

We had a great time on the trip. We had some representatives from the Vandenberg and Santa Barbara clubs along with us for the trip. The most notable thing on the trip up was a stop in La Canada Flintridge to refuel the bus and get a bite to eat. I pulled out my PST Coronado and did a little impromptu public Sun Gazing. The Sun was pretty active with a number of platform prominences as well as the ever-present flame types. A distinct sunspot group in a very disturbed area of the Sun with a bright spot had me wondering if there was a flare in progress (There wasn't.) The patrons at the tables outside didn't seem to object to seeing the Sun either.

I had a little bit of a scare when we first got up to the gate as a couple of people who were going to meet us there were nowhere to be seen. Fortunately one of them was already on the grounds and the other showed up while we were in the Museum. Relief!

As it turned out we all went on the tour of the grounds. Our tour guide Greg gave us a tour starting outside the 60" Dome. He talked about the various Solar Telescopes -the old Snow telescope which was always a non-performer because of the design of the building- too many air currents. He talked about the rivalry over the 60 and 150 ft tower solar instruments (looks like UCLA won this one over USC.) And we got a good look at the 150 ft tower. I so want to ride that platform type elevator and see the Solar Projection Table. We went inside the museum and we received a very thorough history of Mt. Wilson. We crossed "The Bridge" en route to the 100" scope. There was an event happening in the Dome that night so we only got to look at the 100" from the gallery. There are plans to use the 100" for nights starting next year. We got- how shall I say this- not so subtle "Hints" that members would be interested. My favorite part of the tour was the lecture on the Chara Interferometry Array. Those conduits I had taken to be electrical were the light conduits instead. Fascinating stuff.

And then on to the main event. We were introduced to our telescope operators and Celestial Guides Geo and Tom. These guys were great. During the night we were given a chance to see how they operate the instrument. It is a remarkably simple system consisting of optical encoders and slew motors. Tom uses the "Sky" planetarium software to look up objects and his other controllers to operate the Dome and Telescope. The trickiest part of controlling the instrument is to avoid getting the Dome in the way of the telescope. During the night we were taken downstairs to see the main drive gear. The telescope is very well balanced and the only time we actually heard the motors was when they were taking up slack.

What I did on my fall vacation!

Here are my notes of the Observing List. Tom Frey was given a copy of the pre-prepared list. That list is going to prove very useful at our own star parties. By the time we saw the last object we were cold (48 degrees), exhausted and as elated and happy as could be. By the way - the Telescope Operator Tom wore shorts the entire night!. Burr!

Here are my comments on the list of objects we saw.

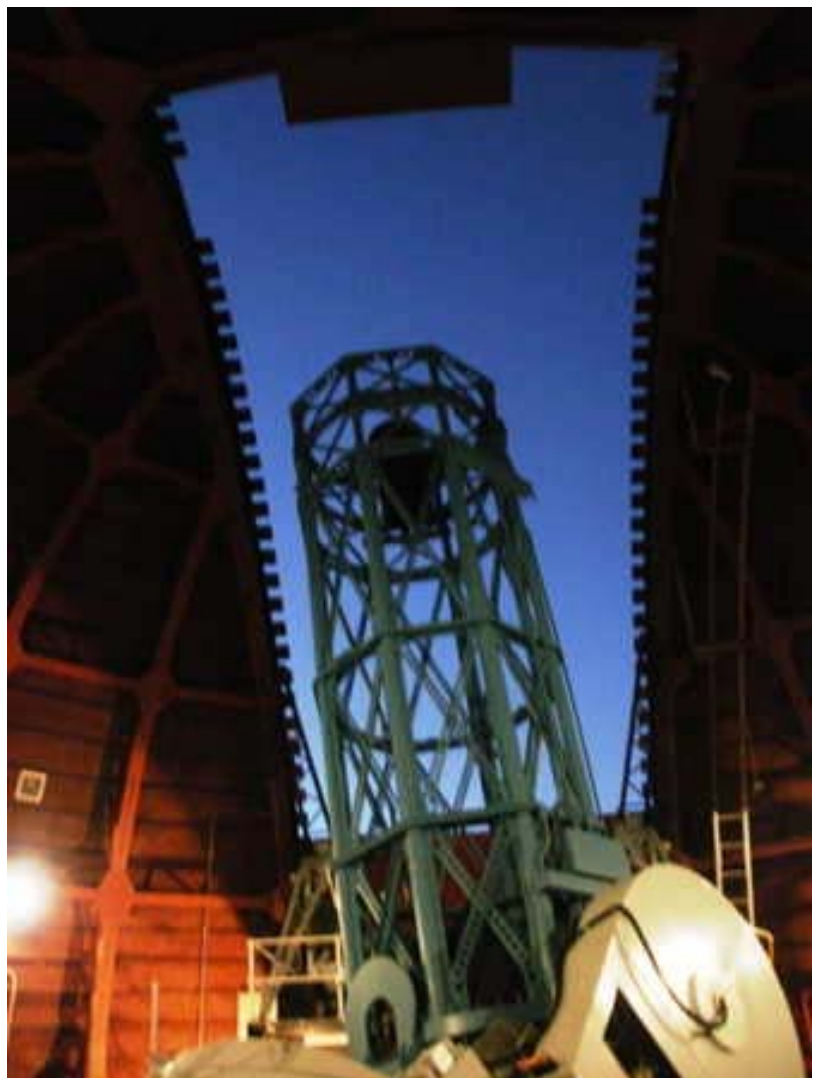
1. Vega in Lyra: A brilliant star. Vega has long been one of those stars I like to look at. Very bright and bluish. I have always wondered if Jody Foster ever saw this star through a telescope when making "First Contact."

