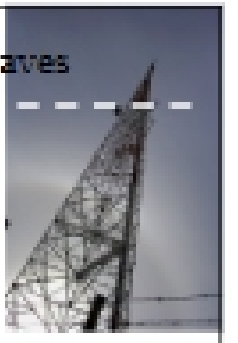
Announcements Astronomy 101A 10/05/11

- Jacobsen Observatory 8:30 - 9:30 pm OPTIONAL (especially if it is not clear)
- Review for exam 1 on Friday; exam 1 Monday, 10/10
  - Will have summer's exam on-line soon (will announce) for study purposes
  - Mix of short answers, fill in blanks, short essay, reading star map, vocabulary
- Exercise on spectral analysis in sections tomorrow - important for next 2 weeks! (and, your scores)

Light

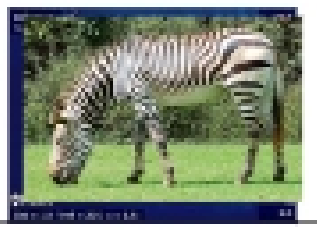
Microwaves

Radio waves



Infrared Radiation

If we could see at IR wavelengths, what would we see?

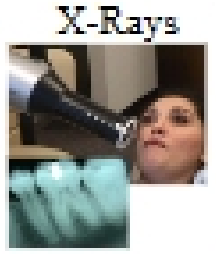


Ultraviolet A, B, C

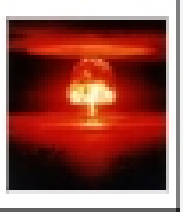
The Sun's UV rays can cause:

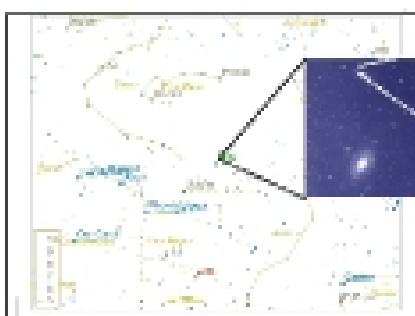
* Most wrinkles
* Sagging skin
* Age or liver spots
* Tan/sunburn
* Eye damage/ cataracts
* Skin Cancer

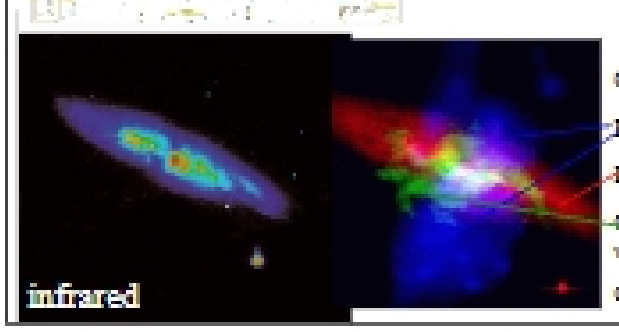
X-Rays



Gamma Rays







Learning goals

- Define light (electromagnetic radiation) and describe how we characterize it
- List 3 ways that light is created
- Explain why stars appear to be different colors and how we use this property
- Distinguish between emission and absorption spectra by what is happening with the electron in the atom.

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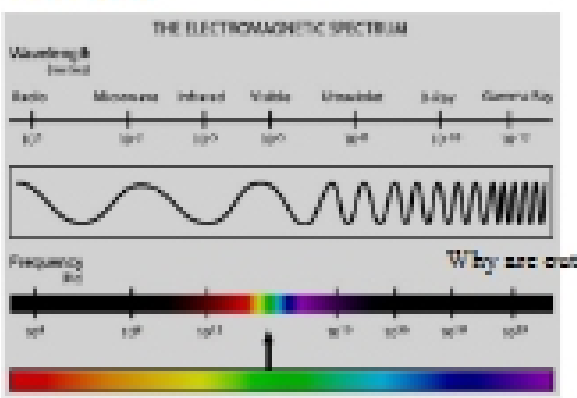
Light measured in wavelength λ, frequency ν, or photon energy; light has the velocity c in a vacuum



Why are outer ends "black"?

✓ Define light (electromagnetic radiation) and describe how we characterize it

Light can behave as a wave OR a PARTICLE!

[Planck's Constant:

$$E = h\nu$$

Energy

Frequency (ν)