

SUG Minutes – 10 May 2016

In attendance

Jim B, Nathan, Whit, Jim T, Francisco, Tom, Dick, Wes, Shing, Jim S, Chuck, Dave

Station Reports – New Info in RED

Tom – Making some interesting forward scatter meteor detection records.

Dick – A few solar obs but unable to post to the Jove Data mailing list.

Whit – A few nice solar observations made, taking a cell modem and new antennas to Coho soon.

Nathan – Doing some forward scatter meteor detection a la Tom. RASDR software has been benchmarked (PC-side FFTW processing). Should be receiving a RASDR2 at the Dayton hamfest.

Jim B – Line noise has become intermittent hampering track-down. CATV pole-mounted battery charger power supply interference still present, CATV company unresponsive, contemplating getting the FCC and ARRL involved as was done before.

Wes – Has reported RFI to power company – no response from power company, but line noise has become less frequent. Working on a new station diagram

Chuck – Observing 24x7 with students reviewing the data. Step cal and correction array seed file done; Dave has supplied calibration analysis and correction array files; student project next to start using the correction array and keep taking more data.

Francisco – Writing a new Florida Space Grant proposal to pay for a student to help set up the TFD square array at RHO this summer. FSX-7S now operating on an old UFRO PC that has a serial port, everything working well on the 20 MHz square polarimeter array.

Dave – Updated to RSS 2.8.14 on the FS-200 and the DPS, attempting to serve data on both simultaneously.

All observers are urged to keep an engineering log and update their system drawings for the SUG site.

Discussion – New Info in RED

Update on the progress of the correction array instruction manual.

Waiting on Dave to test the latest release of RSS ~~2.8.14~~. 2.8.16

Latest Version of RSS

Jim will release today a new version of RSS, 2.8.16, that will fix several bugs and add more metadata options based on his new knowledge of what the PDS is looking for.

RFI examples for the SUG web site.

Examples received, waiting on Dave to mount the examples on a page on the SUG web site.

CML-Io Phase Plane zone labels

Dave asked if it was truly important to label every bit of emission with a firm, definite label of Io-This or non-Io-That, suggesting that what really matters are the emission characteristics not the zone labels. Chuck put forth that it is in fact important and that better label definitions would come from analysis of our data. Shing and concurred, citing the lack of any good review paper, suggesting that this is a gap that could be filled by the SUG. Dick suggested that we shouldn't get too hung up on labels as the phase plane is just a map of probabilities and not much else. Francisco suggested two phase planes, one for RCP and one for LCP. Dave mentioned that efforts are underway to do precisely that.

Jovian DAM emission morphology terminology

Jim B mentioned that a recent non-Io-A storm was interesting because the individual bursts had a positive frequency drift, while the overall envelope had a negative frequency drift. Dave wondered if this was abnormal or normal; nobody offered any strong opinions one way or the other.

Dave asked what the proper use of the terms envelope, arc, and burst are. Discussion with Jim T, Chuck, and Dick indicates that the emission envelope is the overall shape of the storm on the time/frequency plane, with separate arcs therein. Bursts form the arcs, but no hard and fast definition of "burst" seems to exist. Chuck mentioned that several terms are explained in the Physics of the Jovian Magnetosphere book.

HEC grant

No news about any funding that might affect spectrograph stations. Apparently there is major emphasis on observations to be made during the upcoming eclipse. Comment from above (the OMB) was that this is a must-do, must-succeed project (but silence on funding for doing it or succeeding at it). Francisco suggested a portable spectrograph and portable TFD array to be placed in the path of totality. Shing mentioned the need to

come up with concrete performance goals and suggested that everyone participate to the best of their ability. **No discussion on performance goals or any spectrograph related issues.**

Update on literature search progress

No progress.

PRE 8

Chuck mentioned that another Planetary Radio Emissions conference, PRE 8, will be held in Graz, Austria in October. He and Francisco and possibly Dave will attend.

Archiving

Jim Sky has returned from his meeting with the PDS and will never be the same due to information overload. The plan is for the PDS to send portable hard drives to observers, whereupon observers will load the drives with all raw data since 01 Jan 2016, then return the drives to the PDS. Data will be in the form of 12- or 24-hour data files.

Jim will be the point of contact for the data submission effort and has asked all those interested in submitting data to provide him with their mailing addresses.

The vetting process for the data is unclear at this time. The PDS desires someone not associated with the SUG or Jove program, but who is versed in the field, to vet the data. Masafumi has been mentioned as a possible person who could do it. It is thought that vetting will take place annually. Discussion ensued about how it would be good to find out what is required to pass the vetting process sooner rather than later.

Efforts also underway to better define the two types on ancillary data, namely “auxillary data” and “context data.” Jim reported that aux data should include beam steering and similar information while context data should be a document containing information similar to our SUG station diagrams. It is not yet clear whether the aux and context data need to be of uniform format across all SUG observatories, but it appears that having such uniformity would certainly help the conversion process (taking place in Paris) and any researcher looking at the data.

Before the telecon, Jim sent an email to everyone containing a diagram of the data flow between Jove/SUG observers, the PDS, and VO Paris.

SUG BREAK

As Dave and Chuck will be out of the country for the next SUG meeting and as no one is wont to volunteer for cat-herding duty, the next telecon will occur in four weeks instead of two.

Next SUG Telecon Tues, 07 Jun 2016 at 5:00 pm EDT (844) 467-6272, 352297#