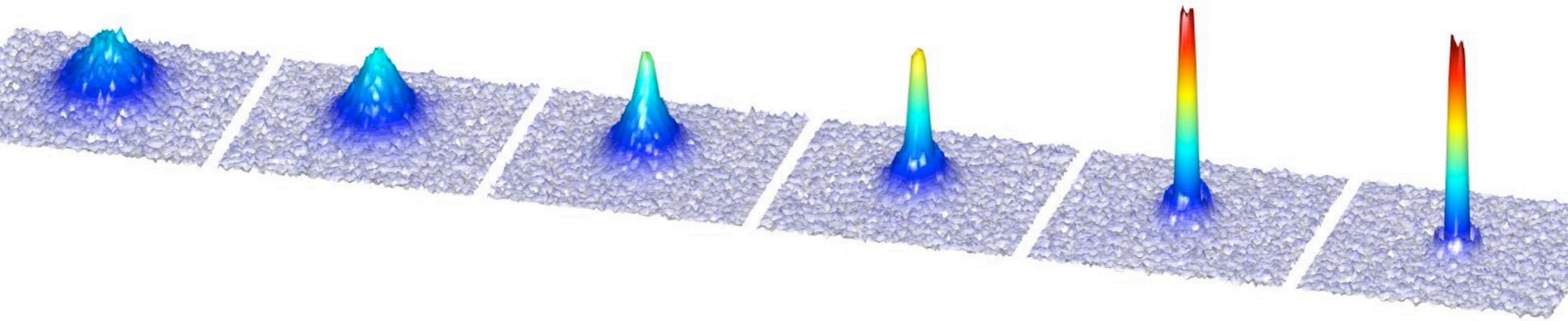


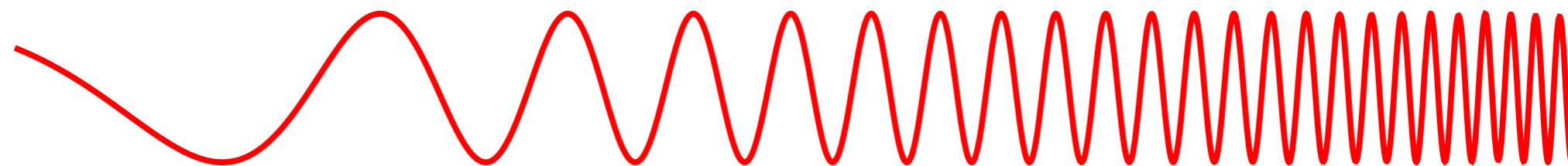
Bose-Einsteinov kondenzat



<http://ultracool.ijs.si/>

SVETLOBA

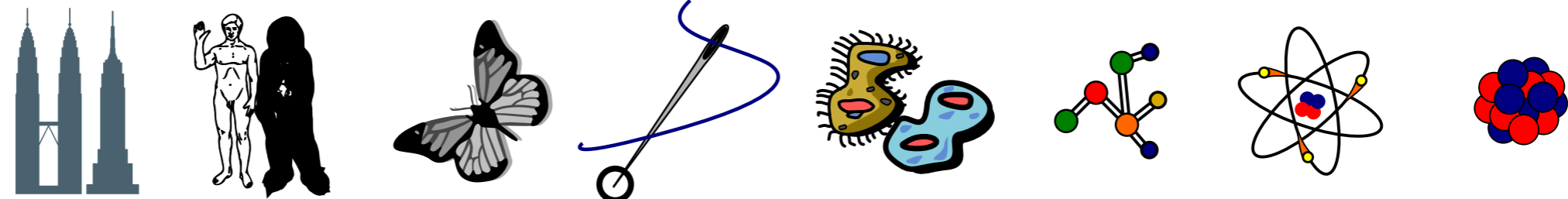
Penetrates Earth's Atmosphere?



