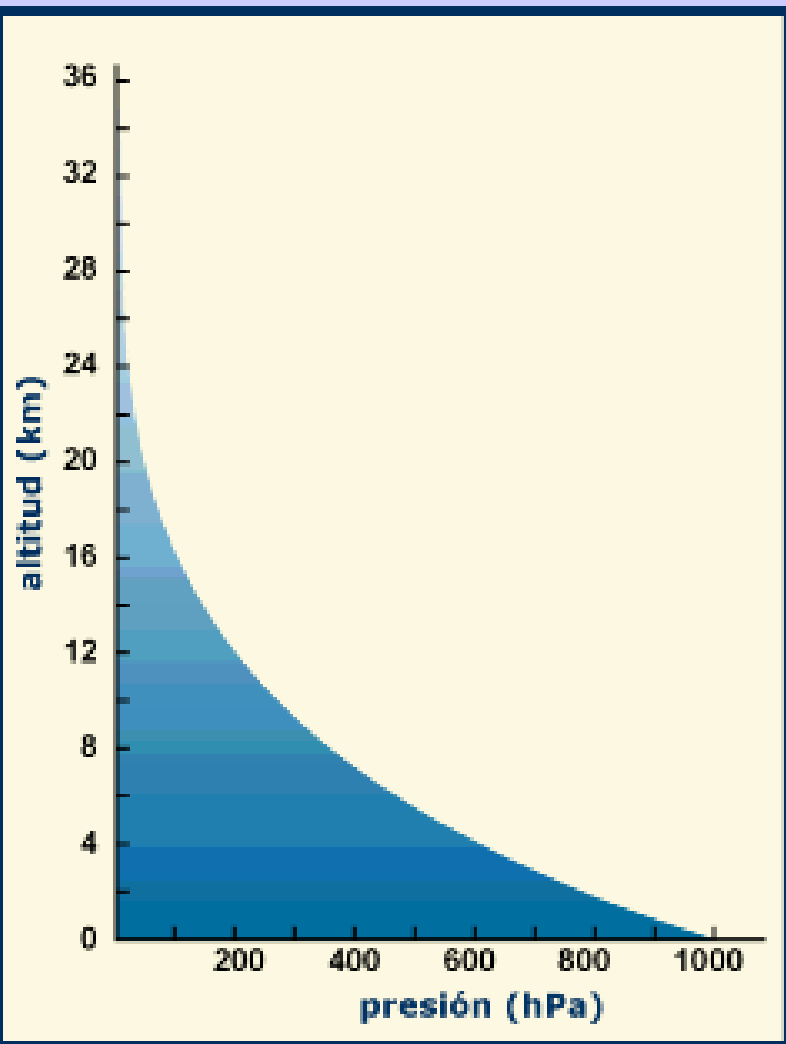
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Average Composition of the Troposphere

Gas Name	Formula	Abundance (%)	Residence time (approx)
Nitrogen	N ₂	78.08%	42,000,000 years
Oxygen	O ₂	20.95%	5,000 years
*Water	H ₂ O	0 to 4%	10 days
Argon	Ar	0.93%	~Infinite
*Carbon Dioxide	CO ₂	0.0360%	4 years
Neon	Ne	0.0018%	~Infinite
Helium	He	0.0005%	~Infinite
*Methane	CH ₄	0.00017%	10 years
Hydrogen	H ₂	0.00005%	3 years
*Nitrous Oxide	N ₂ O	0.00003%	170 years
*Ozone	O ₃	0.000004%	20 days
*variable gases			

