Parallax Lab

Notes
- Solar Labs due
- Where is good dark spot on campus?
- “Orbits & Kepler” tutorial as homework
- Test Thursday—Multiple Choice?
- Today’s plan:
  - Some astro news
  - What’s Uraniborg?
  - Review Declination and Right Ascension
  - Revisit Stargazer software
  - Parallax lab

Latest news:
- Nasa probe explores Saturn’s rings and moon
- What’s Its name?

Cassini Studies Saturn’s Rings
- Many of the features being observed were predicted by computational models!

- Spokes--radial structure

- Clumps
Cassini Studies Saturn’s Rings
- Waves thousands of miles long
- A tiny moon (~4 miles)

What’s “quintessence”?

What’s “Uraniborg”?

Good Astro-related books:
Sky Charts Available Free Online

Review Declination and R.A.
- Which is measured in hours/min/sec?
- What’s the other measured in?
- A star rises in East, sets in West with a constant value of which coordinate?
- Where is Polaris in these coordinates?
- True or False: Sun’s Right ascension is between –23.5 and +23.5 degrees
- Using these coordinates, how do you describe the location of celestial equator?

Local Skies

Sun at the Zenith
- The Sun can only be seen at the zenith at noon...
  - from the region between the Tropic of Cancer and the Tropic of Capricorn
  - this only occurs twice per year

Parallax—Perspective Changes
Parallax—Measure Distances

Just need to determine the angle alpha and then we use previous equation to get distance R!

\[ \frac{\alpha}{360^0} = \frac{B}{2\pi R} \]

\[ R = \frac{360^0}{\alpha} \frac{B}{2\pi} \]

Parallax—Measure Distances

Look for star so far away, that lines from A and B to that object are parallel

Parallax—Measure Distances

Measure beta angles to object relative to these lines

\[ \alpha = \beta_A + \beta_B \]