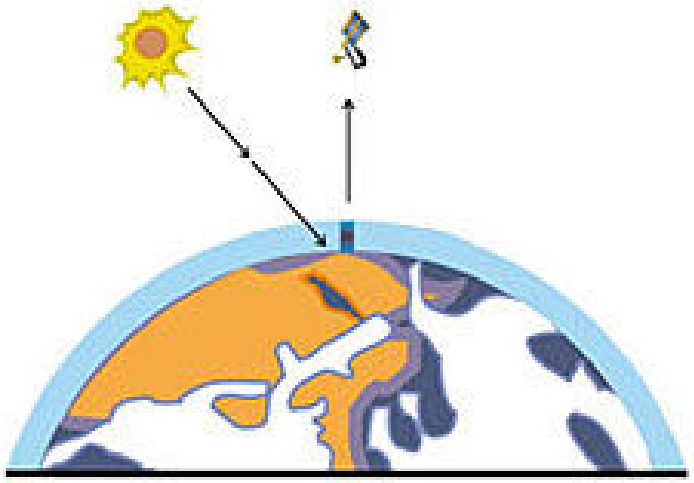
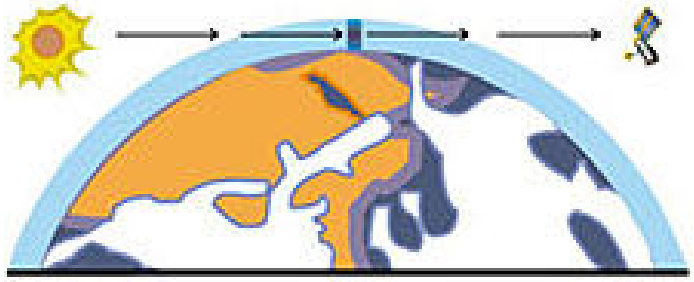
Ozônio

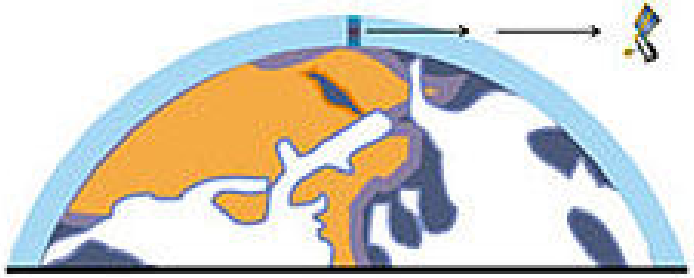
- Técnicas para determinar sua concentração integrada na coluna atmosférica via satélite

