

2017-10-09 DSES Technical Planning Meeting Minutes

Location and Time: The October DSES Technical Planning Meeting was held on **Monday Oct 9th at 5:30PM MST** at the IHOP Restaurant at Constitution Ave. and Tutt St, Colorado Springs, CO 80919.

Attendance: Rich Russel, Gary Agranat, Ed Corn, Steve Plock, Dave Molter, Bill Miller, Myron Babcock, Ed Schade, and Floyd Glick

Attending Remote: Skip Crilly from New Hampshire and the Green Bank Observatory in West Virginia.

As usual if I have omitted anyone or miss represented anyone or anything here please feel free to correct me.

General: I'm very sorry for the late publication of notes from the last couple of meetings. I have been tied up in a number of family issues but will do better going forward. The new venue for the meeting at the Constitution IHOP was much better this time with a semi-private room and better acoustics however the wifi connection for remote attendance was still unreliable and dropper Skip a number of times.

Agenda:

1. Gary Argonaut's represented the DSES at the Haswell Bazaar with a table, display boards and slide shows provided by Michael Lowe and Bill Miller. Gary provided this report on the bazaar for 10-07-17 trip and other items. From Gary;
 - a. The Haswell bazaar went well, better than the last year. Several expressed interest to come out while we are there. One farmer was interested and knew of the site and past usage. Also had lunch with Dolores's son in law. Great community relations for the day's efforts. New slide shows and boards were presented.
 - b. While I was at the Haswell Bazaar on Saturday, I was approached by Ms. Linda Trosper, the coordinator of an upcoming bazaar in Eads on November 18. She asked if we would be interested to participate. And seeing our setup, she said she would like to have us. I didn't ask for more information about the scale of their event. She did give me a flyer application for participation, which I attached.
 - c. The flyers we have for giving out about DSES are out of date. At a minimum those need to get updated contact information. Myron provided some new flyers at the 10/9 meeting and will post them on the web so they can be printed at will.
 - d. If we want a dedicated page on the website for donations, as well as membership and general contact instructions, we will need to work out what should go on that page.
 - e. Rich requested that we need a tab for donations and a list of projects that need funded. Items like new frequency feed antenna, a month's electric bills and hot spot charges could be individually sponsored with donations.

Items related to Meeting Agenda Submitted by Steve Plock

2. A 15 KW Generator was removed from Cheyenne Mountain by Ed, Ray and Steve on 9/13/17 and checks out OK. It will be sold or used at a later date. We may decide to keep this generator and sell the 25KW we use now. One possible customer is the Colorado Springs Astronomical club for their site near Rye. It was suggested that we get the commercial power on line and stable from Skip's generous donation and then sell the other generator and solar systems if they are no longer needed.

Another option is to use them as backup and to augment the commercial power for power cost and reliability considerations.