Radiation Type
Wavelength (m)

Radio 10^3	Microwave 10^{-2}	Infrared 10^{-5}	Visible 0.5×10^{-6}	Ultraviolet 10^{-8}	X-ray 10^{-10}	Gamma ray 10^{-12}
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Approximate Scale
of Wavelength

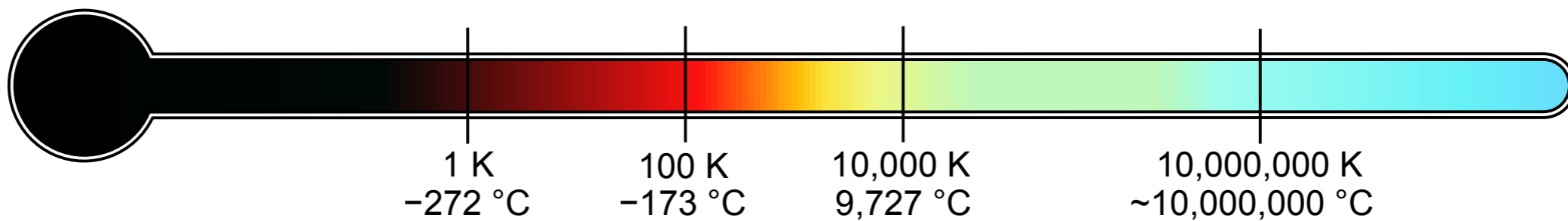


Buildings Humans Butterflies Needle Point Protozoans Molecules Atoms Atomic Nuclei

Frequency (Hz)

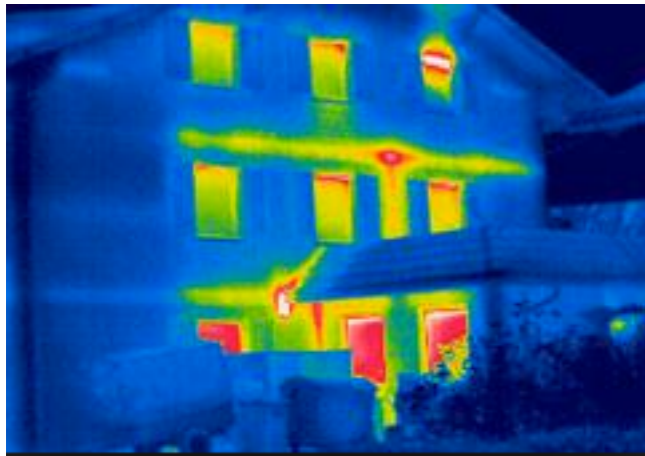
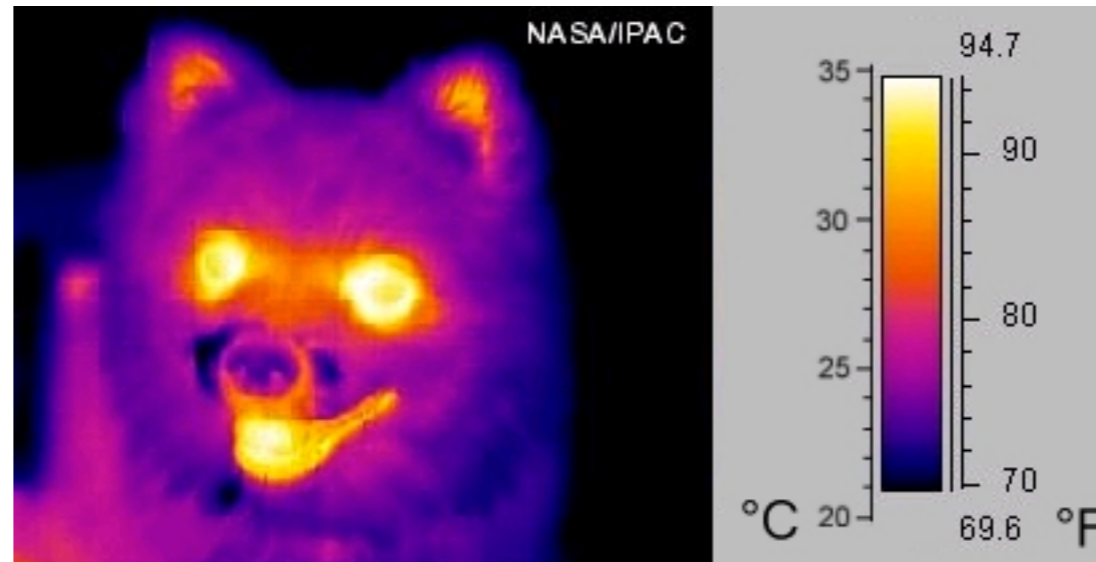