A. Backscatter Ultraviolet

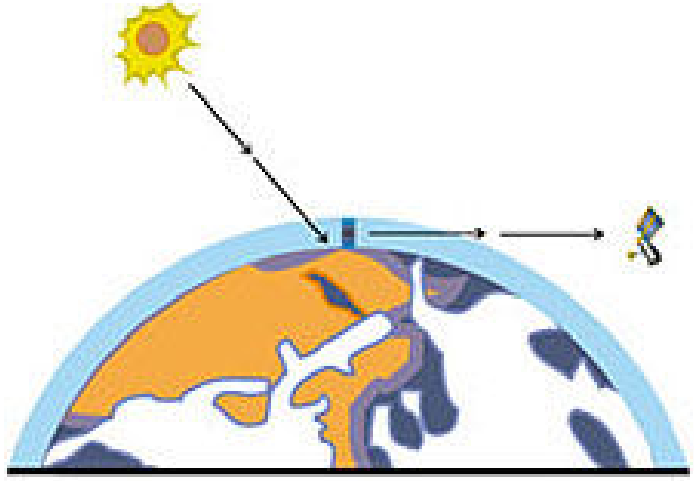


B. Occultation



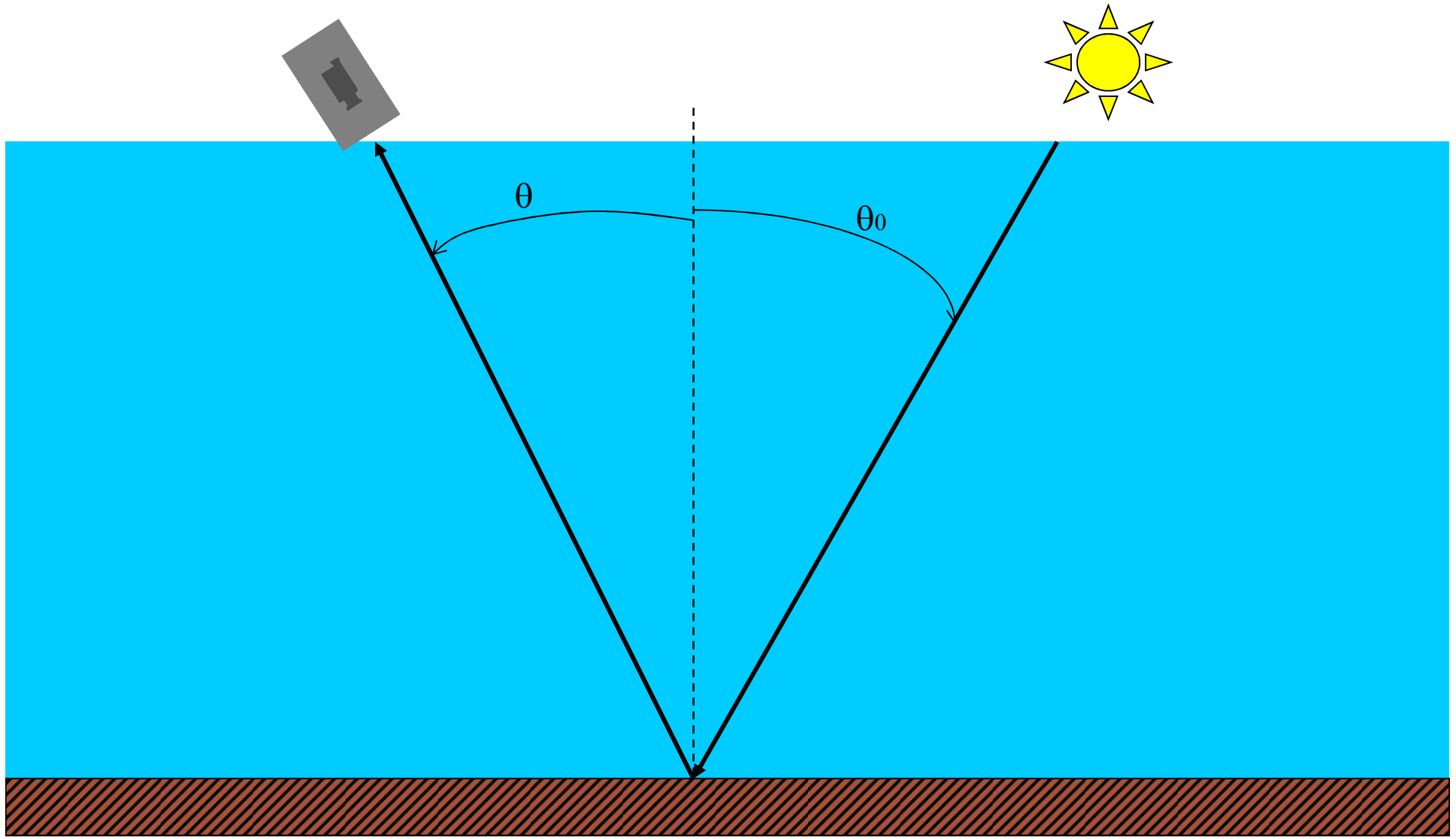


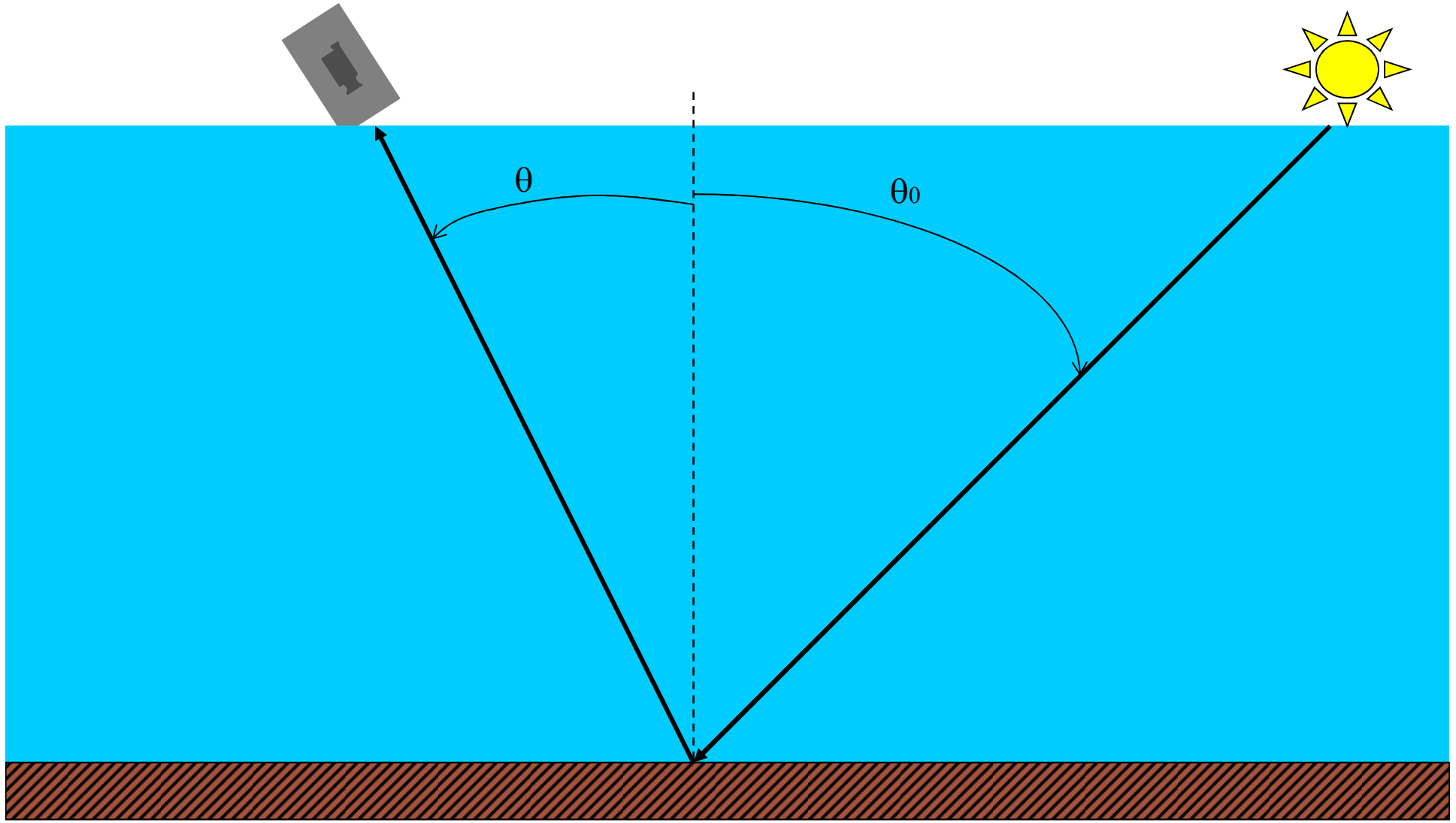
C. Limb Emission

