

SUG Minutes – 12 Sep 2017

In attendance

Jim B, Wes, Dick, Larry, Tom, Jim T, Chuck, Shing, Jim S, Dave

Station Reports

Tom – Good observing conditions, lots of solar and Cas A scintillation; wondering if there is any correlation between solar activity and Cas A scintillation.

Dick – SDRPlay2 and external hard drive installed at Windward; but, needs password to computer to finish software installation.

Jim B – Observatory down on weekends for landscaping; burying all feed lines between Polyphaser and first junction box using french drain pipe.

Chuck – Not much new; still taking HF data at the dairy farm. eCallisto with antenna on roof of building on campus is awash in RFI.

Larry – Adding a Polyphaser to the Jove dipole array. Having issues with the Cal Wizard in RSP; not getting expected results. Dave and Dick offered one-on-one help via phone or Skype.

Wes – Power currently out from hurricane Irma; will be offline until service returns. Antennas survived just fine. Wes had removed all coax and lowered the Jove and 20P dipoles; left TFD elements in-place.

Dave – Good conditions; great solar, some Jupiter. All antennas survived Irma just fine.

Archiving News

Per Jim Sky, Baptiste is working on Python code now in lieu of IDL code. This to convert SPD and SPS files to CDF.

Dick wondered if the delay would hurt anything; Jim S said that his is a bit concerned about it.

Jim also said that a manual to tell people how to use the software to transfer their data to the portable PDS hard drives would be a good idea. Dave asked if before that is done whether Jim could send a reminder to everyone to submit a new batch of data and include where people should mail the hard drives; Jim agreed to do this.

Solar Burst Morphology

Tom sent around some spectrograms and a paper about some Type IIIb solar bursts. These have the same envelope as a Type III, but are made up of small puffy blobs.

Tom also send around an example and a paper about “paired bursts” – brief solar emission that looks like two closely spaced parallel lines in a spectrogram.

Cas A Scintillation

Discussion about Cas A scintillation. Tom wishes to continue to investigate with an eye toward correlation with solar activity. Dick suggested the best would be to point to Cas A’s transit elevation and wondered if Dave could point half of his 8-element TFD array to Cas A and leave the other half pointed toward zenith. Dave and Shing thought this was a good idea. Tom will leave his array pointed at zenith since the Jupiter season will not start for several months.

Eclipse Data Processing

Chuck sent around some “first look” strip chart images of some of the data submitted to the data archive. No further QDC processing as yet.

Shing asked if all the eclipse data has been uploaded to the Jove archive; Chuck said that data is still coming in.

There will be a post-eclipse telecom at 7:00pm EDT on Saturday, 9/16.

HEC Grant

Dave asked where we were at as far as HEC goes now that the eclipse pandemonium has somewhat subsided. Chuck mentioned that there is a HEC meeting at Goddard in Mid October that he will attend. Shing said that all groups in attendance will talk about their accomplishments with their projects.

Addressing the issue of characterizing the SDRPlay2 system, Jim S pointed out that running this receiver in switching mode with Nathan’s software may required more computer power than his 1.6 GHz single-core 4MB RAM computer can muster. Dick noted that we must formalize the computer hardware requirements before we can start setting up additional clusters of stations.

Dick asked Chuck if HEC could fund a more capable computer for Jim S so he could proceed with testing of the SDRPlay2 in switching mode; Chuck replied that he felt this would be a good use of funds.

Dick brought up that Jim B said there were problems with the most recent version of Nathan's software. Jim S is unaware of any problems.

Dick asked several times in several different ways for the science investigators to say what freq range is desired.

Shing mentioned that the original idea was to have data from 10 to 100 MHz using a combination of eCallisto antennas and SUG (TFD / LWA) antennas. Dave thought that such a setup could run well over the \$10k it would cost for an eCallisto system. Dick felt that might be overstated, since we might not need continuous frequency and time coverage.

After much subsequent back-and-forth between Dick, Dave, Shing and Chuck about desires and reality, they agreed that starting testing of the SDRPlay2 in non-switching mode from 18 to 26 MHz is the best place to start.

**Next SUG Telecon Tuesday, 26 Sep 2017 at 5:00 pm EDT (2100 UTC)
(844) 467-6272, 352297#**