

6 Degrees of Freedom Rocket Trajectory Simulation with Stochastic Analysis

Jago Strong-Wright & Daniel Gibbons

Preliminary Results, December 2020

Summary

What we have made so far



- ▶ All 6 axes simulated for full flight
- ▶ Uses the engine data from Joe's simulation
- ▶ Calculates aero forces based on RASAero drag coefficients
- ▶ Includes parachute decent
- ▶ Designed to be as general as possible so it can be used for any flight
- ▶ Structured like a python library including documentation (hopefully finished soon)
- ▶ Has a new modual for Monte Carlo simulation to find trajector error bounds

Nominal Flight

Results of a nominal flight

