

Open House Attendance. Sorry if I missed any others.

Current Members

- Myron Babcock, Co. Springs
- James Burnet, Co. Springs
- Floyd Glick, Co. Springs
- Dan Layne, Col. Springs
- Bill Miller, Co. Springs
- Rich Russel, Co. Springs
- Marc Slover, Denver
- Ray Uberecken, Co. Springs

Interested Visiting Parties:

- Vince Bradshaw, Lakewood
- Jayson Quilantan, La Junta
- Arthur W. Roos Jr., La Junta



Time Lapse Star Trails with Dish, "Skyfall" Photo by Marc Slover

Most of the current members arrived on Friday Afternoon. The temperature at 3PM was 103 Deg. on Friday and didn't cool off until after midnight.

Rich Russel got to the site Friday morning and finished mowing the RV park. This made it much easier to pull the RVs in and set up camp that night.

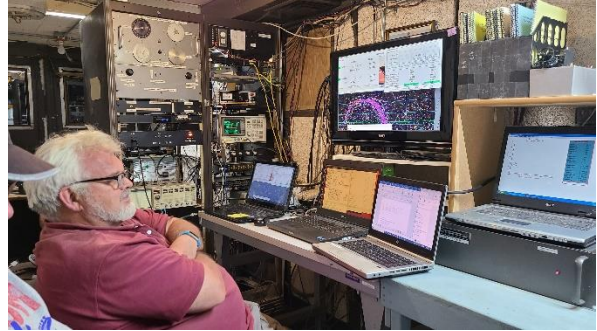
Rich brought all of his equipment including Telescope, 850MHz Interferometer, Itty Bitty Radio Telescope, Optical Telescope and Mini 1420 MH Scope in a Box. The thick smoke, wind and light attendance made it difficult or nonproductive to set most of this up, so the majority of the observations and science were conducted from the Comm. Trailer.



We had 4 RVs plugged into the 20 AMP 120 Volt RV circuits but those are not enough to run the air conditioners so keep that in mind when camping on site. The power did allow fans, microwaves, and refrigerators to work and was a great convenience to all the RVers. Ed Corn installed the breakers for these in the outhouse and they should be turned off when not in use.

Each morning Bill set up a coffee pot outside the trailer to keep us going. Bill also bought and put out 28 solar yard lights so we could see our way around obstacles in the dark.

Rich and Dan set up the equipment and computers to hunt Pulsars on the installed 1420MHz feed. On previous trips they had problems with accurate pointing and receiver settings and had not been able to acquire and pulsars on 1420. Glenn Davis, Dan Layne and Phil Gage and others had made several calibrations runs in the last several months to solve the pointing error of ~ 3.5 deg Azimuth and in the last several trips, they fixed it in the software along with other enhancements. During this weekend the pointing/tracking system worked almost flawlessly.



Dan Layne had been experimenting with the B210 Receiver and had found suitable pulsar settings for the 1420 feed system. On Saturday afternoon he started receiving pulsars starting at the top of the signal strength list and bagged 4 by about 10PM. One of these had not been captured on previous 408MHz runs so added to our list of 14 Pulsars so far. This was the first time that pulsars have been detected on 1420 MHz This was done using the new supercomputer provided by Don Latham. Rich and Dan had a competition going about who could receive the most in a single day. Rich had previously bagged 5.



Myron Set up a VHF/UHF Satellite communication system with a Yaesu F736R and two Eggbeater antennas on the Comm Trailer and proceeded to work contacts through the AMSATs.

Myron also brought out his new DJI Mavic Mini 2 drone and flew it around the site for about an hour. We can't wait to see the video footage from this.

Ray setup a Flex Radio on the Jupiter dipole antennas and attempted to capture the Jupiter/Io emissions with the RadioSkyPipe and Radio Jove prediction SW. Later Arthur W. Roos Jr. of La Junta brought in his Radio Jove receiver. Bill calibrated it with a reference generator and the Radio Jove calibrator from Rich. Arthur left it with us to use and experiment with until we can fix the old one or get a replacement.



Marc Slover and Vince Bradshaw came down from Denver and set up a number of cameras for time lapse videos.



Marc has designed and built his own unique articulated slow moving time lapse camera mount that yields excellent camera position and movement effects.

Marc has posted several of his time lapse videos of the dish on his You Tube channel: Road Trip Ventures at:

<https://www.youtube.com/channel/UC7xe59SBEdWErd25TZ1Ffkw/videos> .

We had some time to set back under the canopies and reflect on the dish, the site and the science of Radio Astronomy and Ham radio. On Saturday night the smoke and wind were too great to cook outdoors so Myron took the cookout to the underground/bunker. He provided hot dogs, beans, potato salad, macaroni salad, watermelon, cake, and lemon aid. After a hot and tiring day, this was very well received and satisfying.



During the weekend Bill and Myron did some more cleanup work on the bunker and installed a 2 inch exhaust pipe out to the surface to exhaust the vacuum for cleaning. This is a great add to allow vacuuming out the bunker without breathing the dust it exhausts inside. The pipe is capped on the outside with a bean can to keep the rain out when not in use. Be sure to remove and replace this can when using the vacuum to clean the bunker.

In previous trips Bob Haggart and Bill discussed various methods of removing the tumble weeds from the bunker ramp including borrowing a chipper/shredder from Bob Sayers. This didn't work so they thought about using a pitchfork to load the weeds onto the tarp then wrapping it up with the rope and dragging it up the ramp to dump away from the bunker. This was far easier than pitching the weeds over the ramp walls as had previously been done. Dan Layne came down about halfway through this exercise and helped shovel weeds. It took only 6 tarps full and two hours to clear the ramp of weeds. (see this video of the tumble weed monster).



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https://www.dropbox.com/s/k7ar75g0940fcar/20210717_102614.mp4?dl=0



On the previous Monday Bob Haggart met Bill and Myron at Home Depot and we purchased a pallet of Cinder blocks and mortar. Bob hauled them down to Haswell with his trailer and Bill added a tier to the cinderblock wall to stop the mud flow over it. Myron loosened and piled up the mud that had flowed into the ramp.

On the open house trip Jim Burnet helped Myron and Bill shovel the dried mud into his truck and it took four partial loads and a number of wheel borrow loads that Myron single handedly pushed up the ramp to clear most of the mud from the ramp. Thanks to Jim and Myron for this hard work!

The ramp is now clear but will require several more tiers of cinder blocks and biannual maintenance to remove the tumble weeds and keep the mud out of the bunker sump pumps and hallway.



Additional housekeeping during the open house included: Jim bought some fly traps on his side trip to Las Animas. Myron cleaned out a lot of the old, expired food and junk and did many cleaning activities in the bunker. Bill emptied the bunker portable toilet, took out the trash and ran the magnet roller up and down the road and parking area collecting about 2 lbs. for nails and metals.

Overall, everyone learned a lot. We got a lot done, had some good observations, and great comradery even if attendance was light and the heat and smoke was heavy. We hope to have many more observing trips and sponsor a much larger public open house after the pandemic next year.



End of trip report.