2. M13 in Hercules: A nice pretty ball of stars. The sky was still bright so we didn't see down to the Horizontal Branch of the cluster but still saw innumerable stars. Incidentally- the eyepiece gave us about a power of about 375X and a field of view of about 11 minutes.

3. Epsilon Lyrae- the Double Double. I sometimes have trouble with these stars but both pairs of stars were very bright and very cleanly separated. I'm sure Tom Frey was wishing he had a Micro guide and adapter available to make some PA and Sep measurements.

4. M57 in Lyra- Ring Nebula. Using averted vision I saw nebulosity inside the Ring pop in and out of vision. I did not see the central star consistently and cannot confirm I actually saw it.

5. NGC 6542-Cat's Eye Nebula in Draco. This looked blue to me with just a tinge of green. The central star was plainly visible.



6. Moon. We looked at two different places on the moon. The first was the region around the Straight Wall in Mare Nubium. The crater Birt was visible but even better- the rille just to the side of Birt was plainly seen. It is a difficult object to pin down in my own scopes. Tom Frey was able to capture an image through his camera.

7. Moon-the other area of the Moon was the Southern Highlands. The sunrise terminator was just rising over Clavius and only the rims of Clavius, Rutherford on the rim wall, and two of the interior craters were visible. Just as we were going on to the next object the Sun was beginning to illuminate the floor of Clavius. Stan Ketelson was able to capture an image through his cell phone.

Onwards to the mysterious outer reaches of the Realm of the Planets.

8. Neptune- What a nice view to see a decent sized disk. We clearly saw the moon Triton. In terms of color I saw Neptune as bluish but paler than I had thought.

9. Campbell's Hydrogen Star- Planetary Nebula in Cygnus. Located about 2.5 degrees north of Albireo this particular star is a Wolf-Rayet star ejecting its hydrogen envelope. Some of our members were able to see the nebula and others were not. I saw it clearly with a reddish tinge. Further research indicates this is a rare sub-type of Wolf-Rayet star called [WC] - the brackets indicating it as the central star of a Planetary Nebula. Wolf-Rayet stars are generally high mass (20 times the mass of the Sun) and very hot (>25000K). The [WC] stars like this one are of much smaller masses and are believed to be post-AGB stars that still have a very strong stellar wind. Thus while they are very hot and emit enough UV radiation to cause the ejected gases to fluoresce they have not yet evolved to the point where the core of the star that will become a White Dwarf is exposed.

10. NGC 7009-Saturn Nebula in Aquarius I did not see the central star. I did see the antennae to either side that gives it its' name.

11. NGC 7662-Blue Snowball in Andromeda. This name describes it perfectly. A planetary nebula in And which I saw with distinctly blue tinge. Some members saw it as two distinct circles separated by a white line. I could see these features with averted vision but not directly.

12. NGC 7331-Spiral Galaxy in Pegasus. This one was seen as a spiral galaxy seen in between face and edge on. I thought I saw some mottling with averted

vision but can not confirm it. Note- Stephan's Quintet is about 0.5 degrees south of this galaxy. We did not look for these.

One again out of the darkness to the outer reaches of the solar system.

13. Uranus- We got a linguistics lesson here. Pronounced as in "oor-un-oos" with long o's and the accent on the first syllable. Anyway-this was a really good view. I saw it as blue but with more green than I did Neptune. I saw four of the five moons although it took a bit of time at the eyepiece to identify all four. Miranda escaped detection- at least for me.

