Fort Bend Astronomy Club
General Meeting
April 15th

Minutes:

Business Meeting:

ED Committee: there is a problem of lights, looking for ideas for lights other than the rope lights that they have right now--
- the idea of LEDs was put forth
- the idea of christmas lights
- any other ideas should email the ED Committee
- Tracy is working on the computer issue

A-Team: no report

A.O.W.: three since the last meeting
- 350 attendees at the last meeting
- over 200 at elementary school
- one more left on the 21st of April at an private school in Richmond

Treasury Report:
- 3270.80 in checking
- 2160.53 in CD
- Astronomical League payment will be done soon
- FBAC will donate an amount for door prizes at TSP, a representative will take care of that

Club Viewing Nights:
- First Friday in April went well, around 6-8 people there
- Not sure of the next schedule for such a night but they will be at some point

Club Communication is Netslyder

Speakers Committee:
Trying to get Patricia Rieff
Looking in August

Promotions Committee: No report

Novice Presentation: "The Inferior Planets" by Justin McCollum
- The inferior planets, a concept developed by Ptolemy, are Mercury and Venus, are those planets inside the orbit of the Earth

- Superior Planets are all those in the solar system which lay beyond the orbit of the Earth
- Both Mercury and Venus exhibit a collinear relationship, or a linear apparent relation in the orbit positions that are observed due to their close proximity to the Sun
- In Ptolemaic cosmology, the retrograde motion of the planets was mistaken for an epicycle in the planets orbit
- The concept of the epicycle was developed around 350 b.c.e. by the philosopher Aristotle
- Astronomers in more recent history began to notice that the inferior planets exhibited phases much like the moon, which supported a heliocentric hypothesis; a Sun-centered cosmology
- Speaker discussed several orbital characteristics of the inferior planets, such as greatest eastern and western elongations
- Speaker discussed observations of both planets both with the naked eye and with apparatus
- Showed the phases and Venus and the dates for greatest eastern and western elongations
- Showed the phases and the elongation ephemeris for Mercury as well
- Because the are inferior, inside the orbit of the Earth, they will transit the Sun displaying a wonderful sight
- Mercury transits the Sun much more often than Venus
- Discussed the sidereal and the synodic periods of Venus and the reason for the rarity of its transit, which is a consequence of the pattern occurring between the orbits of both Venus and the Earth
    - this pattern is not static, it has changed and will again, but remains in a stable 243 year cycle
- Mercury transits occur around every three or four years
- There are other types of very rare and typically rare transits, such as partial transits and regional transits (those that are only visible on certain portions of the Earth).
    - the most rare, a simultaneous transit and a double transit, which wont occur for thousands of years--so we are out of luck, and then there is an eclipse and transit event, as well as Mercury and Venus occultation.
- Speaker discussed some physical characteristics and orbital properties of both inferior planets
    - Mercury:
        - day is longer than its year
        - very much like the moon in terms of physical topology, as well as small in size
        - very hot, because of its close proximity to the Sun, as well as very cold on the dark side because of little to no atmosphere
        - the only terrestrial planet, other than Earth, that has an appreciable magnetic field, they are not sure why though.
        - the orbit was not fully explained until Einstein's equations for general relativity were applied to it

- Venus:
    - is considered to be much like Earth and is called her twin planet
    - similar in size to the Earth, very close to the Earth
    - very dense atmosphere, sulfuric acid rain, extreme pressure and heat on its surface
    - complex geological features and harsh volcanic topology
    - has the most circular orbit
    - rotates clockwise, unlike every other planets
    - no true satellites, but a quasi satellite that maintains a shared orbit with the Sun and Venus
    - no extremely large craters, no tectonic motion, and a crust that appears young, astronomical speaking, only around 500 million years
    - surface shows a large amount of volcanic calderas, as well as lava channels and other indications of dramatic and consistent volcanic activity
    - atmosphere is composed of mainly carbon dioxide, something like a runaway green house effect
    - no intrinsic magnetic field, but they are not sure why

- Talk ended at 8:01 pm

- Break at 8:03 pm

- Meeting Resumed at 8:28 pm

- Announcement:
    Nathaniel Whitehead presents on both the reoccurring nova in Pixis and on the Decadal Survey