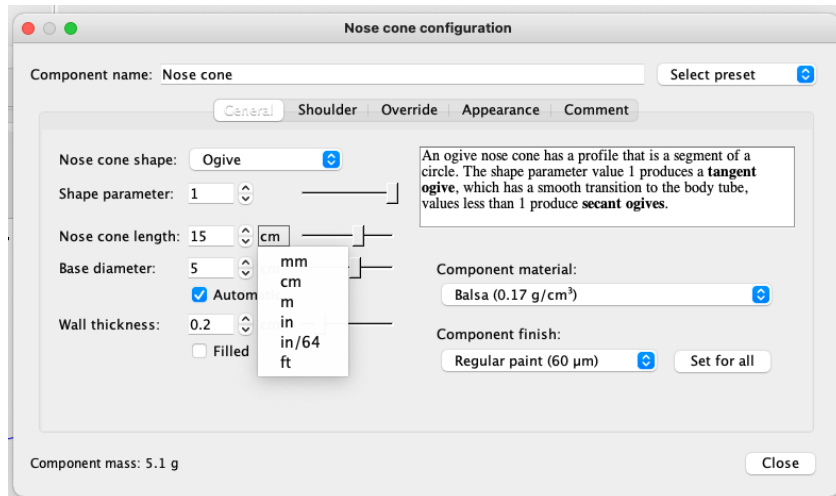
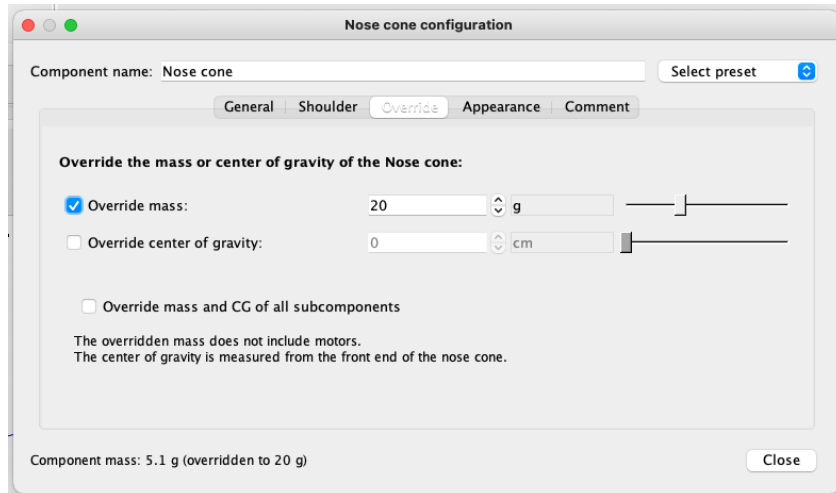


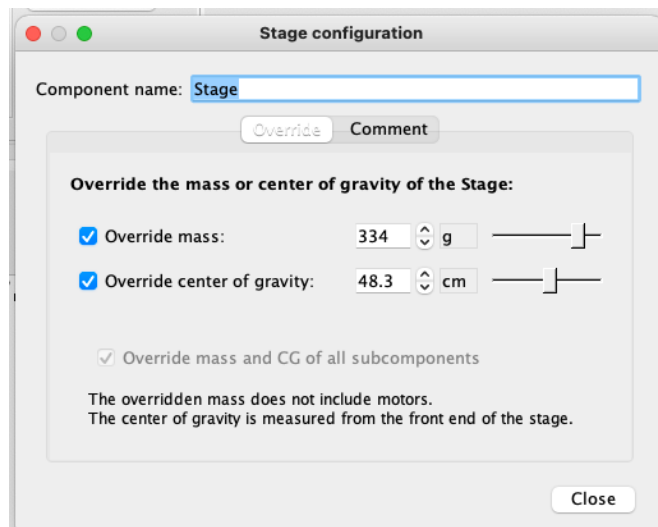
## Some Hints for Open Rocket Change Units



## Override mass of a component



Override mass and CG of entire stage (for after you've assembled and completed your rocket, and measured the mass and CG.