14. M 31- Andromeda Galaxy What Can I say? It's M31! We were looking at the Nucleus here and it appeared starlight. There were a number of stars visible against the milky glow of the galaxy. I wonder if any of these were some of the very brightest Supergiants in M31. In theory the 60" should be capable of detecting the brightest supergiants. I know a number of amateurs who claim to have done so with NGC 206 and apertures greater than 20". We did not look at NGC 206.

15. G1-the brightest and easiest to find of M 31s' Globular Clusters. YESSS! Located at the apex of a triangle of stars this appeared non-stellar and fuzzy. Btw- is it apparent yet that I was thoroughly enjoying myself?

16. M 32- the small round companion galaxy to M 31. I saw no detail visible but M32 was clearly embedded in the nebulosity of M 31. I can't tell whether it is currently on the near or far side of M 31.

17. NGC 604-Star Forming Region in M 33 in Triangulus This has long been one of my favorite galaxies. Although I see little detail I am always looking for spiral structure. NGC 604 is bright enough to have its own number. This is M 42 to any inhabitants of that galaxy. The overall shape was irregular and I could see some low contrast dark features embedded in the nebulosity.

18. M 76-Little Dumbbell in Perseus Paler and smaller than its better known namesake M 27 it was still an impressive object. Geo changed eyepieces for us here. For the most part we had been using a 65 mm eyepiece yielding 375x. He changed it here to a 50 mm eyepiece yielding about 487x. I could see clearly the two ends with the split in the middle-although more rectangular than M27.

19. NGC 891- Edge on spiral in Andromeda This was my personal favorite of the night. A very challenging object. I normally see this as a dim splinter type galaxy and am always looking to see if I can detect the dust lane. Here the galaxy extended across most of the field of view. I clearly saw the dust lane

passing across the field and could see some detail. But I never did see the glow of the galaxy itself. The only way I knew a galaxy was there was because of the dust lane. A big milestone for me to see this.

20. M 42 in Orion. WOW!!!! This was far and away the most impressive object of the night. A vivid green! I could see many embayments around the fishhook and lots of dark nebulae amongst the lighted nebulae. The number of stars visible inside the Trapezium- itself another WOW -was more than I had expected. I identified at least 3 stars in the field of view which I know to be very young stars of the T Tauri type irregular variable. Oh yes- how do you spell “A-p-e-r-t-u-r-e E-n-v-y”?

And now back into the heart of the solar system for a look at some more planets.

21. Jupiter There was a ton of detail to be seen. I could clearly identify 6 belts and suspected others in the Northern Hemisphere. The Red spot was- Pink! Overall a lot of pink. I could see some festoons right at the edge of visibility along the South Equatorial Belt.. All 4 Galilean Moons were visible. Europa, Ganymede, and Callisto made a tight triangle on one side of the planet with Io all by its lonesome on the other. During the time we were observing the Red Spot had traversed about a quarter of the way across the planet.

About this time we started to see the approach of dawn. Geo and Tom were not sure the last two objects were within the traversing limits of the telescope but went for it anyway. We lucked out as they were just within the travel limits.

22. Mars was a teeny weeny red ball with a lot of atmospheric turbulence- the quintessential “Angry Red Planet.” I saw no detail and no trace of the ice caps. Hardly a surprise. We were coming up against the dawn and Mars is on the far side of the Sun having just emerged from the glare.

23. Comet Ison Finally we got to Tom Frey’s request. Comet Ison. This comet showed a fuzzy nucleus with just a hint of tail against the rapidly brightening sky. This was the finale.

What a wonderful night. When we first heard of the tour I had doubts about going for the full session as I wasn’t sure we could stay awake all night. I am so glad we did so. It got pretty cold and I had all my layers on. Lots of coffee and Hot Chocolate although I am not a fan of the instant stuff. Back on to the bus where we were an extremely happy but exhausted bunch. I don’t know about anyone else but about the time we reached the highway I just collapsed.

Tom and Geo were wonderful. It still beats the heck out of me how Tom was able to wear shorts all night. Obviously he was well acclimated to conditions in the dome.

I'll close with this sent to me by Jurgen Hilmer of the Santa Barbara Club

THE GREAT 100 INCH HOOKER

THE GREAT WALL IN CHINA AND PYRAMIDS IN EGYPT

MAN MADE FOR MAN'S EARTHLY NEEDS .

BUT THE GREAT 100 INCH
HOOKER

MAN MADE TO FIND HIS
EARTHLY SEEDS

AND TO HIS SURPRISE IT'S
COSMIC SEEDS !

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