

KPARC Meeting Minutes of Monday, January 11, 2016

The KPARC January Meeting was called to order at 2:00 PM on Monday, January 11, in the Ripple Room in the Kings Point Club House.

The KPARC Board Meeting Minutes of January 4, 2016, were read by Secretary Linda Conklin. There were no changes to the minutes.

There was no current Treasurer's report because the audit of the KPARC Treasury has not yet been completed. The last Treasurer's report was as of November 2, when we had \$3,540.50 in our club account.

Dick Bishop reported that several members plan to take their RV's to the Orlando Hamcation on February 12-14, and possibly arrange for a table to sell excess Club equipment.

Bill Barron announced that there will be a mandatory ARES/RACES meeting at the Hillsborough County EOC on Saturday, Jan. 16. An email has been sent detailing the meeting. The agenda has not yet been finalized.

Today's program was put on by David Jordan, vice-president of LMARS (Lake Monroe Amateur Radio Society), AMSAT Area Coordinator for central Florida, and ARISS coordinator. ARISS (Amateur Radio on the International Space Station) has volunteer coordinators who work with schools and museums to stimulate STEM interest by helping students learn about space technology through space communications. See "ariss.org" for much more information on this great program.

David talked briefly about the history of satellites, from Sputnik 1 launched on 10/04/1957, to the first AMSAT, Oscar 1 (launched 12/12/1961), which was a beacon transmitting "hi" in CW on 144.983, with the transmissions/minute controlled by the temperature. He talked about several popular advanced ham radio satellites, including a really innovative AMSAT constructed inside an old space suit that was deployed from the ISS. David said hams can receive satellite communications using the FUNcube Dongle Pro SDR receiver plugged into your computer. Portable beam antennas (a dual band 2M/70cm antenna was demonstrated by David at the meeting) or even dual band whip antennas can be used to track LEO (Low Earth Orbit) satellites. Some of the satellites currently available to hams include:

FM Satellites: the ISS, and SO-50

CW/SSB (transponder) Satellites: FO-29, AO-7, AO-73, or Funcube

Digital Satellites: the ISS, NO-44 (Pcsat), or PSAT

David explained a satellite tracking program like SATPC32 is needed to predict when satellites are passing overhead. Because satellite speeds are affected by interference

KPARC Meeting Minutes of Monday, January 11, 2016

such as solar storms and micro-particles, a Keplerian Elements set is needed for satellites like the SO-50. Doppler effects of the passing satellites mean a slightly higher frequency than the standard frequency is needed to receive as the satellite approaches, and lower as it moves away. Transmit frequency doesn't change.

For further information, here are some resources:

amsat-bb@amsat.org This is an Amsat email list bulletin board carrying the latest chat on how to operate current amateur satellites and related news.

www.ariss.org This is a website with the latest info on amateur radio operations on board the ISS.

www.amsat.org This is the official AMSAT website for amateur radio satellites, giving history on amsats, current status on satellites, etc.

18 members and 2 visitors attended the meeting. The meeting adjourned at 3:35 PM. The next KPARC meeting is scheduled for Monday February 8, 2016, at 6:00 PM in the KPCH Banquet Room. Pizza, salad, and desserts will be available, and a \$5.00 donation is requested to cover the costs. The program will be presented by Dick Bishop and Mike Burks on "Mobile Operations: Installing Radios in Your RV"

Linda Conklin
KPARC Secretary