Nature of Images

- Each photon provides:
    1. Time of Arrival
    2. Spatial Positioning
    3. Energy Content
- Big difference between older images and images now
- Sometimes it is useful to look at B/W images than the newer, colorful ones
- Looked at how an old camera looked
- Instructor appeared flipped through lens (to be continued)

Image Formation

- Without a pinhole, the film would be messed up
- Disadvantage is the small amount of light (longer time etc
- Lenses allow for more photons and less time
- Curved mirrors are used more frequently in telescopes because lenses are really hard to make

Skipping Stones and X-Ray Images

- X-rays get absorbed by the mirror, don't go to the focus point
- Using grazing incidents of mirrors, x-rays can be brought to a focal point
- w/o xray mirrors, astronomers could only see at most 1 degree

Perception of Images

- Brighter the object, smaller the magnitude of light
- Any change of 5 in magnitude is equal to a factor of 100 in brightness
- Difference of brightness is harder to detect the brighter the star is
- Can't see stars during the day because the noticable diff. of the brightness between the star and the sun is harder to detect
- We look at the sky more sensitively than ordinary cameras
- Change in sensitivity, brightness is proportional to itself

Introduction to DS9

- DS9 is free
- Expressed as "photoshop on steroids"
- Can download on most computers