3. Phase one of ramp retaining wall has been completed and is 8 blocks high now. Need to add additional phases to seal all the overburden erosion into the ramp. The next phase will be the buttress with current materials plus a couple of hundred dollars of added supplies. Phase 3 of the wall will extend up the ramp slope to further retain the hillside. We will ask for wall donations for the next several phases.
4. Ed Corn stated that the inverter in the bunker kicks off in overload when both sump pumps turn on at the same time. He needs to separate the sump pumps on two different inverters to prevent this from occurring and rendering the sumps inoperable when they are most needed.
5. Dave Molter has acquired a 10' satellite dish. Dr. Russel would like to install it on his property and move the DSES Spectracyber system to this dish which will be online and available for Hydrogen line observation and experiments by members remotely. The initial plan is to use Steve's 1420 MHz feed in this experiment. Bill stated that when using the Spectracyber at the Plishner site, a strong local 892MHz emission was overwhelming the Spectracyber and that Ray believes that we need to add a bandpass filter to the down converter to get the local 892MHz signal out of the Spectracyber receiver.
6. Bill reported that the system II dish motor controller and software was tested by Ed Johnson, Ray and himself on 10/7/17. Several issues were solved and the pointing controller and SW were working well. Unfortunately an automatic Microsoft update rendered the system bench computer inoperable and Ed had to remove it to his lab to reload the operating system. Ed was able to use his laptop to test everything and do a direction calibration on the Haswell grain tower by sight and the Como 435Mhz beacon by receiver. Ed couldn't leave his personal laptop in place but will fix the bench computer for permanent installation. The controller HW unit was left attached in the dish pedestal control deck. Late breaking update is that since that time Ed has repaired the control computer and it is ready to install on the next site trip but is unavailable for this until Oct 29. Bill is also unavailable until that date so can't make the Oct 21 trip. I called Rich on this last Thursday and he will work to use system I from Dave and Glenn to point the dish for the Oct. 21 trip.
7. One additional problem is that the computer operation of the dish drive is popping the two three amp breakers on the Azimuth and Elevation controllers. It was suggested that limiting the speed and the start and stop ramp speed would prevent this because slowly increasing/decreasing the ramp speed gradually with the hand controller seldom pops the breakers. Although this was done in the software we will have to make sure it moves, starts and stops slow enough for the breakers. It is also possible that the breakers are over worn and need to be replaced. These are Allen Bradley A-B Catalog #1492-GH030 Series B, AC 250V 50/60Hz. 3.00 (3.00)A DC 65V 3.00A Din rail breakers. Date coded 96. Estimated online cost between \$50 and \$100 each. We should also do an engineering analysis and test to make sure that the breakers are properly sized for the motor controllers as their origin is unknown.
8. Completion of ramp fencing is still required to prevent tumbleweed intrusion into the bunker ramp but the temporary plastic fencing seems to be doing the job for now. Bill is watching Craig's List for 6ft. chain link fencing at low cost.
9. Skip Crilly plans to set up his test system at Plishner starting on the 21st of October site trip. Skip could move to the 28th but we need to let him know right away. Since then Skip scheduled to come down to work with Steve and Rich on the weekend starting on the 19th.
10. Steve proposed granting Ed Johnson and Glen Davis free memberships for 2018 as a result of their development efforts on system I and system II. This was motioned and passed by unanimous vote for granting membership as this is a critical piece of the system infrastructure and needed for all other dish operations.
11. Steve purchased and installed two new 12V 950 AH batteries in the generator shack to fix the starting problem on the generator. Ed installed a 24V charger which runs off the generator that charges the new batteries whenever the generator is running.
12. Steve is still working on the easement permissions on the utility power but had no new update from the property owners.

13. Dave is running the JOTA Boy Scout Jamboree on the air the weekend of the 20th thru. 22nd of October a list of frequencies was given and everyone should join in. Gary offered to run a contact station for the Jamboree from the Plishner site and host Scout visitors if needed.
14. Ed Corn is going to the site on the 21st to work the electrical and gas line upgrades.
15. Myron provided a new roster with all the member data and will send out to everyone. Aaron Reid has rejoined and with Ed Johnson that makes 50 active members total at this time.
16. Myron stated that expenses are about \$2000 for the year so far. Additionally about 300 for Insurance, 200+ for solar exhaust fan, paying the Taxes on both properties at about \$6/year. Last year expenses were only about 500 but many items were purchased for infrastructure and many members donated materials for projects last year. Electrical materials, fencing and equipment from Ed Corn; large propane donation from Lauren Libby; steel for stairway and solar controller from Bill; spectrum analyzer, multiband feed, controllers, radio transceivers and other equipment from Ray to name a few. Many other members have donated various items to get the site operational. If you have something that can be used or have a special item that you know is needed that you want to purchase this is greatly appreciated.
17. Rich: Daughter is updating the QSO cards. Rich will get 500 of them and donate to the group. Also Rich's daughter did a hat design that we could get. Her web site is KAMVAS.
18. Rich put two papers in the SARA journal. Next entry date is Dec 12th to publish on Dec 21st.
19. Next SARA West conference is at Palo Alto and paper abstracts are due Dec 21st. Papers must be complete by March 1.
20. Ray has said that he will provide a 1296 beacon by the 28th from his site that we could use to check the dish pointing and receiver sensitivity.
21. Rich will publish the 5 year plan presented at the last science meeting.
22. Floyd has a handbook of general terms in Astronomy and Radio Astronomy in the works.

Interesting Read: On Neutron Star Collisions: https://www.livescience.com/60701-ligo-neutron-stars-heavy-metals-gold.html?utm_source=notification

That concludes the minutes from the technical meeting on October 9, 2017.

73 and keep looking up!



Bill Miller

KCOFHN

DSES Secretary

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