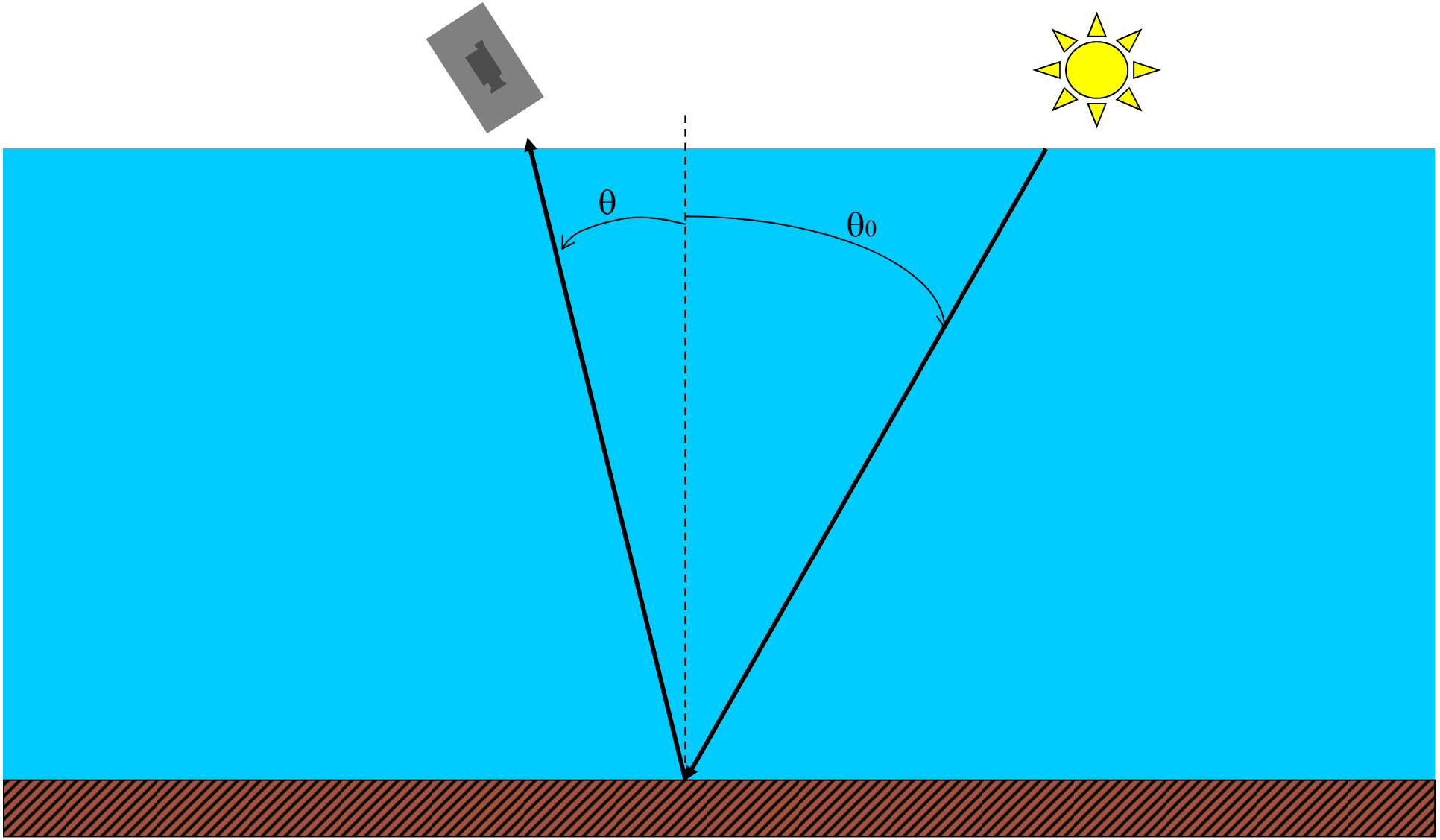


D. Limb Scattering

Retroespalhamento de radiação solar no UV




θ
θ0


θ
