Research project meeting summary: Trajectory Module for Launcher MDAO

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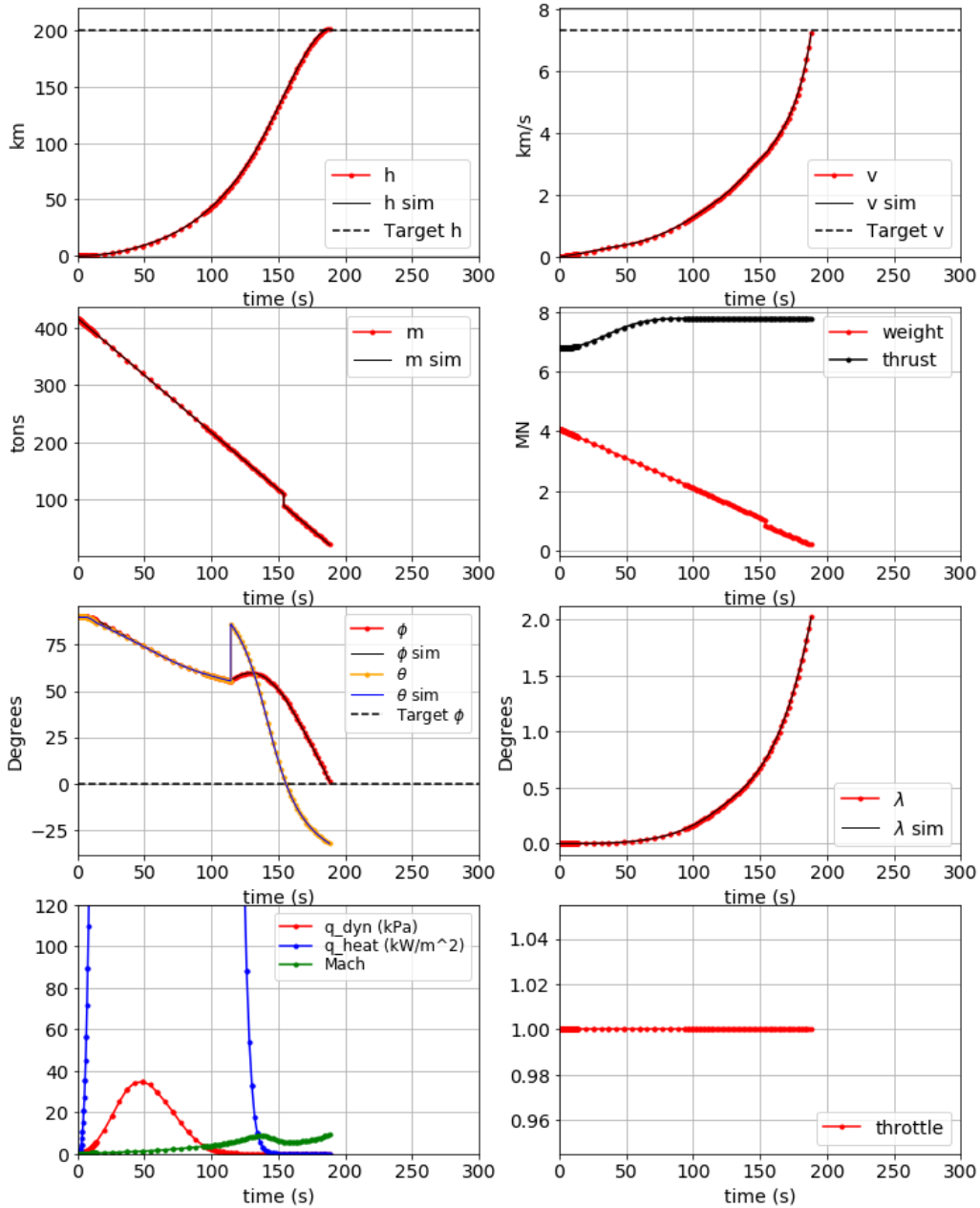
Plan:

1. Review of previous work
2. Key points discussed
3. Future actions

Review of previous work

- Difficulties to link time variables and outputs of subsystems for different phases in Dymos. 10h of work for 2 lines of code. But finally made it. The link between gravity turn and exoatmos phase for pitch angle is working!
- creation of new subsystems and design parameters to control time of exoatmospheric phase, given that it is divided in to two.
- Dynamic pressure constraint for end of gravity turn is working correctly at 1 kPa.
- Successful staging of imaginary TSTO based on the previous SSTO with optimization of mass of propellants for 1st stage only.
- No elliptical orbits yet. No fairing jettison yet


km
time (s)
h
h sim
Target h
km/s
v
v sim
Target v
tons
m
m sim
MN
weight
thrust
Degrees
ϕ
ϕ sim
θ
θ sim
Target ϕ
λ
λ sim
q_dyn (kPa)
q_heat (kW/m^2)
Mach
throttle

Key points discussed

Future actions