## Unofficial Meeting Minutes 5/29/2020 Weird Version

- Club Announcements
  - o Game Nights! Alternating with every meeting, every two weeks. Next Game Nigh Friday, June 5<sup>th</sup> at 4pm. Hosted on Discord. Minecraft, Jackbox, etc.
- · What's Up Astro Club with Yancy
  - O Venus is almost not up anymore :(
  - o Mercury is still visible!
  - o Quarter til Midnight, Saturn and Jupiter are visible near Sagittarius
  - o Procyon A
    - § 1.5 Msun
    - § 2.0 Rsun
    - § 6.9 Lsun
    - § F5 IV-V, transitional spectral type, right at the very end of burning hydrogen, at the end of the main sequence, and will enter Red Giant phase
    - § 11.46 ly away, very close to us!
    - § Double star, companion white dwarf Procyon B
      - · 0.6 Msun
      - · 0.012 Rsun
      - · 0.0005 Lsun
      - · 40.8 yr orbit
      - ~15 AU from host star on average
      - e = 0.4
    - § Face West at 8:30pm in Canis Minor

- Astro Question of the Week with Don
  - Solar System Explorer
    - § If I'd dropped that sucker into a gargantuan sea it would've floated.
      - · Saturn
    - § I was knocked unconscious and awoke to the sound of my ship being pummeled, as if a thousand kids were throwing snowballs. All I could remember was that I wasn't in the asteroid belt.
      - · Rings of Saturn, Comet tail
    - § It was very cold, and the atmosphere blocked out all the stars, but I wasn't hovering over one of those gasbag Jovian planets.
      - · Titan
  - Comet ATLAS
    - § Kind of fizzled out, disintegrated
    - § Comet's gas tail points away from the Sun, dust tail follows the orbit
    - § Apparently has two nuclei now
  - Impossible moon photos
    - § Family Circus fake, no full moon and sunset on the same side of the sky
    - § Alessandra's picture possible, fun framing the moon to be in a radio dish, but in reality a mosaic
    - § Moon over Kitt Peak taken in the morning as the moon sets in the West
    - § Moon Analemma Picture of the moon every lunar day composited together, analemma, throughout the month, due to the tilt of the Earth
    - § Moon Eclipse another composite, this time showing the shadow of the Earth
  - o How high is a meteor?

- § 60 to 90 kilometers typically
- § This specific meteor was at 121km
- § Fireball parallax allows you to triangulate the altitude
- § Why did it heat up so soon? Either its speed or the angle it came in at
- Don asks you to complete some surveys to help plan classes for next semester!
- Meet the Messiers with Sean Messier #12
  - o NGC 6218
  - 23 thousand ly from Earth
  - Discovered by Messier in 1764
  - Astronomers suspect that gravity has ripped many low mass stars from M12 as the cluster passed through denser regions of the Milky Way
  - o It must have lost up to 1 million stars this way.
- · Astrophotography with Sai
  - o Star trails!
    - § Just need a stable surface and some time to take long exposures
    - § Set up camera for 30 second exposures and take 70-80 pictures and combine them in photoshop
  - Ryan and the supernova
    - § Supernova went off in M61
    - § Supernova is in the outskirts of the galaxy
    - § Lots of galaxies in the image that were unexpected, pretty cool!
    - § Owl nebula and surfboard galaxy
  - Constellations are easy to take pictures of, easier than star trails
- Kahoot time!