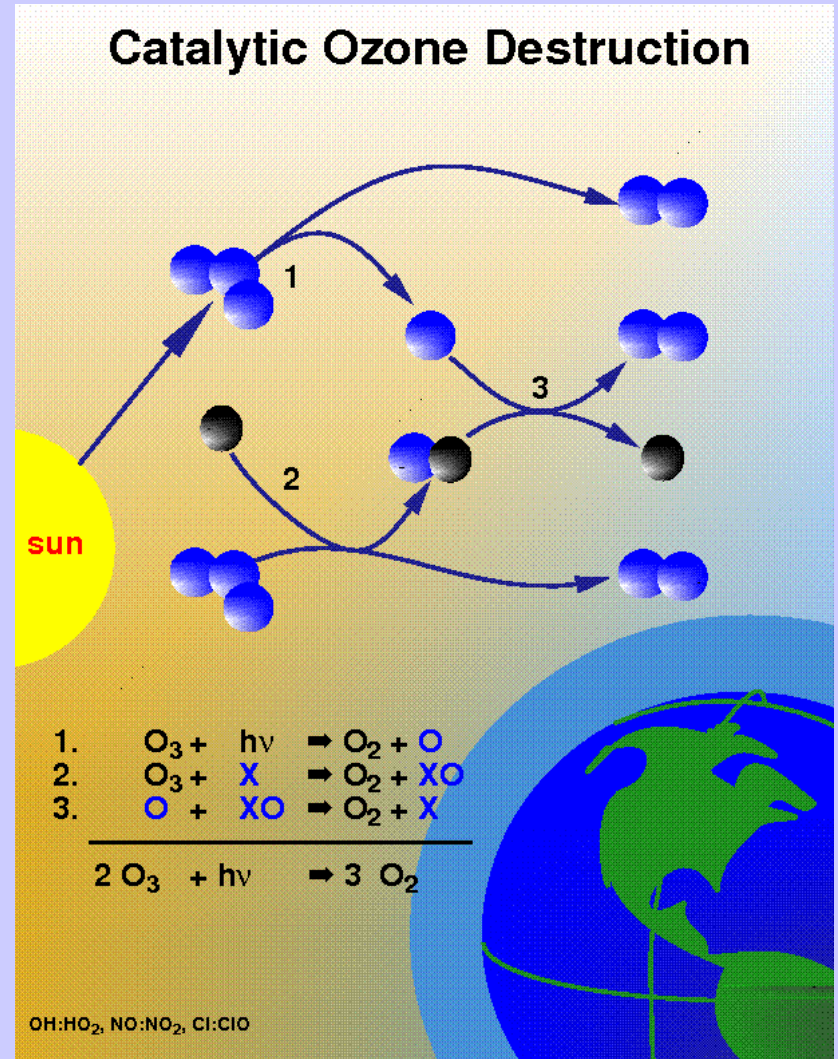
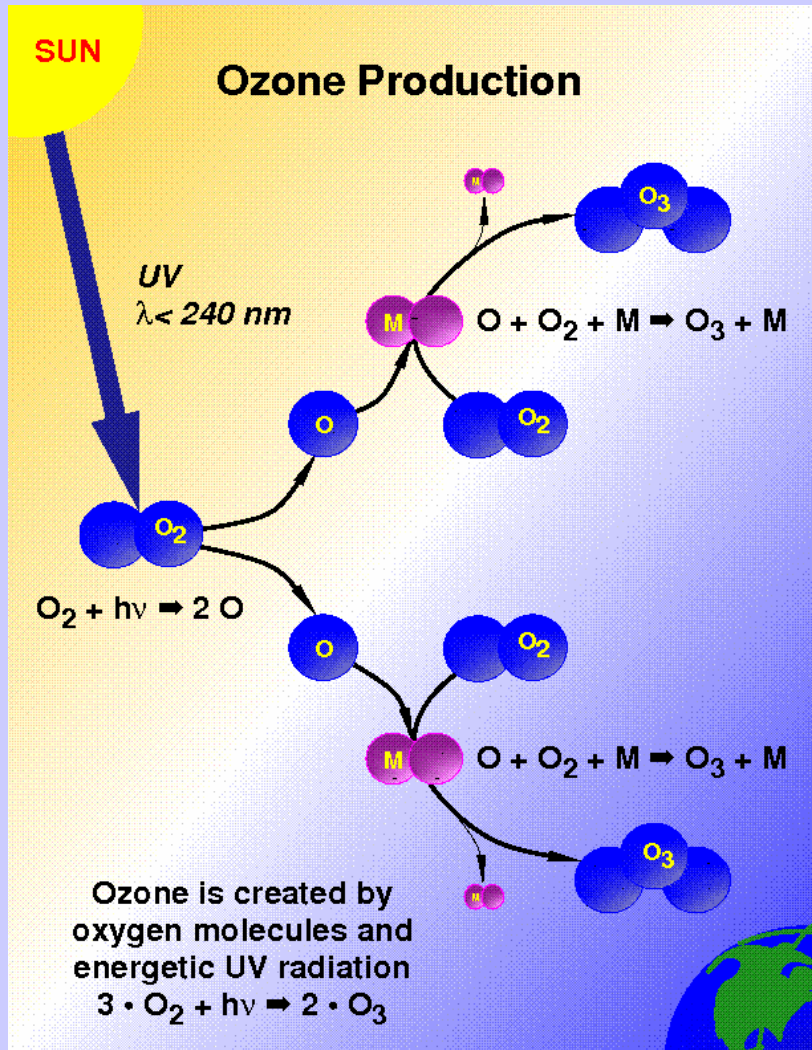
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