Recommended “Homework” for Rocketry Lesson 6 10/19/2018

Reading

* read Chapters 13, 14, 15 in the High-Power Rocketry book

Materials

* purchase spray paint and primer if you are going to paint your rocket (which we encourage you to do – but no spray painting indoors, at least not without permission)

Exercises

* finish your OpenRocket model and check it (total weight and balance point without a motor) against your completed rocket; ballast the model if need be – then add a motor and simulate a flight to predict performance (especially the appropriate delay-grain timing for your motor eject)
* finalize a time slot for your team to do your final check-out (one-on-one with Prof. Flaten and/or with Max) – the rocket needs to be completed (except perhaps for painting) and your Flight Readiness Review needs to submitted at least 24 hours before this time – choose a date between Tuesday, Oct. 23 and Wednesday, Nov. 7 (Note – avoid Oct. 25 (evening) through 28 – I’m away at a conference)
* finish and submit Flight Readiness Review before your final check-out

Building

* finish av-bay build and wiring and programming and testing with LED’s (remember to hold Raven3 vertical, like in a rocket, when testing it)
* do final tweaks – bleed hole, vent holes (possibly in more than one place)
* do calculations for upper rail button location then insert both the lower and upper rail buttons, using epoxy to hold the insert in place inside the airframe – the button should be able to roll (perhaps use loctite on the threads)
* do calculations for delay charge timing and expected ejection charge size

Document repository: *http://www.aem.umn.edu/people/faculty/flaten/Rocketry\_Remote\_Lessons\_Fall\_2018/*

Max’s evolving photo-build instructions – check back regularly: [*https://docs.google.com/presentation/d/1oepk62CjsZubKPHbRcWFAOIm7tNdElkoKxc64FFhwU4/edit#slide=id.g42ec7e3ad3\_0\_5*](https://docs.google.com/presentation/d/1oepk62CjsZubKPHbRcWFAOIm7tNdElkoKxc64FFhwU4/edit#slide=id.g42ec7e3ad3_0_5)