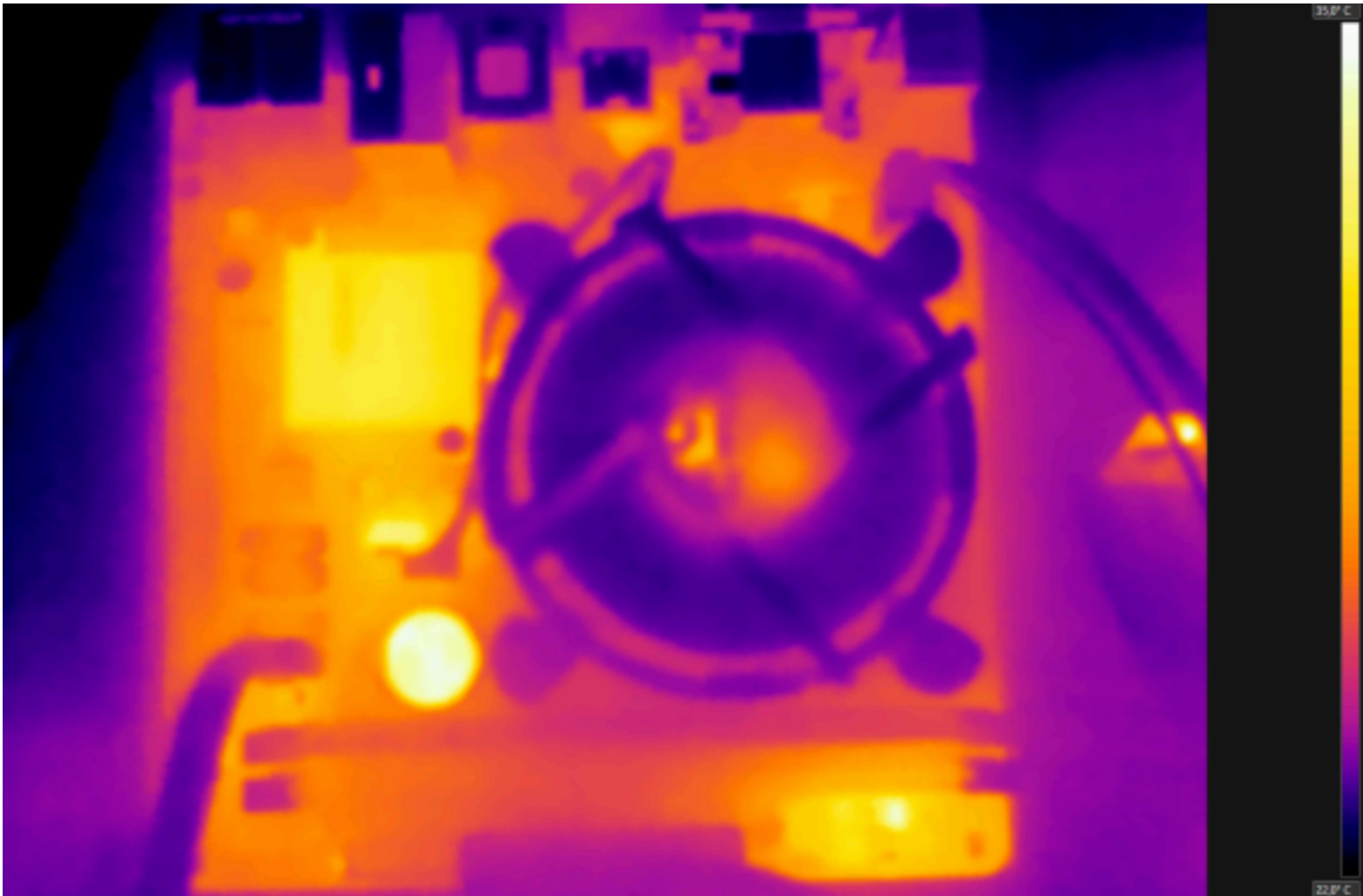
Temperature of
objects at which
this radiation is the
most intense
wavelength emitted



