



EOSS Meeting Minutes Tuesday November 12, 2019 Centennial, CO

Call to Order: Tom KE7KCK called the meeting to order at 7:10 PM. There were four present with 8 attending via Zoom Meeting.

Previous Meeting Minutes: Meeting minutes for October 8, 2019 are available on the EOSS web site for review. Tom KE7KCK directed attendees to review minutes online. With no additions or corrections, passage of October's minutes were corrected and accepted by motion.

Treasurer's reports: Treasurers report was provided by our treasurer, Rob, NØRPF, account balances were paid. All outstanding accounts have been paid except reimbursements. An explanation was offered how budgeting numbers were provided to several of our customer and how compensation were made for gas purchases. It was agreed that an increased reimbursement from \$80 to \$100. This increase was accepted by motion. Discussion ensued about how full and partial tanks would be paid for. Full bottles are kept at Larry's until the bottle is "cracked". Returned, partial tanks will be invoiced as full tanks. This all seems fair to our customers. Customer pricing will probably not shift for 2020. Standard pricing will not be reviewed. Special considerations might be available for STEM schools. Larry suggested an additional \$20 be offered to anyone assistant helping Larry load tanks at Air Gas. The resulting motions were approved and accepted.

Tech Committee: Mark KCØD stated EOSS #294 was successfully cut down. #295 had some issues. Payload reported release did not report successfully released, had nozzle returned. Pending further discussion. EOSS #296 AEØSS-12 GPS was intermittent, removed from operation until repaired.

ADS-B Committee: Weekly work and weekly meeting with CU. Issue is it quits reporting lat/long above 60K ft. Investigating with uAvonix and FAA. Note the FAA can see our payload on radar! Decided to meet with uAvonix technical folks and determine what "rated above 80K ft" means. Marty and Russ are still working with FAA for tail numbers.

Launch Team: Larry is concerned about low participation of members at launch site and would like more members (trackers) at the launch site. Russ suggested we should not hurry with launch process

Ground Station: Jeff Shykula, both flights went well. Bernadette and her team were quite involved. Russ and Randy feel the ground station operations went well.

FAA: Russ said the FAA offered some results from our November 2 flight for comparisons. Perhaps this will be available for next flight if resources are available.

Flight Summaries: NDIA flight was well received by the customers. Wiggins did not open rest rooms and we should be aware of possible issues in the future.

MSU Intro to Space flight was accompanied by an MSU Aircraft with Tom, KE7KCK aboard to transmit APRS locations and follow the flight. The SDR brick provided input into a tablet operated by the co-pilot

in the right seat. Pilot was very experienced and communicated well with Denver Center. Denver Center was receiving the aircraft ADS-B. A commercial aircraft visually observed the balloon.

Colorado Space Grant flights went well with two balloons. Additional discussions about communication procedure improvements will be reviewed in the future.

Upcoming Flights: The scheduled requests for 2020 flights was discussed. The suggested flight dates are (See the EOSS.ORG web page for updates)

EDGE OF SPACE SCIENCES FLIGHT SCHEDULE

Flight #	Date	FC	Launch	Customer	Config
EOSS-297 (if needed)	02-29-2020?	KCØD	Windsor	EOSS Qual Flight	1 x 1500g
	03-14-2020	KCØRPS	Deer Trail	NDIA	1 x 1500g
	04-04-2020	KE7KCK	Eaton	COSGC DemoSats	2 x 3000g or 4 x 1500g
	04-18-2020	KCØRPS	Windsor or Wiggins	MSU Intro to Space Gateway to Space	2 x 3000g or 4 x 1500g
	05-02-2020?	KCØRPS	Deer Trail	Spring STEM	2 x 1500g
	07-11-2020?	?	Omaha NE	GPSL	1 x 1500g
	07-25-2020	KCØRPS	Genoa	COSGC Summer BIRST	2 x 3000g or 4 x 1500g
	11-07-2020?	KE7KCK	Wiggins	Gateway & DemoSat	2 x 3000g or 4 x 1500g

Notes:

Hamcom 2020: Announced by Ann, KAØZFI to be August 7,8 & 9 2020. Ann placed a call for papers and sponsorship of an ARRL speaker for the event. Ben stated the ARRL will publish a proceedings book for sale.

ARRL Affiliation: Rob will look to see if we are an Affiliated Club Station. He will forward a report to ARRL. Randy will provide a report of ARRL club members.

GPSL Coordinator: Tom KE7KCK will send out email asking for a volunteer to assume GPSL coordinator for EOSS. We appreciate the great work that Nick NØLP has done over the last fourteen years as the GPSL coordinator. Nick will help this person get started. Marty will send a request for a new coordinator onto the reflector.

Tracking and Recovery: Marty reported that EOSS #294 draped across 7200 volt power lines. The tracking teams followed protocol and stayed away from the payloads until the power company appeared to cut the payloads down. Hats off the teams for adhering to the protocol. EOSS #295, #296 only had 5 teams downrange for two balloons. We need to encourage both new and old members to rejoin our efforts. We also need to discuss procedures for quick launches. Suggest we deploy some crossband techniques to avoid communications lapses.

Next Meeting at CU Boulder Campus, December 10 to attend a review of student payload experiments.

Meeting adjourned at 09:00 PM. Minutes prepared by Marty Griffin on behalf of Dave Lanning, EOSS Secretary.