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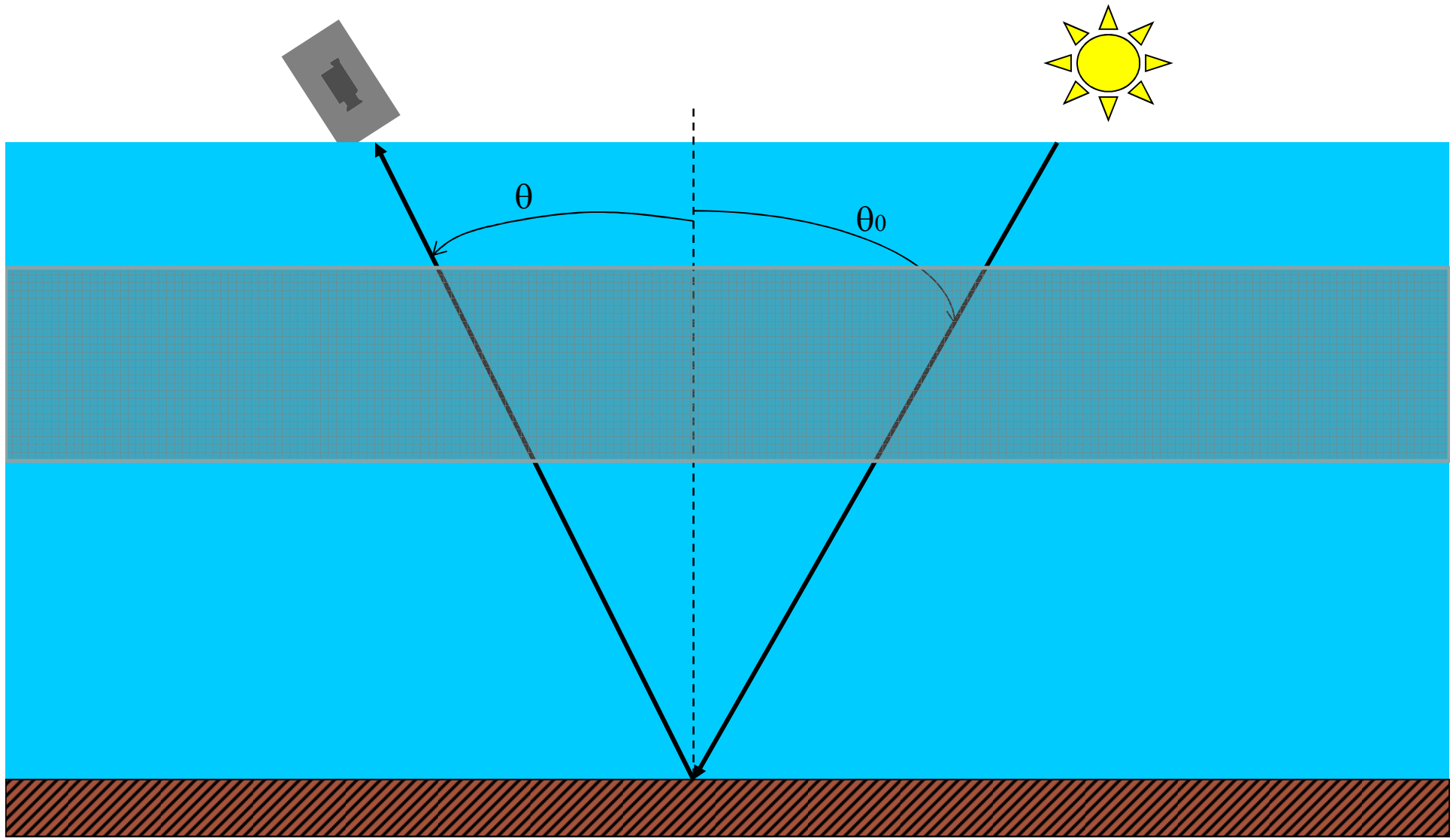
