

DSES minutes for 8 July 2019

5:30 PM –

Update for System #1 -

Glenn: Found the errant bit in the card; has a software fix in Elevation (bit drop)

Phil: Modified s/ware has indicators to help tell the operator(s) how/when the switches are to be flipped to enable a quasi tracking mode.

Louis: Relays could be used to automate the present control panel (Needs schematic of the control panel).

Bill M.: System #2 swaps out the manual control panel for relays.

Rich: Wants to acquire and record six(6) calibration points (known targets) using the Spectra Cyber. Using the screen capture to record the RA/Dec values displayed by the s/ware to compare them to the expected RA/Dec of the same targets.

Glenn: Later, a “math” solution of the INI values could be developed.

Dave: Has relays and just needs to move the “pin” of the Elevation.

Rich: Pulsars require a high precision tracking ability.

Update for System #2 -

Bill: Integral movement is ready to go. Star tracking is pending, and ready to test.

Current dish status -

Steve P.: The “Lock Out” was due to a bad switch on the panel. Paul B. is going to replace the switch (possibly modify the “Lock Out” so it can be reset more easily). Skip C. is sending us a new Tx/Rcvr fiber-optic box.

Ed C.: Last trip the conduit is installed. Need to pull wires and install the hot water heater. NEC code is good. Ground measured 1.8 ohms. Going down to Plishner Wednesday or Friday to get outlets on the generator setup for 30A service. Bunker is 820. Ham radio antenna tower will have 10/15/20 meter bands. We have a rotor; need a vertical pipe/mast and guy wires.

20 July Work Party -

???: Sychro panel must be kept OFF until it is troubleshot.

Rich: Don't make the dish inoperable before we have the Open House!

Bill: Status of the yard?

Ed: Good...need to use a roller magnet to pick up some nails and screws that are on the road. How long would it take to skirt the trailer?

???: One day?

Open House Preparation -

1) Demos and Presentations -

- Spectra Cyber / print outs for people to take home
- Itty Bitty telescopes
- Solar telescope(s) [optical and radio]
- Absorption demo
- Meteor scatter
- Radio Jupiter [20MHz radio rcvr]
- Ham Radio in bunker
- Talk about Pulsars

- 2) Food
 - **Dave & Myron** run the grill. **Bill** will contact **Myron**.
- 3) Misc.
 - Clean up, fixes, road July 20th work party.
 - Signage to indicate where different events take place.
 - Check In at the Comm. Shack to collect name, address, phone #, etc. Ask if they wish to be contacted later.
 - Publicity (Crowley, Eads, Haswell, Ordway) {**Gary & Bill**}
- 4) Camping
 - \$? maybe \$10/night for power/hookup
- 5) Photography
 - Moon will be near full phase; makes seeing meteors difficult.

SCIENCE Status -

Rich: Pulsars need lots of gain in the chain (Antenna/Preamp/RF pickup) Currently have about 12dB at home: need more! Some equipment has been ordered. Using *Stellarium* s/ware to track pulsars might help. Vela [PSR J0835-4510] pulsar is only briefly available each day. PSR J0332+5434 is available 24/7 so it has about a third of the signal; but a better chance of being found.

Outreach/Science Fairs -

Gary A.: How do we interface with the public?

Bill: Contacts and outreach. Support science fairs. Maybe awards? El Pomar grants? Bring ideas to the next meeting. Use remote programs like *TeamViewer* and Ham radio to involve people. Next meeting will be after the open house.

Ed: Need Wifi to make the remote control more accessible.

Rich: We can use **Ray U.**'s dish to see the Spectra Cyber in action.

Ed & Bill: Hands-on projects to put into schools. Video interfaces. Summer internships from colleges. Need job description 6-7hrs worth of credit.

Rich: IEEE students, STEAM students, AIAA, Engineering, etc. Point of contact: Dr. Leann George.

FINANCES -

Myron (Treasurer) was absent.

Bill: Good shape. We need to watch our outgoing expenses while generating income. Maybe grow our membership [especially younger members].

Ed: Amazon account needs "Smiles" inquiries.

Bill: Mission statement might need to be reviewed.

Adjourned: 7:00pm