ionizirajoče sevanje

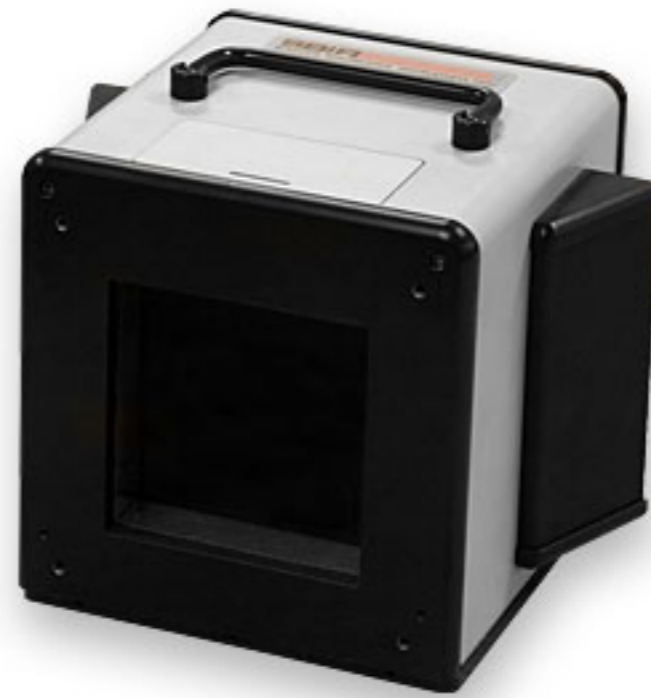
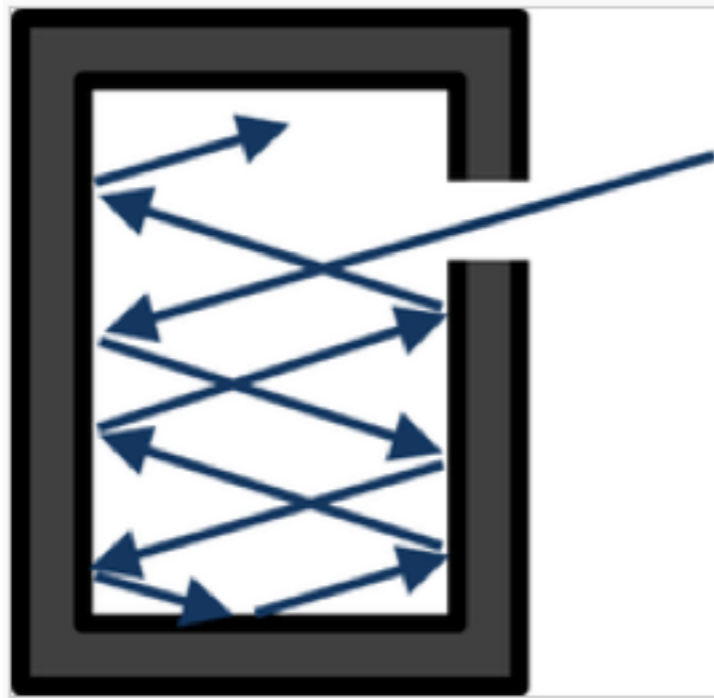
TERMIČNO SEVANJE





