Meeting Minutes 10/23/2020

- General Club Announcements
    - ATOMM schedule
        - Bring questions from ASTR, PHYS, MATH
        - M (2-4 pm) Yujing Qin
        - T (noon - 2 pm) Ryan Keenan
        - W (1-2 pm) Ryan
        - Th (2-3 pm) Yujing
    - Game night!!! Tonight!!!
    - Spooky Halloween Costume Party! At our meeting next Friday
        - Wear your favorite costume
        - Spooky backgrounds are fun too
        - We will host a costume contest for those who participate
- TIMESTEP
    - No meeting this upcoming week
    - Instead: Register for graduate application workshops
    - Email Vasileios Paschalidis to receive Zoom link
    - First workshop will begin November 11th
- What Up Astronomy Club with Yancy
    - Webcam down in New Zealand in Wellington, Lyall Bay
        - What is the star?
        - Canopus!
- Astronomy Question of the Week with Don
    - Why bat scientists are socially distancing from their subjects
        - Scientists are trying not to infect the creatures which infected us!
    - What if Earth suddenly became a blackhole?
        - What sensations would you experience?
        - Event horizon ~1cm radius
        - Freefall for ~21 minutes
        - No rush of air, drag forces, or sense of falling
        - Faster and faster
            - At 64km from the center, 112km/s
            - ~1 millisec left to live
            - That's when the tidal forces start to pull you apart
        - Objects appear to approach from all directions
        - At 99.8% to the center (14km) you die
            - Tidal forces ~110 lbs of force
    - Picture from Binh
        - Rainbow like colors on a metal plate
        - Noontime in middle of street at SunTran stop
        - What is causing it?
        - Thin film interference
            - Requires a surface layer ~ one wavelength thick
            - The layer causes a phase change and a path difference

            - Your eye combines the light
        - Light from the Sun
            - The sun is an extended source of light
            - Can get different wavelengths of light
        - Anti-reflection coatings
            - Diverse applications
            - In Nature - peacock feathers
            - Devices - eyeglasses, astronomical optics, stealth aircraft
- Astro News of the Week with Savannah
    - https://www.nasa.gov/feature/goddard/2020/osiris-rex-tags-surface-of-asteroid-bennu/
    - OSIRIS-REx TAGs Surface of Asteroid Bennu!
    - The University of Arizona-made probe has grabbed its sample from the asteroid Bennu
    - The sample will be returned to Earth for analysis
- Meet the Messiers with Sean
    - M17: The Omega Nebula
    - Magnitude 6
    - 5400 light years from Earth
    - Discovered by Philippe Loys de Cheseaux in 1745, catalogued 1764
    - One of the galaxy's youngest star clusters!
    - The gas and dust around it makes it difficult to look at
- Optics with Trenton
    - Works on the Large Binocular Telescope, metrology system/active optics of primary mirror
    - Astrophotography
    - The optics department put the optics into OSIRIS-REx
    - Plenty of reasons to be an astrophotographer, capturing photons from space is cool
- Game Night!