## Creating Configuration

->New Configuration

->Select Motor

Select a rocket motor

Select thrust curve: F67W

Ejection charge delay: 4

Hide very similar thrust curves

Manufacturer	Designation	Total Impu...	Type	Dia...	Length
Cesaroni Technolo...	144-G65...	144	Reloadable	24 mm	228 mm
WECO Feuerwerk	D7	14	Single-use	25 mm	70 mm
AeroTech	E23	35	Reloadable	29 mm	124 mm
AeroTech	E16W	38	Unknown	29 mm	124 mm
AeroTech	E16	38	Reloadable	29 mm	121 mm
Roadrunner Rocke...	E25R	39	Single-use	29 mm	76 mm
Cesaroni Technolo...	F36	42	Reloadable	29 mm	98 mm
AeroTech	F27	50	Single-use	29 mm	83 mm
AeroTech	F37	51	Reloadable	29 mm	99 mm
AeroTech	F20	52	Single-use	29 mm	83 mm
AeroTech	F23FJ	53	Single-use	29 mm	83 mm
Cesaroni Technolo...	53-F32-...	53	Reloadable	29 mm	98 mm
Cesaroni Technolo...	F29-IM	54	Reloadable	29 mm	98 mm
AeroTech	F42T	56	Single-use	29 mm	83 mm
Cesaroni Technolo...	56-F31-...	56	Reloadable	29 mm	98 mm
Cesaroni Technolo...	F120-VM	56	Reloadable	29 mm	98 mm
Cesaroni Technolo...	F59-WT	57	Reloadable	29 mm	98 mm
AeroTech	F62T	58	Reloadable	29 mm	99 mm
Roadrunner Rocke...	F45R	61	Single-use	29 mm	93 mm
AeroTech	F67W	62	Single-use	29 mm	83 mm
AeroTech	F26FJ	63	Single-use	29 mm	98 mm
AeroTech	F22	65	Reloadable	29 mm	125 mm
AeroTech	F50T	69	Single-use	29 mm	98 mm
AeroTech	F25	71	Single-use	29 mm	98 mm
AeroTech	F52	73	Reloadable	29 mm	124 mm
AeroTech	F10	75	Unknown	29 mm	92 mm

Search:

Filter Motors Show Details

Hide motors already used in the mount

**Manufacturer**

- AMW/ProX
- AeroTech
- Alpha Hybrid Rocketry LLC
- Animal Motor Works
- Apogee
- Cesaroni Technology Inc.
- Contrail Rockets

Clear All Select All

**Total Impulse**

A B C D E F G H I J K L M N O

**Motor Dimensions**

Motor mount dimensions: 29 mm x 203 mm

Diameter

Limit motor diameter to mount diameter

0 13 18 24 29 38 54 75 98 +

Length

Limit motor length to mount length

0 mm ∞ mm

Cancel OK

->Show Details

Filter Motors Show Details

Total impulse: 62.1 Ns (55% F)

Avg. thrust: 73.3 N

Max. thrust: 86.1 N

Burn time: 0.846 s

Launch mass: 80 g

Empty mass: 50 g

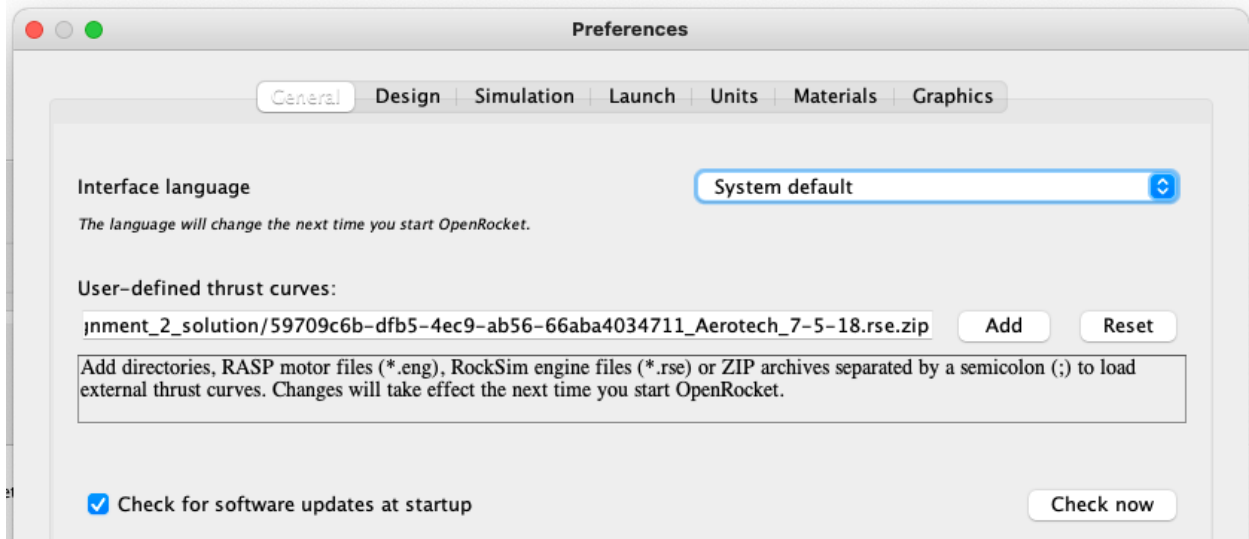
Data points: 33

No description available.

