



EOSS Meeting Minutes Tuesday August 11, 2020 Online via Zoom

Call to Order: Tom KE7KCK called the meeting to order at 7:00 PM. There were fourteen attending via Zoom.

Previous Meeting Minutes: Meeting minutes for July 2020 are available on the EOSS web site for review. Tom KE7KCK asked if anyone had comments or corrections. July's minutes is accepted as written.

Treasurer's reports: Rob NØRPF reviewed checking and savings accounts. Rob has received and payed an invoice from Air Gas. Rob will contact CU for an unpaid invoice regarding a tracking brick requested by Matt Rhodes. Rob NØRPF will be sending out an invoice for flight EOSS-299 and issuing mileage reimbursement checks. Mileage requested for EOSS-300 is for tracking purposes only as we did not have a paying customer on that flight. Rob NØRPF requested an invoice from Tom KE7KCK for expenditures on the EOSS-300 celebration.

Tech Committee: Mark KCØD said we flew a new payload for preliminary qualification along with a new release Charlie which will be our third wireless release. At about forty thousand feet on the way up the payload began reporting a negative value for the barometric pressure. Mark KCØD is looking for this bug. Jeff N6BA is capturing the barometric pressure and the external temperature to calculate air density to improve landing predictions. After the flight Mark KCØD made some air density comparison calculations using the temperature from the new payload and the barometric pressure from KCØD-14 and data from a radiosonde that flew earlier in the day and found that they worked better than the published tables. Looking at this data we believe we are on the right track. Mark KCØD requested that we fly this payload on the next flight. Mark KCØD and Steve KØSCC are working with wireless release Charlie to solve some erratic behavior and would like to fly it again with some new firmware if there is room on the next flight. KCØD-2 has some new firmware with a couple bug fixes that needs to be qualified. Mark said all payloads damaged on the EOSS-300 flight have been repaired. Mark KCØD reported that CU's ADS-B was dead on this last flight. CU's students reported that they found a bad wire and it has been repaired.

Ground Station: Jeff N2XGL said that everything went well at the ground station. We did confirm that the ADS-B had failed but it was flown as ballast. Jeff said that the Deer Trail launch site is ideal as far as power, location, and capabilities.

Track and Recovery: Mike W9CN said it was a bit of a scary recovery on the side of Hwy 94. Mike said his goal was to recover the payloads quickly and get somewhere safe. Tom KE7KCK recommended that on future flights we assemble somewhere safe to plan recovery when payloads are located near high speed traffic. Mike W9CN and Tom KE7KCK recommended the use of high visibility vests. Mike W9CN will contact Steve KØSCC and Larry NØNDM for their expertise as first responders. Tom will add this topic to next month's agenda.

FAA: Russ KBØTVJ said that on EOSS-300 and EOSS-301 the FAA has assigned trainees to observe our flights. A couple trainees from Denver Center observed the EOSS-300 flight and a trainee from TRACON observed the EOSS-301 flight. Russ believes that we must be doing a good job for the FAA to use us in their training.

Tracking Bricks: While monitoring the flight via the kiosk and aprs.fi to see if Mike W9CN's machine was broadcasting the predicted landing location as an object, Jeff N6BA noticed a couple software bugs. The software has been remedied and can be updated by those on the dev branch. Hopefully in the future Mike W9CN's machine will transmit a red flag that shows up in aprs.fi. Jeff N6BA also noticed that the performance of the kiosk was very slow. Between Jeff N6BA, Jeff N2XGL and Mark KCØD they made some code changes that should improve kiosk performance. There are more ideas to improve kiosk performance in the works. Jeff N2XGL suggested that we all get together someday to track a radiosonde to test performance. John KØJWB asked when we can expect a package update to the tracker. Jeff N6BA said that most trackers are on the dev branch. Jeff added that they are working on some changes to remove the need for a custom Dire Wolf package. That is something we need to finish before releasing a package update.

EOSS-301 recap: Tom KE7KCK said we launched out of Deer Trail, CO. The launch appeared to have an unexplained slow ascent. Tom KE7KCK reviewed all weights, calculations, and balloon fill and did not find any errors. The prevailing theory is that one of the payloads had some extra weight added after weigh in. Tom KE7KCK expressed the need to return to weighing payloads at the launch site.

Communications Protocol: John KCØL asked why we are having so much traffic on the DMR repeater when there is an analog repeater well within range. Rob NØRPF said none of the communications on DMR had anything to do with flight operations. John KCØL said that if we are going to use multiple repeaters, we need a communications plan like ICS-205 where each frequency is assigned specific traffic. Mike W9CN said that Steve KØSCC and Ben KBØUBZ are working on a communications protocol to be used by the club.

Upcoming flights: Tom KE7KCK said that the Metro State flight scheduled for August 31st has been cancelled. Tom will contact Norm KEØPAM to see if they are on track for the NDIA and STEM flight scheduled for October 3rd. On October 30th we have flight for CU

Balloon Fill and Gas Pickup: Tom KE7KCK said that Larry NØNDM is needing some assistants with gas pickup and balloon fill on flights. Tom KE7KCK and Rob NØRPF expressed the need to add depth at the balloon fill position. Dave KDØSEM volunteered to help Larry NØNDM with gas pickup and fill. Tom KE7KCK ask Dave KDØSEM to prepare to handle the October 3rd flight. Rob NØRPF will show Dave KDØSEM how to order gas online. Rob NØRPF said we need more than one person to learn the balloon fill operation.

University of Houston and NASA: John KCØL has offered his assistance for an August 22 for the University of Houston and NASA. John is requesting support from EOSS for predictions, balloon fill calculations, and use of the kiosk. Tom KE7KCK, Jeff N6BA, Mark KCØD, and Randy Collander have offered their support.

HamCon Colorado 2020: Ann KAØZFI said that HamCon Colorado held a meeting on July 27th. HamCon 2020 has been cancelled because the CU Denver site was closed to us due to COVID19. We are now planning for HamCon 2020 to be held in September of 2021. Ann KAØZFI asked our group to consider sponsoring a breakfast or lunch by providing a speaker for the convention in September 2021. Rob NØRPF

asked what is being done with the seed money provided for the 2020 convention. Ann said they are holding it for next year.

Meeting adjourned at 09:00 PM
Minutes prepared by David Lanning, Secretary.