Recommended “Homework” for Rocketry Lesson 4 11/9/2021

Reading

* read Chapters 8, 9, & 17 in the High-Power Rocketry book

Exercises

* (optional) download the Featherweight Interface Program and look over the options it allows for setting up channels on a Raven altimeter (although those altimeters have been out of stock, so we are going to use an AIM USB altimeter instead) and use it to look at the file “subsonic.FIPa” – Raven altimeter data from an actual rocket flight – and use it to look at various graphing options (besides things like altitude, velocity, and acceleration, look at the voltage on the APO and MAIN channels – these go low when the two ejection charges are fired for the drogue and main parachutes)
* continue working on your OpenRocket model
* start to talk about a time slot (or a few) that would work for your team to do your final safety check-out (one-on-one with Prof. Flaten and/or with Sophia) – the rocket needs to be fully completed (except perhaps for painting) and your Flight Readiness Review needs to submitted at least 24 hours before this time – choose a date between Wednesday, Nov. 17 and Wednesday, Dec. 1 (Note – avoid the Thanksgiving holiday which runs, at most schools, from Nov. 25 through Nov. 28, 2021)

Building

* continue to work on the airframe build – try to be completely finished with the entire airframe build by our lesson next Tuesday
* get started on the av-bay build structure (though wiring and programming will need to wait until the altimeters arrive) – try to at least assemble the full av-bay (including the sled, the switch, the external terminal blocks, and the external cups, but minus the actual electronics) by our lesson next Tuesday

Link to document repository

http://www.aem.umn.edu/people/faculty/flaten/Rocketry\_Remote\_Lessons\_Fall\_2021/

Sophia’s evolving photo-build instructions – check back regularly:

<https://docs.google.com/presentation/d/1NritqFEBkQI95c4ex6SjiA-08uaoEcFUydgjlA6mtdY/edit#slide=id.p>