**Thrust curve:**

The graph displays a red line representing the thrust curve. The y-axis is labeled from 0 to 90 in increments of 10. The x-axis is labeled from 0.0 to 0.9 in increments of 0.1. The curve begins at (0,0), rises sharply to a peak of 86.1 N at approximately 0.15 seconds. It then maintains a high, relatively flat thrust level until about 0.6 seconds, after which it drops sharply to zero at the burn time of 0.846 seconds.

If your desired motor isn't there, go to Preferences/General and follow the instructions in the box. Don't forget you have to quit and restart to have the new motors appear.



You can find the latest list of AeroTech motors at <<http://www.aerotech-rocketry.com/resources.aspx?id=8>>.

You can find the latest list of CTI motors at <[http://www.pro38.com/RASP/CTI\\_UpdateDec2015.zip](http://www.pro38.com/RASP/CTI_UpdateDec2015.zip)>

You may also want to download individual motors from Thrustcurve.org.

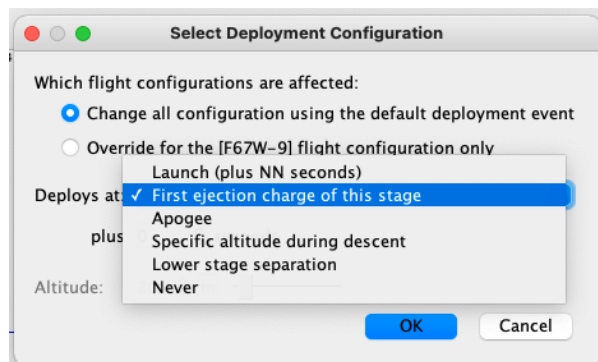
Set type of recovery

In Configurations

->Recovery

Click on Ejection Charge or recovery type (under Parachute)

