2017-01-09 DSES Technical Planning Meeting Minutes

Location and Time: The 26th DSES Engineering and planning meeting was held on Monday, Jan. 9th, at 5:30 PM at the Cumulus Media conference room at 6805 Corporate Dr. # 130, Colorado Springs, CO 80919.

Attendance: (New Member) Drew Bodker, Bob Sayers, Michael Lowe, Gary Agranat, Dr. Richard Russel, Ed Corn, Steve Plock, Dave Molter, Glenn Davis, Bill Miller, Bob Sayers, Ray Uberecken, Floyd Glick, Myron Babcock, Ed Schade,.

Attending Remote: None joined by TeamViewer.

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

This Month's Meeting Minutes for January. Note: These may be out of the order as they were discussed in order to group subjects together.

Last meeting minutes: No New changes other than the meeting numbering. Steve reminded me that this is the 26th Technical meeting not 24th.

Agenda:

- 1. **Introduction of new member to the group:** Drew Bodker (KC9NWP) a radio engineer with KRCC in Colorado Springs.
- 2. Business:
 - a. Board Election Update
 - i. Bill Sent out the ballots on Dec 19th
 - ii. An additional ballot was sent to new member Hubbert for voting dues paid
 - iii. Will send Gary Agranat a ballot as he is now a paid up voting member.
 - iv. Ballots must be mailed back to Wayne Green by Jan 19th
 - v. Wayne will send or bring the ballots to Springs and two existing board members will tally them.
 - **b. Annual members meeting:** Jan 29th, Sunday at 4:00PM at Cumulus Media conference room at 6805 Corporate Dr. # 130, Colorado Springs, CO
 - c. **Next trip to site:** We'll need pretty good conditions to reinstall the feed. We'll drop the trip on the 14th and go for a good weather weekend. Feb 4th if weather permitting. Coordinate by email distribution and meet at Ellicot Fire Station at 7:30AM on the date picked for best weather
 - d. Next Science Meeting: Monday, January 23, 5:30 at Dr. Richard Russell's residence.
 - **e. Next Technical Planning Meeting:** Monday February 13th at 5:30 PM at the Cumulus Media conference room at 6805 Corporate Dr. # 130, Colorado Springs, CO 80919.
 - **f. SARA Western Regional Conference:** March 17th to 19th at Socorro, New Mexico, This will include a tour of the VLA.
 - i. We have 3 potential Papers to write and present:
 - **ii.** Dave says the best hotels are the Holiday, Best Western, Comfort inn, Days Inn, in that order.
 - iii. Paper Abstracts Due: February 1
 - iv. Papers due on February 21st
 - v. Make Hotel Reservations
 - g. **CSVHFS conference** either the 14-15, 22-23, or the 27-30 in Albuquerque
 - **h.** Colorado Exempt Organization Paper Work: Michael said he has filed required state paper work for the year.

3. Technical Projects:

a. Ray: Multiband Feed Antenna:

- i. Steve and Ed made a trip on January 1st and retrieved the Multi-Band Feed for Ray to repair.
- **ii.** Ray went to the site on Sunday the 8th and retrieved the controller assembly for the multiband feed.
- **iii.** The two-piece coax connector on the heleax pigtail connection cable shorted out when assembled. This shorted out the 24-volt bias on the coax used for powering the assembly.
- **iv.** Even so we still received some of the beacons with the shorted feed line which is a really good sign that the dish antenna was providing substantial gain.
- **v.** Ray is in the process of the repair and changing a few features in the assembly to get it operational for the next warm day trip where it will be reinstalled on the dish.

b. Ray: Copley Motor Controller and other projects:

- i. Ray and Ed could not get the RS232 to talk to the controller at Rays House. Want to get this to work correctly but if can't get a suitable repair it can be made to work by dropping the brakes on power off as has been the case up until now.
- ii. The FM Meteor receiver seems to be working as prescribed. A few improvements will make it operational.
- iii. The remote control 435 link was checked out with new antenna from Ray's place but still doesn't work. May have to check and replace the receiver on the unit.

4. Rich

- a. Sun noise measurement experiments
 - i. Mixed results that the detector data is questionable.
- b. Ray did the experiments with a detector integrator with variable time constants and saw flat output at 221 and 142 and on 2 meters. However, there is no current sunspot activity.
- c. Rich Presented data gathering and analysis methodology which looks sound. Actual signal data from the low gain Yaqis may be illusive.
- **5.** Rich would like to document a paper for each innovation we are doing.
- **6.** Ray has the integrator documentation soon here and he will post.
- **7. Book reviews:** Ray recommends:
 - **a.** Antenna Physics by
 - **b.** Propagation and Radio Science by Eric P. Nichols
- 8. **Ed Schade: Rotory Breckfast:** Looking or Presentation on the DSES group and Plishner next one is on March 8th.
- 9. Myran: Has extra Keys. Key protocol reminded

10. Rich's Drift Scan Survey Presentation

- a. Drift Scan at 420 MHz CW, see presentation that Rich will post.
- **11. Meteor Shower Receiver update**
- 12. Copley Motor Drive Update
- 13. Others

14. Dave Molter and Glenn Davis

- a. Raspberry Pie readouts moved to other side of box.
- b. Ethernet noise may be resolved with shielded box.
- 15. Staircase Materials are all down on site

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