Termografija

ČRNO TELO



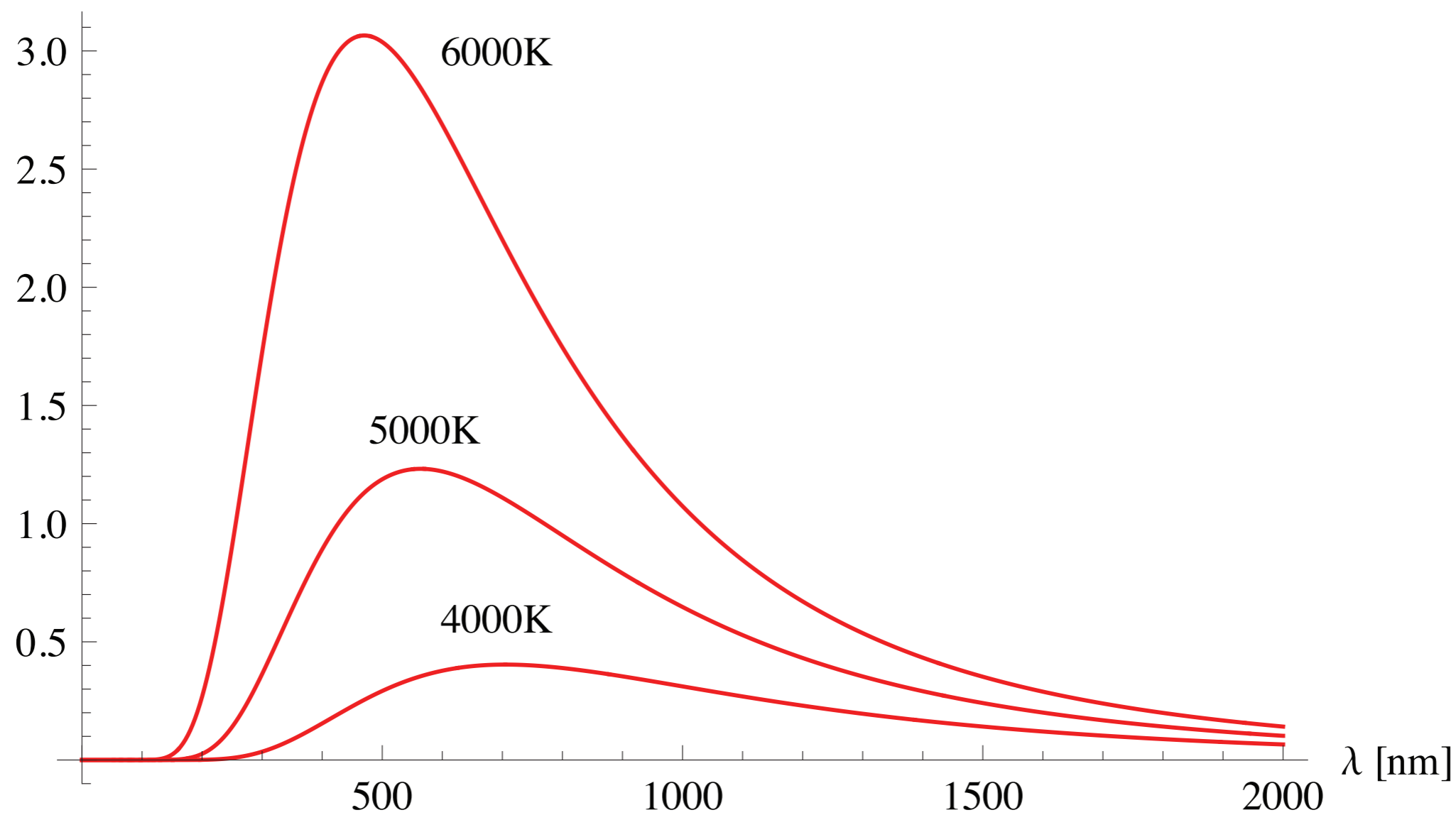
Kirchhoffov zakon:

$$I(\lambda) = [1 - a(\lambda)] I_{\text{črno}}(\lambda)$$

odbojnost (albedo)

univerzalni zakon,
odvisno samo od T

$dj/d\lambda$ (jakost)