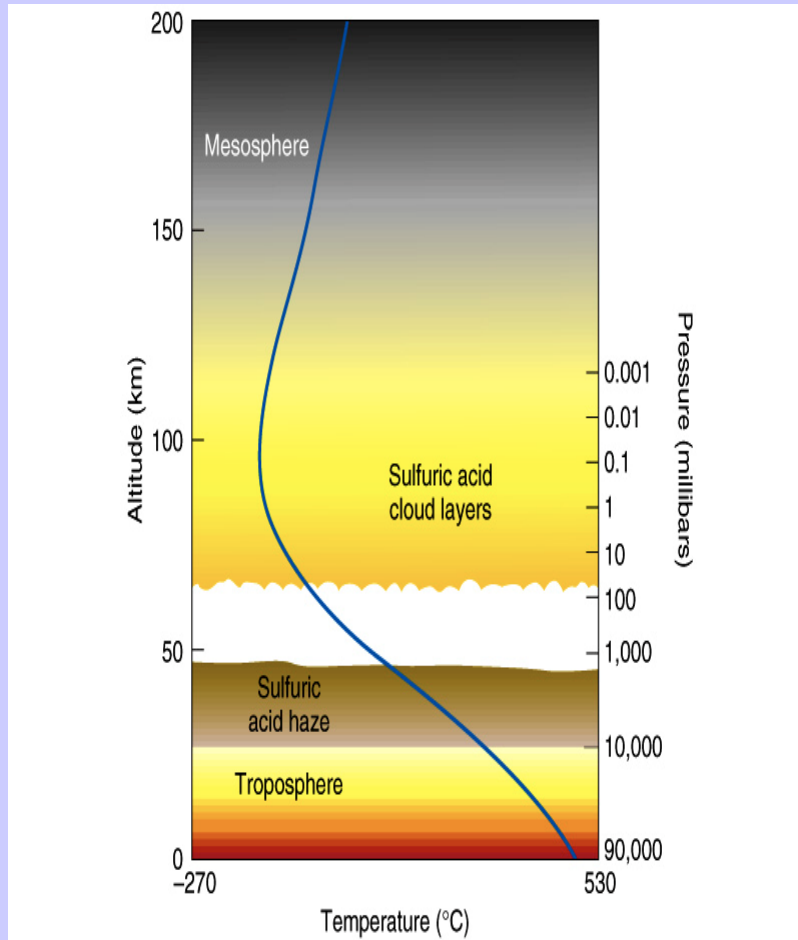
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