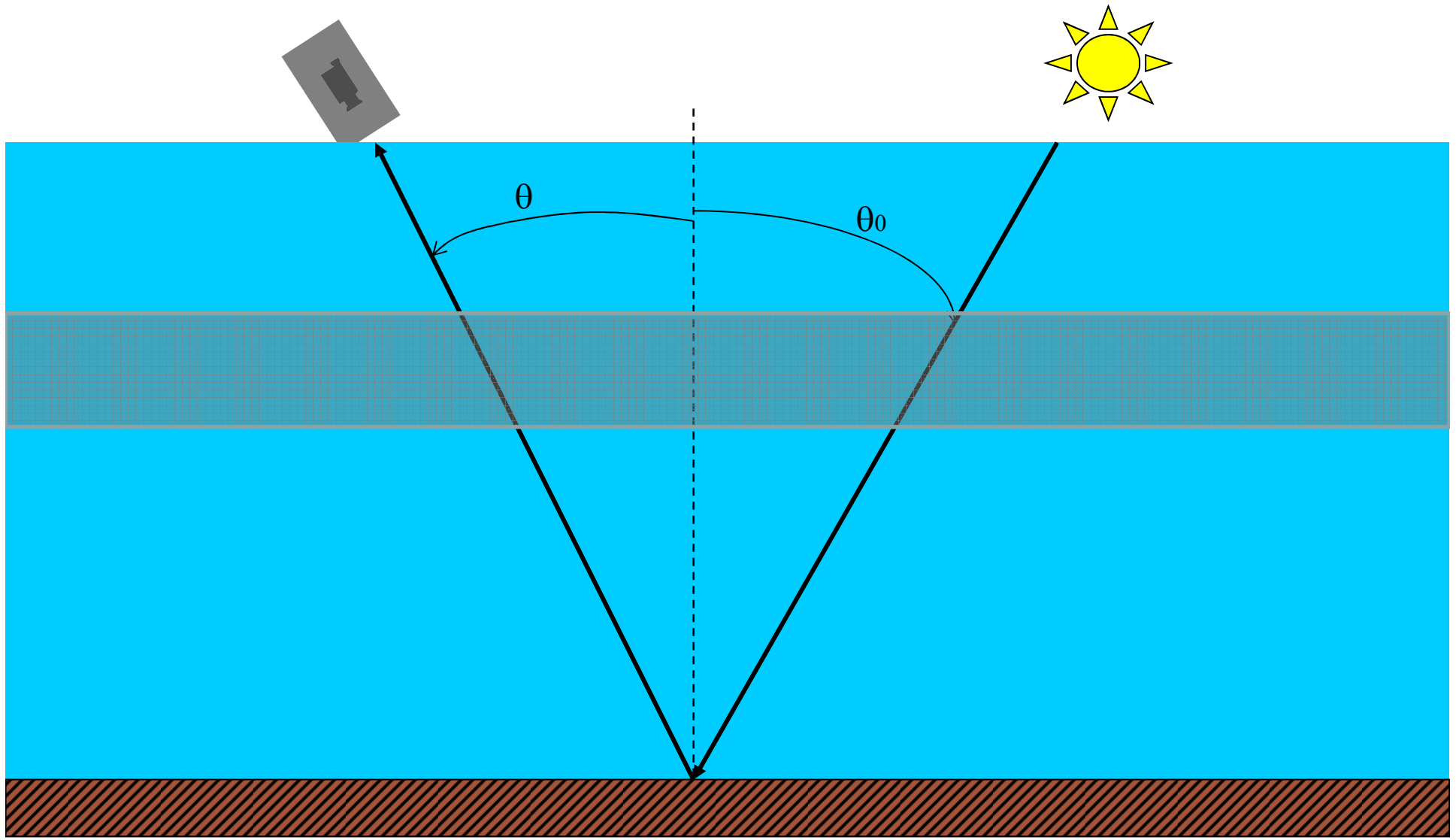
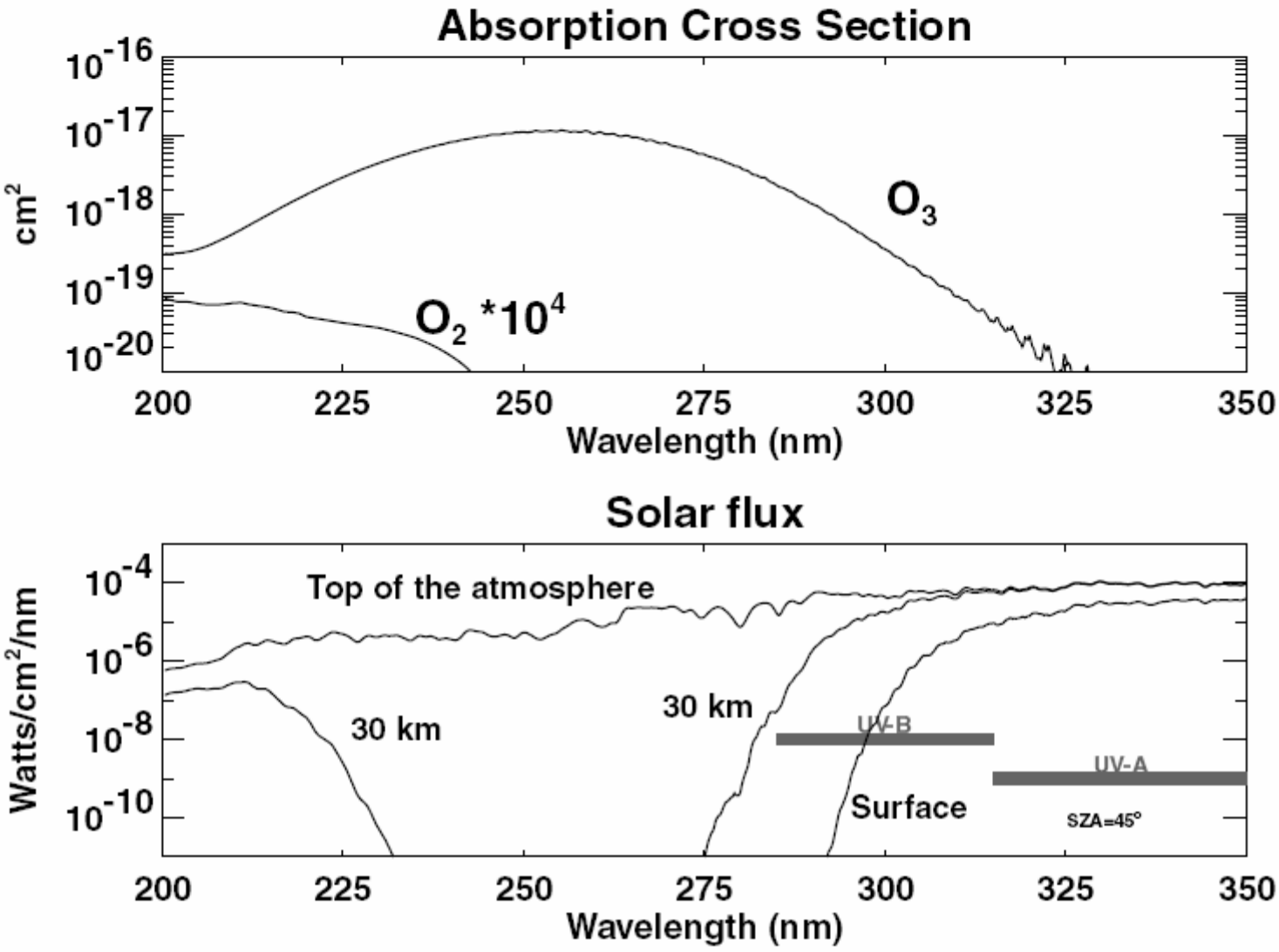
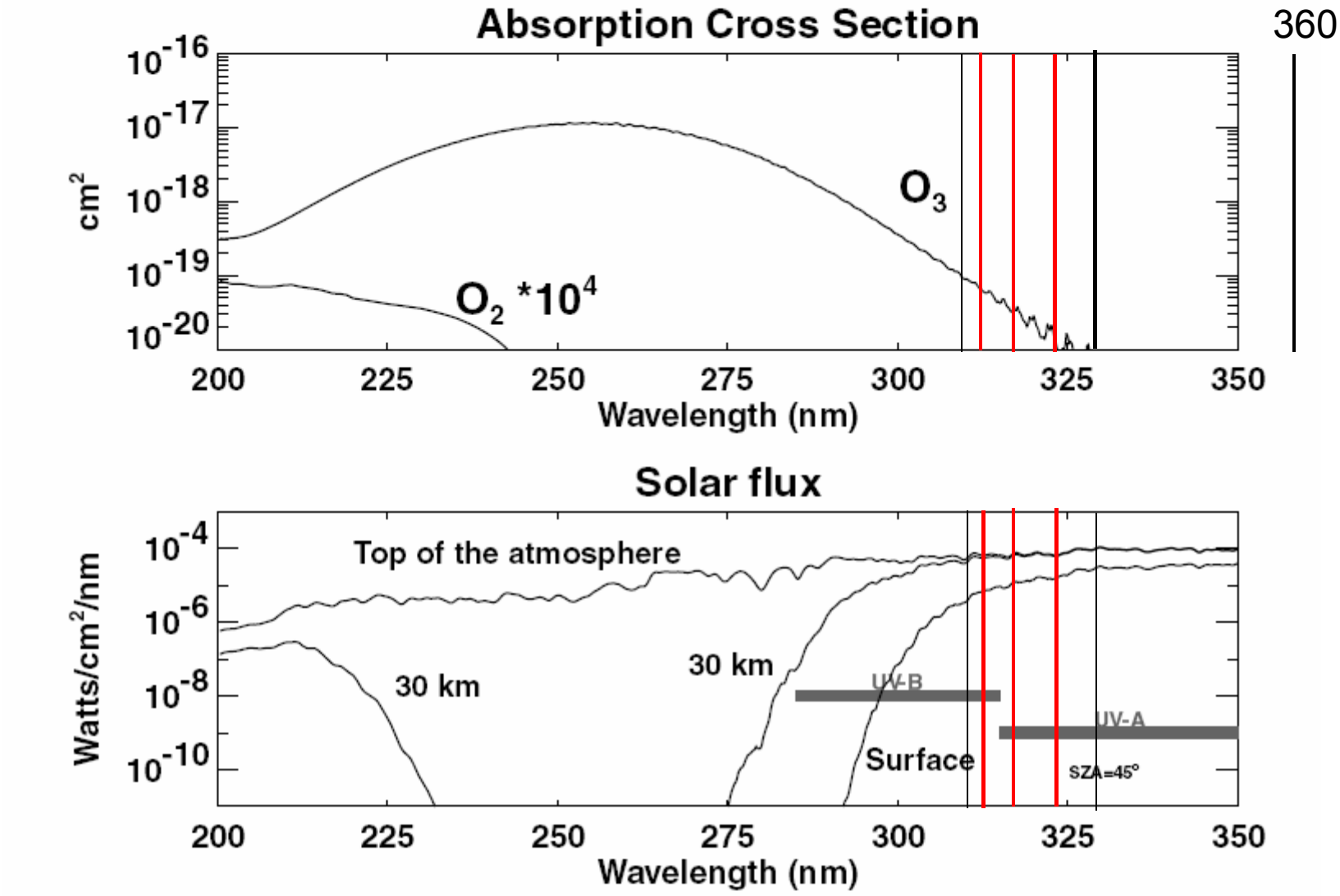

