SUG Minutes – 27 Sep 2016

In attendance
Wes, Jim B, Francisco, Whit, Mark, Jim T, Shing, Jim S, Mark, Chuck, Dick, Dave

Station Reports – New Info in RED

Tom –

Dick – RSS computer at WCCRO has been rebooted; serving data just fine now.

Whit – Starting construction of an LWA antenna at Cohoe, complete with wooden fence to keep rampaging moose away from the antenna.

Nathan –

Jim B – New floor installed in the radio room; re-building workbenches to make room for a 19" rack. Work continues on the supports for the adjustable dangle angle LWA antennas. A write-up for how to set up an R75 and do a non-linear calibration in RSP is in work with Dick and Jim Sky. Jim has returned the PDS hard drive full of HNRAO data.

Wes – Still with the line noise. Jove array moved from 10' antenna height to 12' height to make ready for Jupiter's lower transit elevation.

Chuck – TFD array has been moved to the dairy farm. Receivers and computer not set up yet; will be placed under the porch of the farmhouse. The new location necessitates a longer coax run from the array to the receiver, plus Polyphaser suppressors and a ground rod. No internet connection available. Dave suggested using one of Whit's GPS NTP server boxes for keeping the RSS PC's clock accurate.

Francisco – The proposal to get funding for an undergrad to help set up the TFD array at RHO has been returned with more forms to fill out. Dr Telesco (UF Astronomy Dept Chair) stated that he is willing to fund internet connectivity for RHO; the optical guys want to have an online live video feed from an optical telescope. Francisco is checking into who can provide internet service there and what it will cost.

Andy –

Dave – Nothing new.

Discussion – New Info in RED

HEC grant

Shing mentioned that he has received the system proposal and budget prepared by Dick and Dave and will take a little time to digest. All are in agreement that getting moving on the hardware improvements should happen sooner rather than later. Chuck indicated that the only hurdle before issuing purchase orders for spectrographs and antennas is to find out how Dick and Dave shall be paid from MTSU, which is basically an administrative detail. Dave has the parts on hand for 16 TFD elements and will commence fabrication; however, he will not obtain any coax cable until he has firm orders for it.

Shing mentioned that looking for other sources of funding, especially for the addition of new stations in the future, is an important thing to do now – along with looking for additional station sites and personnel.

Shing also mentioned that he has been in contact with a person at UA and NJIT, both of whom may be willing to set up stations to observe the eclipse.

FCC Noise Floor

Dave has sent around a note from Whit about the FCC's current Technical Inquiry about the condition of the noise floor. Dick also sent around a slide outlining what the FCC is looking for. The FCC desired replies in August, but has extended the dead line to Oct 21st since it has received no replies from what it considers to be important parties (universities and research organizations).

Dick mentioned that mentioning our alliance with MTSU, UF, and NASA / HEC may give us a somewhat louder voice. Chuck and Francisco said they will have to think about the best way to show their universities' involvement. Jim T said that we can certainly say that Jove was started with NASA funding; Shing felt stating that we are collaborating with a NASA funded research and education effort (the HEC) would be a good idea.

Whit mentioned that this is not a legal proceeding, so there are no hard and fast rules.

Jim Brown asked if including images in the response was appropriate; Whit thought it would be.

Dick felt that we should investigate how previous noise floor studies were accomplished.

Whit will send to Dave the applicable ITU recommendations so Dave can contact those responsible. It was noted that the ITU docs do not rely on peer-reviewed information and therefore may not be 100% accurate.

Dave will also draft a response to the FCC's inquiry and pass it around to the group.

Archiving

Mark Sharlow of the PDS has taken over the reins of the SUG archiving effort from Todd King. Mark has been involved with this effort from the beginning. Shing asked if all Radio Jove data is archived at the PDS yet; Mark is not sure how much is done yet.

Shing also asked in any Juno data has been posted; Mark does not see any yet. Shing asked if Juno data was immediately public or had an embargo period; Mark was not sure.

Jim Sky is still working on generation 2 of the CopySPS utility. This should not prevent anyone from sending in their current SPS files who has not done so before. One of the things the new version will do is read the manifest file created by version 1 that lists all of the files sent in on the first submission. Thus it can avoid re-sending those files. The next update to CopySPS will also submit SPD files so a name change is in order for the copy program. **Anyone who has not submitted data on a PDS hard drive is asked do so and to contact Jim Sky for any needed help.**

Hawaii

Jim Sky hopes to put up a spectrograph at his cabin in Hawaii while he is there and run it remotely. Much depends on whether he can afford to beef up the solar panels enough to support the power requirements of the associated computer. The internet connection may not allow live streaming but the location seems to be pretty RFI quiet and may be useful.

Jovian DAM Morphology

Dave asked for some help in better understanding the terminology being used to describe the morphology of Jovian DAM dynamic spectra. Jim T offered that “arcs” occur on a scale on minutes and look like parenthesis, also that the term “emission envelope” contains the emission of the whole storm (on the time-frequency plane) and that we (usually) only ever see the upper frequency limit of observed emission in our spectrograms since the lower limit occurs somewhere (usually) below 15 MHz. Chuck will send the LeBlanc paper on arc structure to Dave. Dick mentioned that the term “bursting” came from single-frequency observations (strip charts and audio), hence the terms L (long) and S (short) bursts. Dave will digest this information and come back with yet more questions.

Software

Jim Sky indicated that experimentation continues with Nathan's SDRPlay2RSS program. He is trying to make the program easier to use from within RSS. The next RSS update should allow multiple configurations of the SDRPlay front end to be selected.

JUNO

Chuck is making a several ground-based observations using the LWA-1.

2017 Solar Eclipse

Chuck mostly done with a guide for participation in observing the 2017 eclipse with a Radio Jove receiver and one or two dipoles.

Next SUG Telecon MONDAY, 10 Oct 2016 at 5:00 pm EDT (2100 UTC)
(844) 467-6272, 352297#