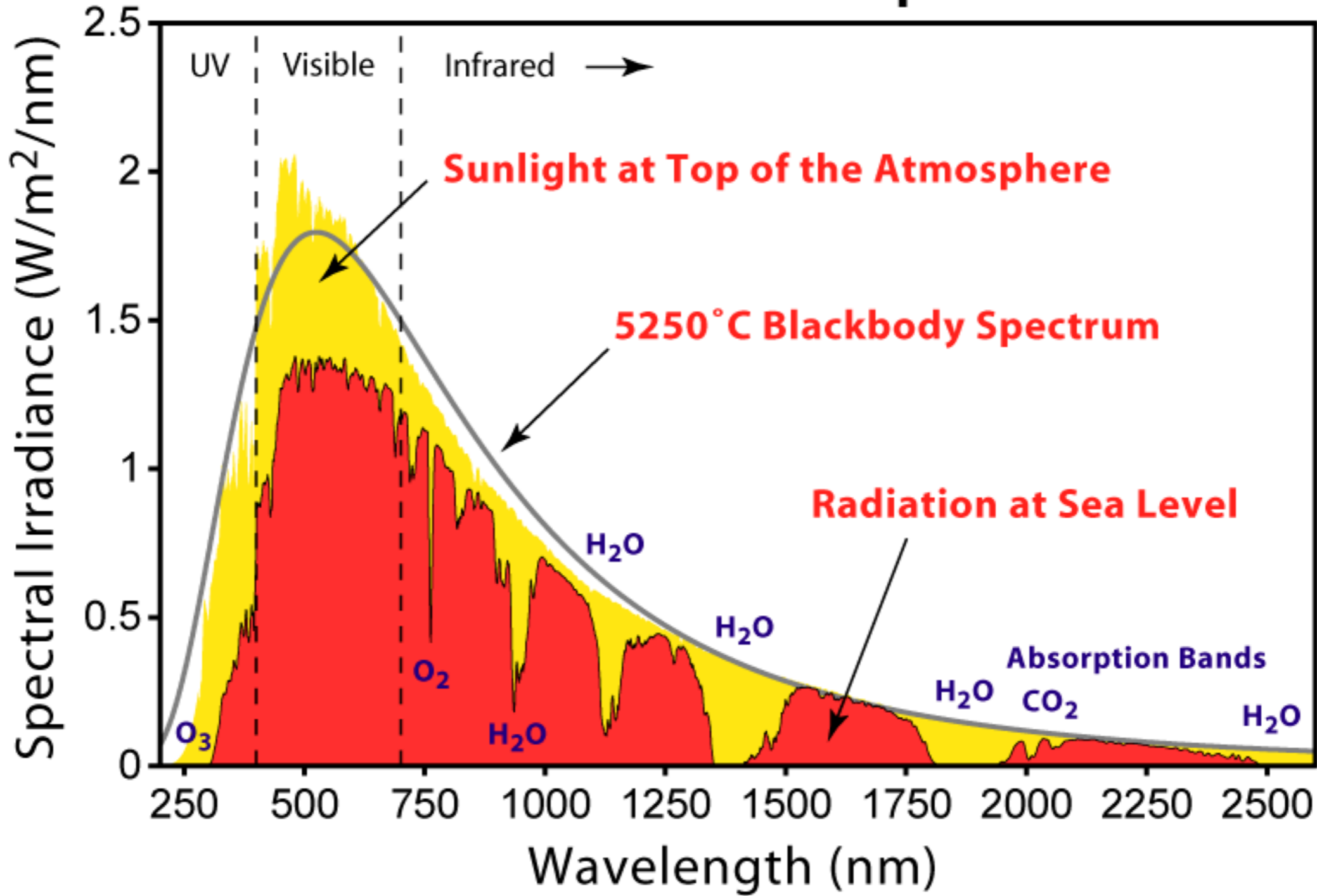


UV

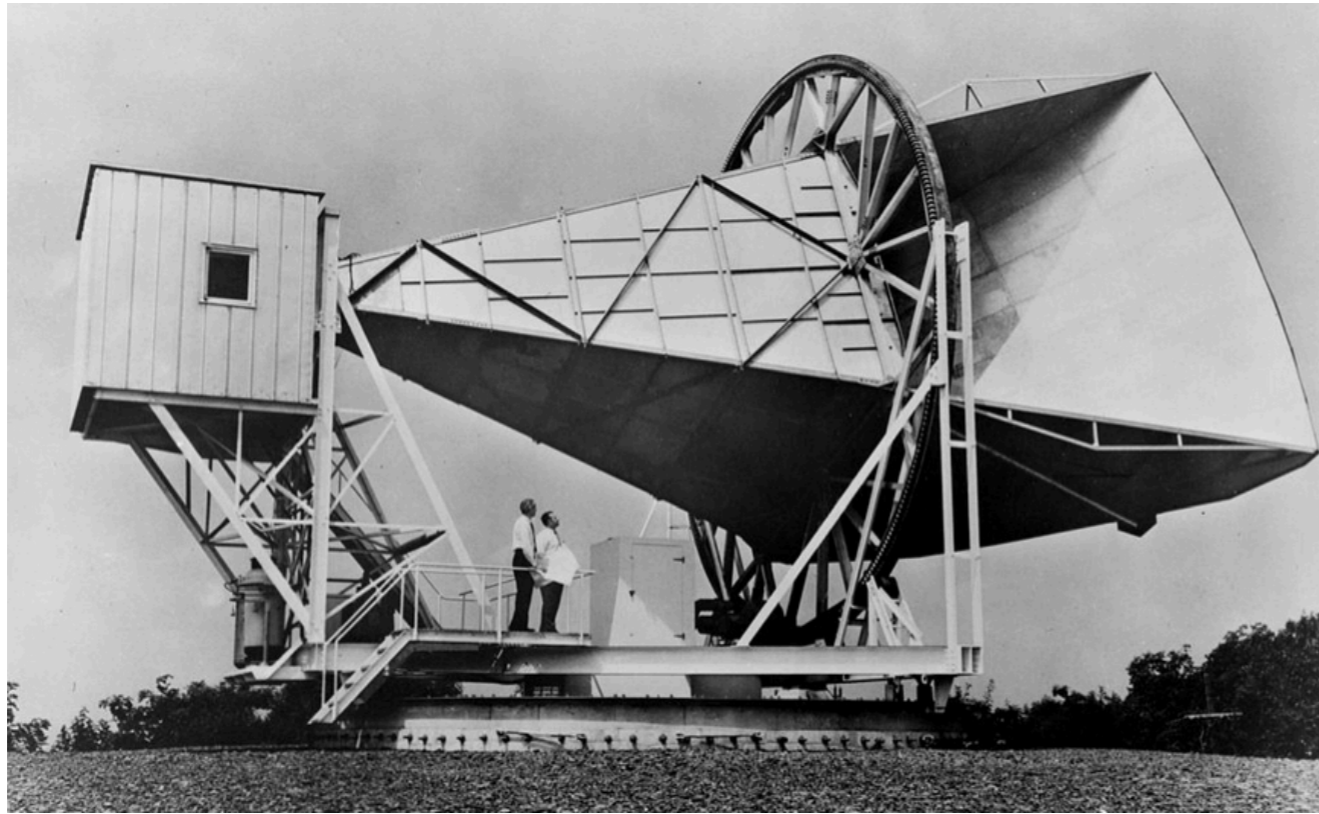


IR

Solar Radiation Spectrum