θ
θ0


θ
θ0


Absorption Cross Section
cm²
10^-16
10^-17
10^-18
10^-19
10^-20
O3
O2 *10^4
200
225
250
275
300
325
350
Wavelength (nm)
Solar flux
Watts/cm²/nm
10^-4
10^-6
10^-8
10^-10
Top of the atmosphere
30 km
30 km
UV-B
UV-A
Surface
SZA=45°
200
225
250
275
300
325
350
Wavelength (nm)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UV-B
UV-A
Surface
SZA=45°
200
225
250
275
300
325
350
Wavelength (nm)

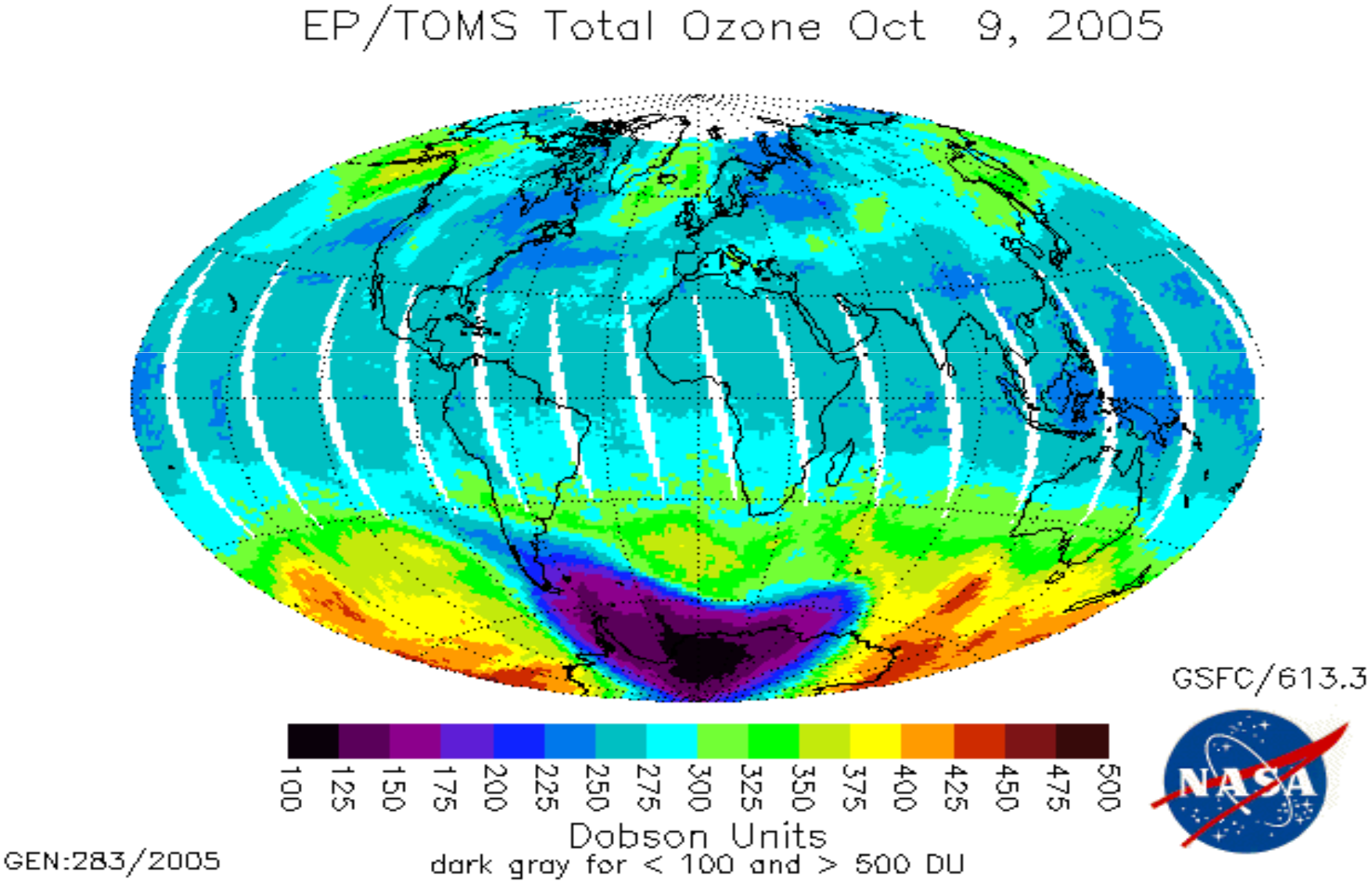
TABLE 1. BUV scattering and absorption coefficients.

Wavelength* (nm)	Scattering coefficient (atm^{-1})**	Absorption coefficients (atm-cm^{-1})
312.60	1.023	0.710
317.63	0.956	0.392
331.29	0.799	0.074
339.93	0.717	0.018
380.	0.450	0.

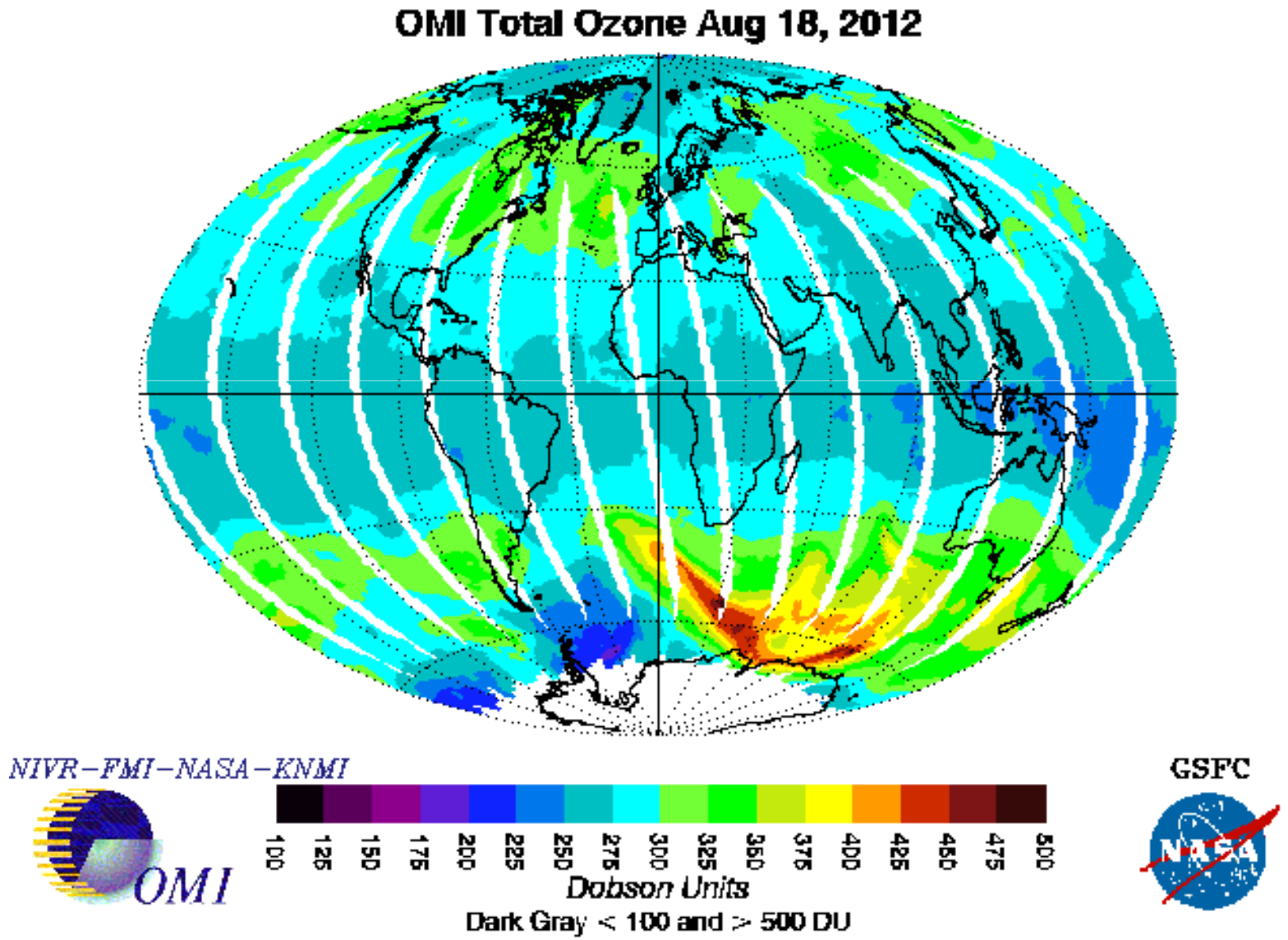
* In air.