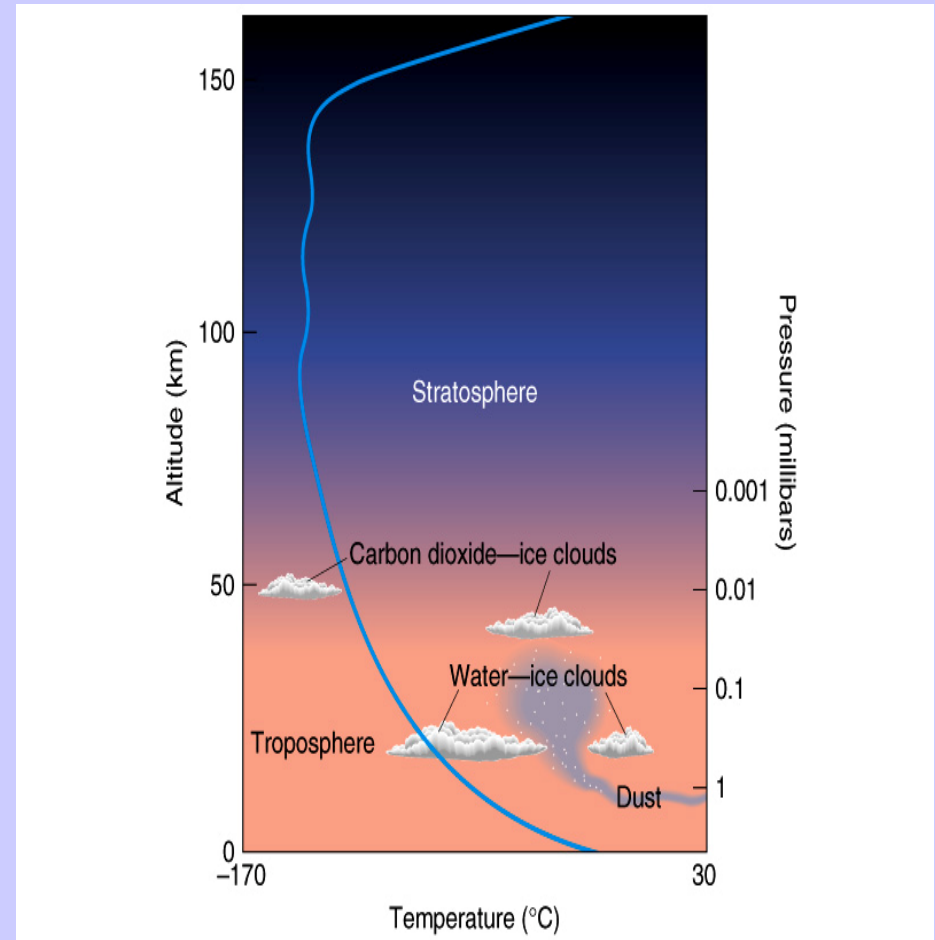
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Venus