KOZMIČNO MIKROVALOVNO OZADJE



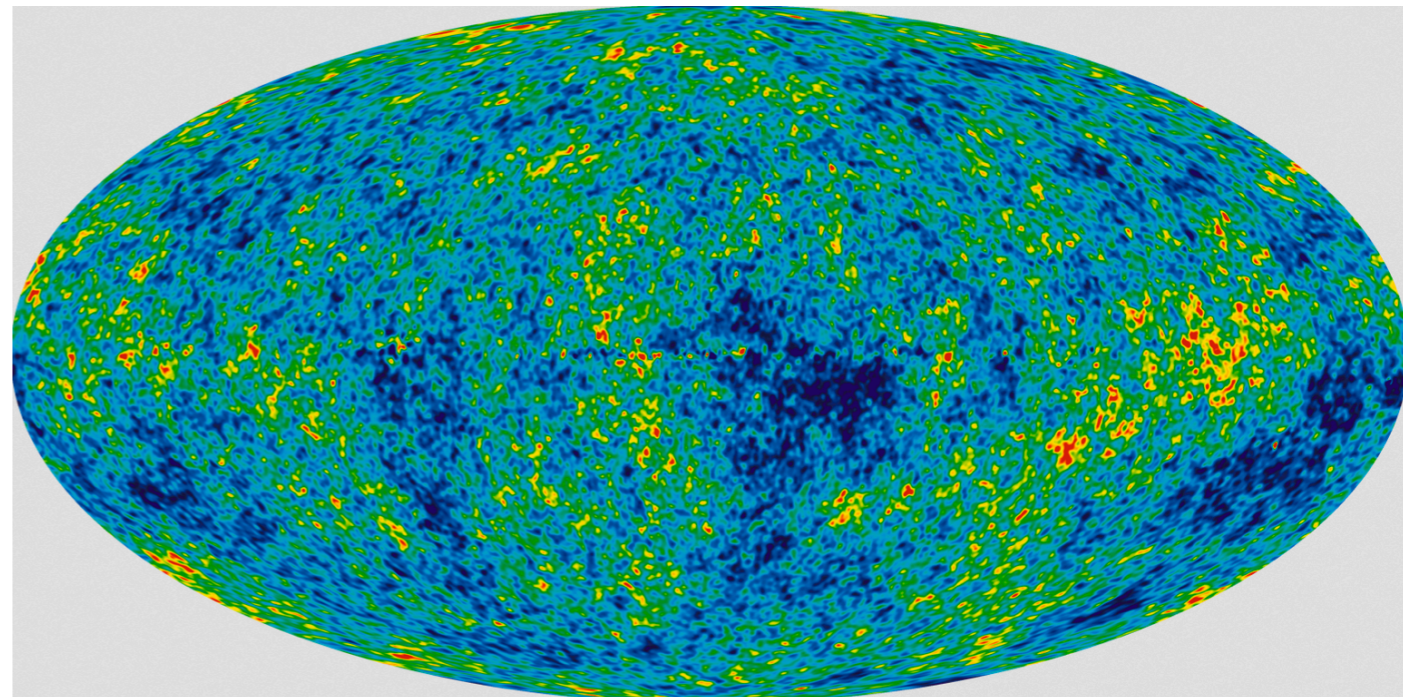
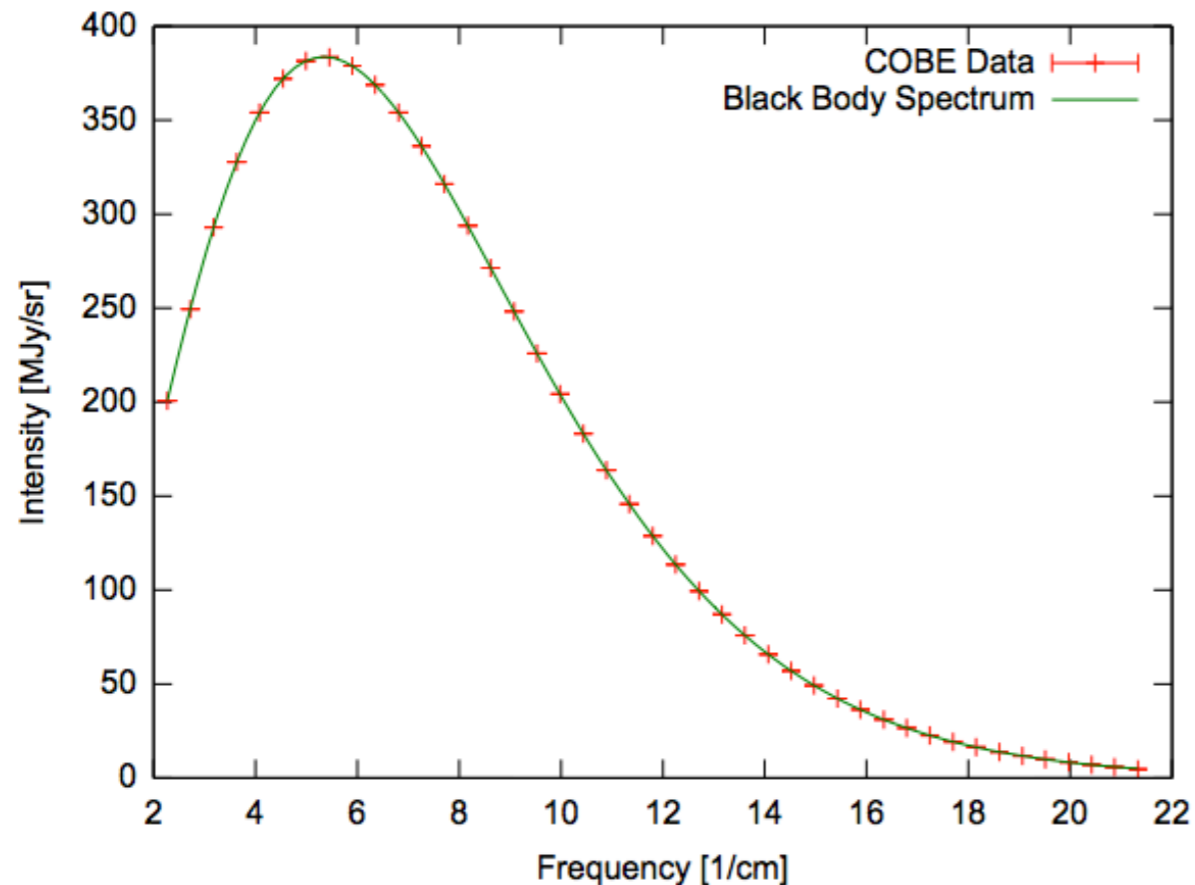
Penzias, Wilson
(Nobelova 1978)



$$T = 2.72 \text{ K}$$

$$\lambda_{\text{max}} = 0.11 \text{ cm}$$

Cosmic Microwave Background Spectrum from COBE



History of the Universe