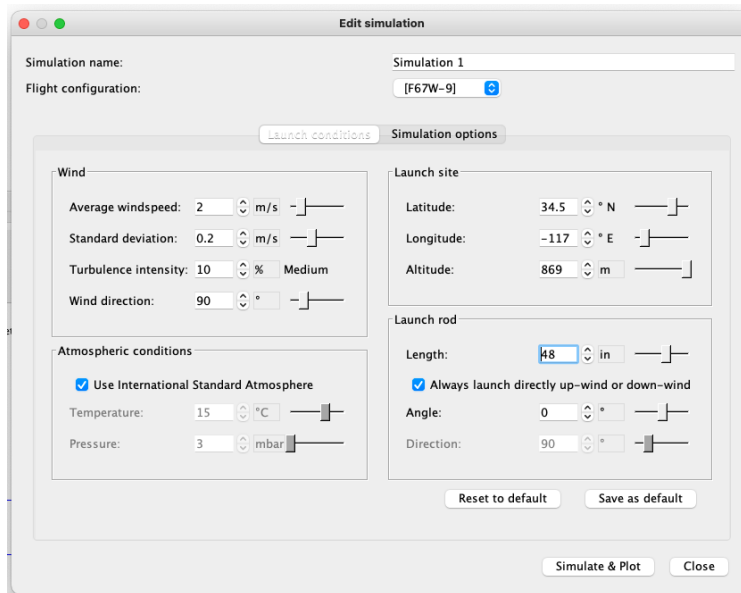
Select Deployment



# Flight Simulation

->Edit Simulation

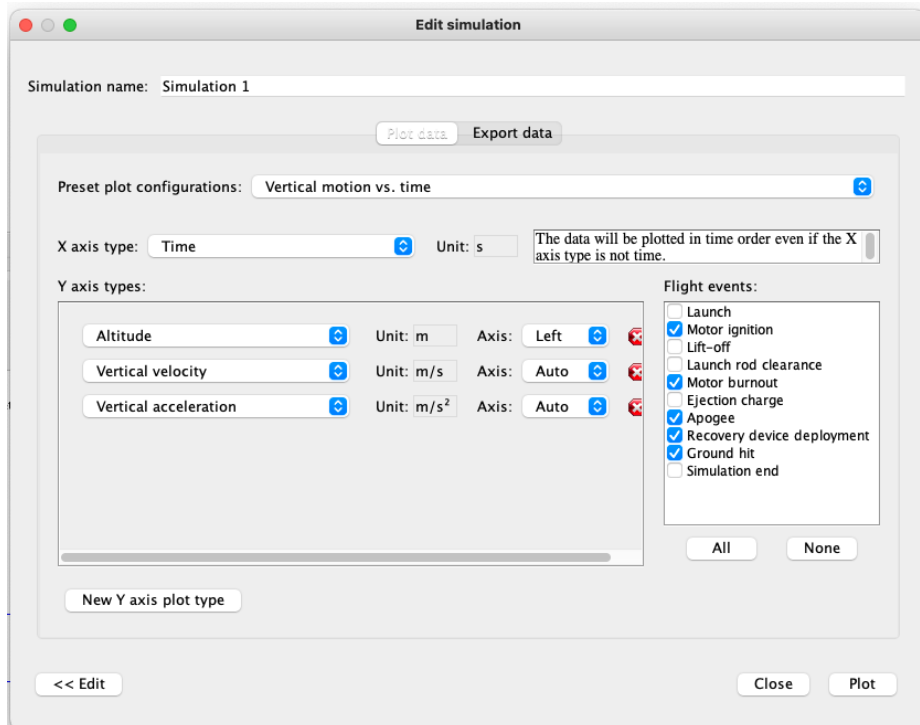
If using standard atmosphere and launching from Lucerne Valley



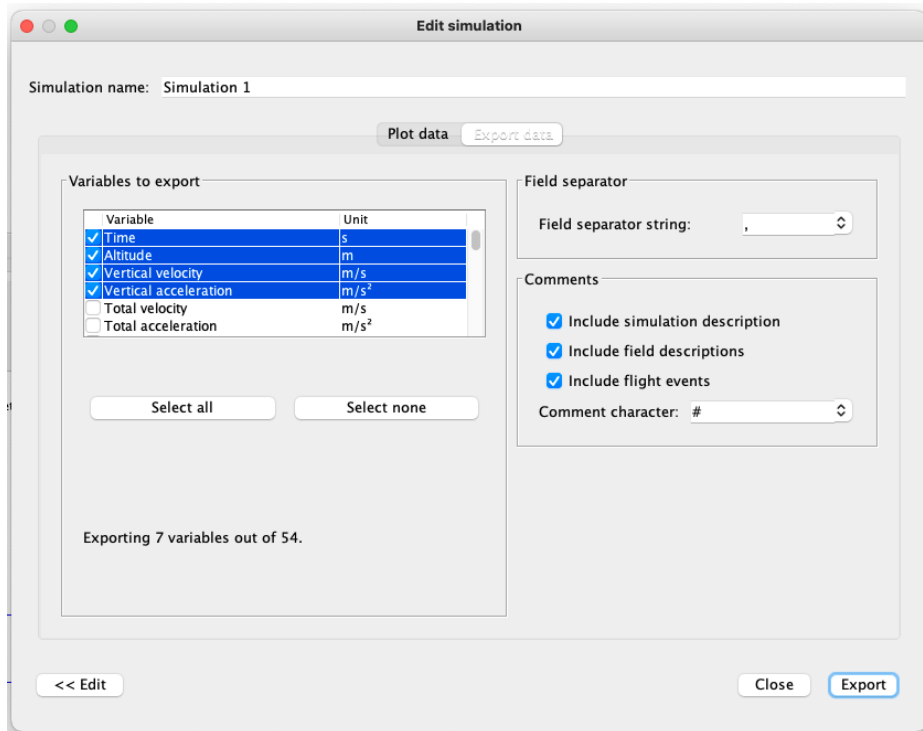
No place to enter relative humidity.

Details on Pressure and Temperature Correction (TBD)

## Simulate & Plot.



## Export Data



You can use Export Data to create plots such as Drag Coefficient vs. Velocity, or  $C_D$  vs Mach Number, or Mass and Thrust vs. Time

### Results

Name	Configuration	Velocity off rod	Apogee	Velocity at depl...	Optimum delay	Max. velocity	Max. acceleration	Time to apogee	Flight time	Ground hit velo...
Simulation 1	[F67W-9]	22.1 m/s	612 m	4.87 m/s	9.47 s	140 m/s	201 m/s²	10.3 s	92.9 s	7.36 m/s

It's often easiest to start from a manufacturer's RockSim file and edit it to meet your measurements.