Nakuja internship
Rodney

Progress report format

Tasks completed last week

- Iterative testing for apogee detection
- Iterative testing on integration of all rocket components
- Fabricate new design
- Decouple the avionics work to two separate cores

Rocket
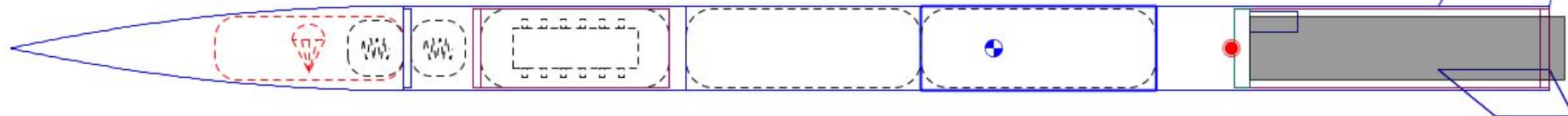Length 996 mm, max. diameter 53.6 mm
Mass with motors 1294 g

Stability:2.83 cal
CG:626 mm
CP:778 mm
at M=0.30

Apogee: 26.2 m
Max. velocity: 15.7 m/s (Mach 0.05)
Max. acceleration: 30.5 m/s²

	Name	Configuration	Velocity off rod	Apogee	Velocity at depl...	Optimum delay	Max. velocity	Max. acceleration	Time to apogee	Flight time	Ground hit velocity
✓	Simulation 1	[F87-P]	13.4 m/s	214 m	7.49 m/s	6.14 s	70.4 m/s	143 m/s²	6.74 s	48.6 s	5.18 m/s
✓	Simulation 2	[G168-P]	17.4 m/s	531 m	10.9 m/s	9.14 s	139 m/s	284 m/s²	9.73 s	112 s	5.17 m/s
✓	Simulation 3	[E17-P]	9.54 m/s	68.3 m	5.43 m/s	2.55 s	29.1 m/s	51.4 m/s²	4.54 s	18.7 s	5.12 m/s

Tasks in this week

- Iterative testing for apogee detection
- Rocket launch
- Finish on documentation for N1
- Write SRI article/paper

Timeline

Month	Week	Tasks
Mar	Week 1	Research on parachute and ejection mechanism
	Week 2	Parachute and avionics testing
	Week 3	Design of new model rocket
	Week 4	Testing new model rocket on the motor
Apr	Week 1	Test rocket with avionics bay
	Week 2	Testing rocket on the motor
	Week 3	Iterative test to optimize the airframe
	Week 4	Iterative test to optimize the airframe