Marte



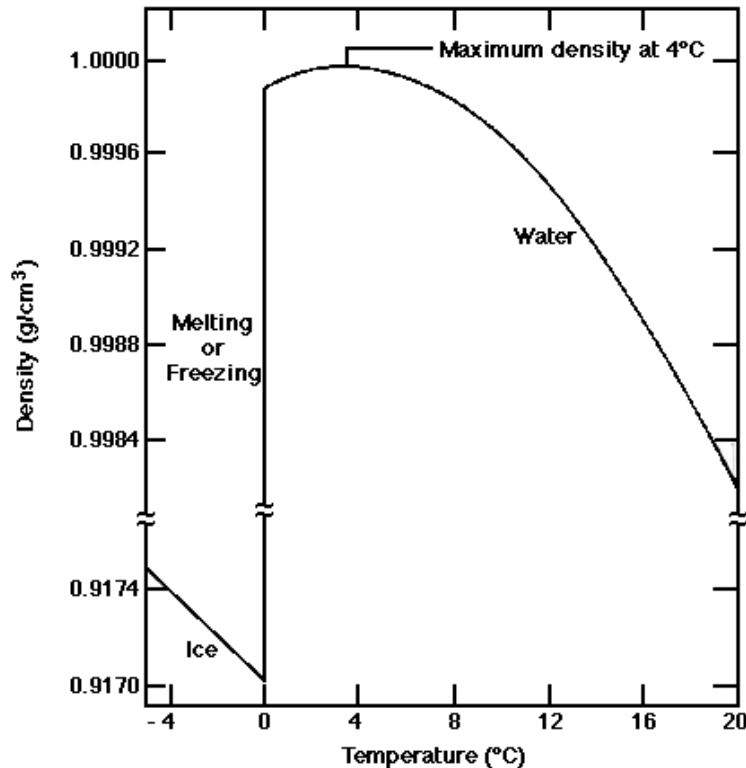
Que similitudes/diferencias existen entre la atmósfera de la Tierra, Marte y Venus?
Como es la estructura vertical de Júpiter, Saturno, etc...?

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Agua destilada a 20°C, $p=1000$ hPa, $\rho=1000$ Kg/m³
 1 Kg agua de mar contiene aprox. 35 gr de sal (Cl,Na,...)

Agua “dulce”



Density of water (and ice) as a function of temperature. Note maximum density of water at 4°C. (Data from Pauling 1953 and Hutchinson 1957: 204.)

$$\rho(T, P, S) = \sigma(T, P, S) + 1000 \text{ kg m}^{-3}$$

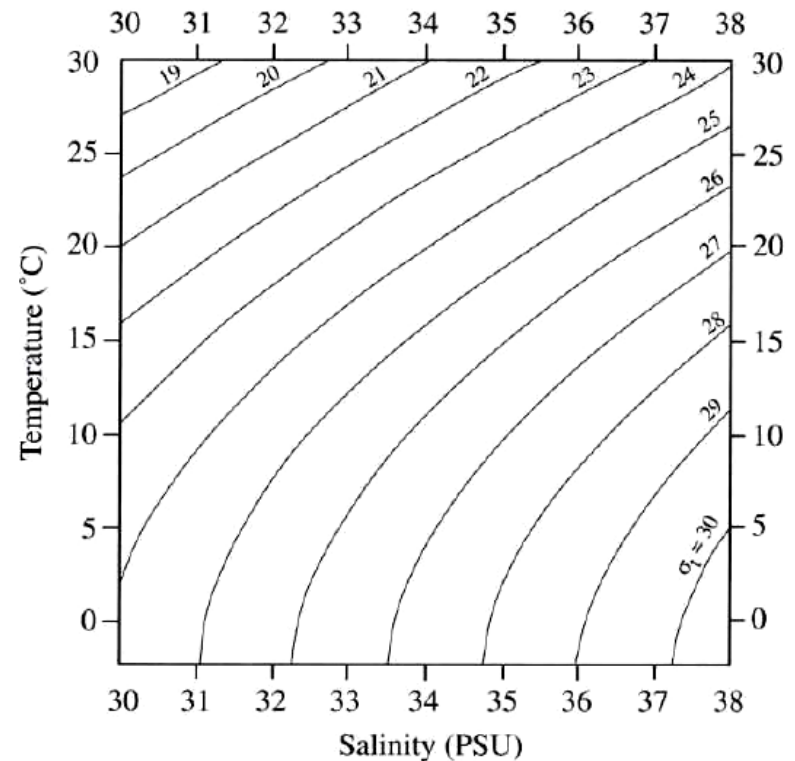


Figure 2.1 Density of sea water (σ_t) as a function of temperature and salinity

$T(z)$ en el océano

Typical Temperature Profiles