** 1.0 atm = 1.01325×10^5 Pa.

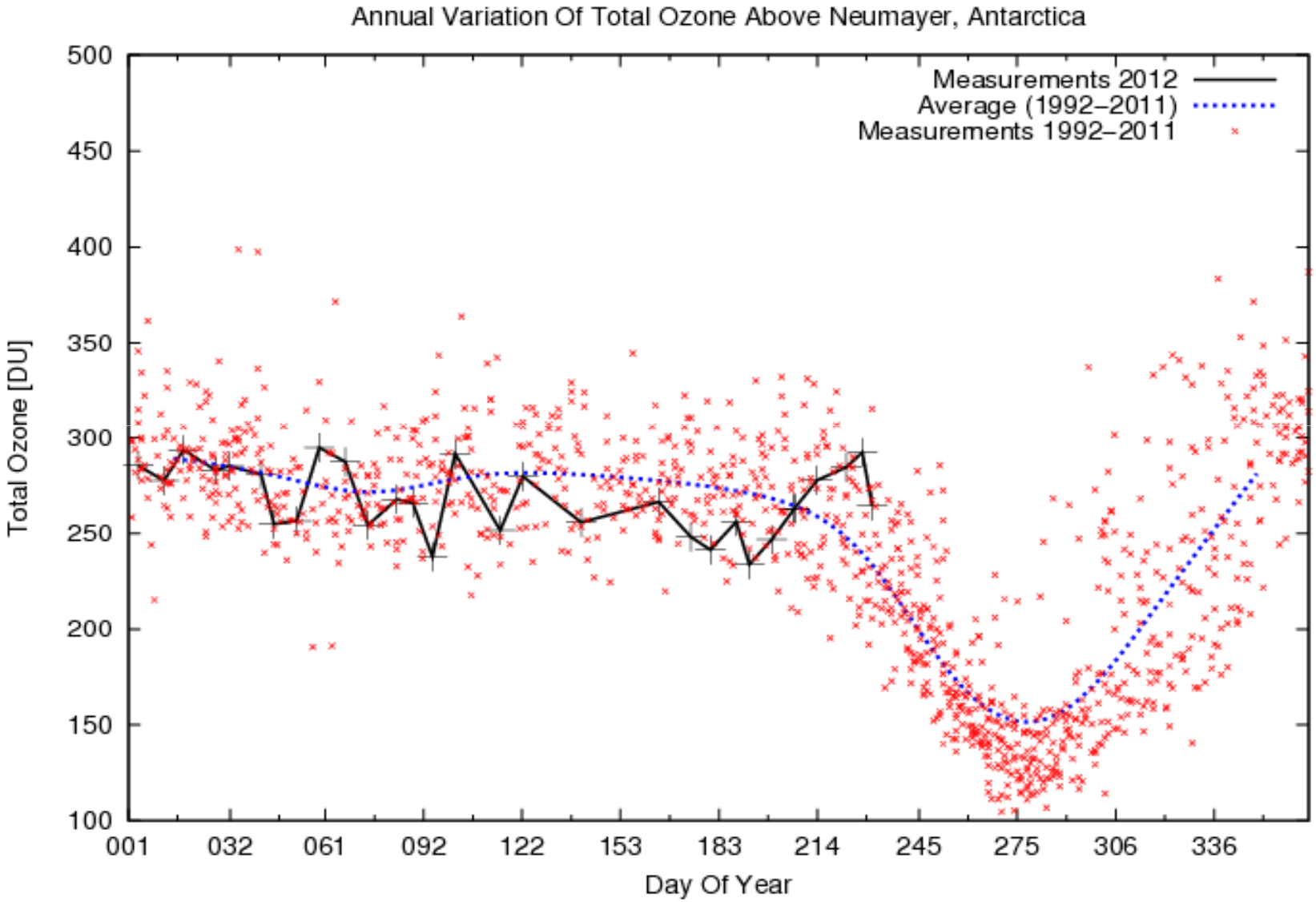
Earth Probe – TOMS – Total Ozone Mapping Spectrometer



Aura – OMI – Ozone Monitoring Instrument



Coluna integrada de ozônio obtida por radiossondas em Neumayer – Antartica a 70° S e 8° O



(http://www.awi.de/en/infrastructure/stations/neumayer_station/observatories/meteorological_observatory/upper_air_soundings/ozone_soundings/)