

## SUG Minutes – 10 Oct 2017

### In attendance

Jim B, Jim T, Mark, Francisco, Jim S, Dick, Larry, Chuck, Dave

### Station Reports

**Tom** – Unplugging for unsettled weather when needed, still taking data for eventual determination of any correlation between solar activity and Cas A scintillation. Still steered to zenith.

**Dick** – Nothing new.

**Jim B** – Landscaping work continues; Jove and TFD array steered to zenith.

**Chuck** – Not much new; Jove and TFD array steered to zenith.

**Larry** – Working on RFI elimination. Running Jove receiver and FSX spectro on a marine deep cycle battery that lasts about 3 to 4 days, except when charging, then the receivers go on AC power. Great reduction in RFI after placing ferrite beads on everything in sight, especially the computer monitor vide cables.

**Wes** –

**Francisco** – Hurricane Irma took down the Jove array at RHO. Awaiting facilities to cut grass and remove some bushes before erecting the Jove and TFD arrays at RHO.

**Dave** – Steered back to Jupiter transit elevation; seeing weak Jupiter.

### Archiving News

Dave and Jim S had some brief contact with Baptiste in which he expressed regret for the lack of progress on getting Jove data into CDF format. Baptiste offered to supply the Python code (which Jim S said he is using as reference for writing a client-side app in VB .NET). Baptiste said he would meet with Renaud (the person who does the programming) and advise on any update to the timeline.

### TFD Array Beam Steering

Jim S reminded everyone to update the metadata fiels in RSS and RSP any time the antenna beam position was changed. Jim also reminded and suggested to everyone that

any and all such changes should be written into an engineering log. Dave related how he remembered to put in the log, but not in RSS or RSP.

Dave responded to Tom's email about beam steering and antenna options for the 2018 Jupiter observing season. Dave said there were two options. Easiest is to steer to the southward transit elevation using time delay cables as usual. Less easy is to elevate the northern TFD element up to 25 or 30 feet, then put the NS elements on a slant. This will reposition the array's "zenith" southward. This has the advantage of producing better polarization discrimination in the array, but requires some effort and expense. Dave noted that as the source moves from zenith, the TFD array's polarization discrimination capability becomes degraded, which also causes a loss in array gain as the signal is shared between the RCP and LCP outputs (even when it shouldn't be). Dave worried about elevating an array in Florida due to lightning. Dave asked if anyone would be willing to try tilting their TFD array. Tom and Chuck declined. Jim B said he was already speaking with Dick about the possibility and was into planning the mechanical aspects. Chuck asked if a ground plane was needed; Dave said yes, a tilted ground plane would be required.

Jim B asked Dave if he knew what delay cables and associated beam positions were supplied to everyone with their arrays. Dave said he was working on that and would send a summary today to those with TFD arrays.

### **Jove Business Meeting**

Chuck caught us up on the latest discussion; namely that it looks like Radio Jove will have a business meeting in early March, possibly at UF. Nobody voiced any concern about abandoning the idea to meet In Green Bank with SARA. Chuck, Jim B, and Dave thought that SARA should be advised of this sooner rather than later. Chuck will discuss further at next week's telecon.

Dave asked about Chuck's previous survey of Jove participants. Chuck offered that he did get some replies, but that it was from 5 years ago. Chuck said that everyone in Radio Jove felt that we needed input from Jove participants, i.e., the users of Jove receivers, before the business meeting. Chuck said that we should discuss and agree on the suite of questions to be asked in such a survey. Dave asked if a survey was difficult to do; Chuck said it is fairly easy, and that he plans to do it after the semester is over (but not before a good set of questions is arrived at).

**Next SUG Telecon Tuesday, 24 Oct 2017 at 5:00 pm EDT (2100 UTC)  
(844) 467-6272, 352297#**