Research project meeting summary: Trajectory Module for Launcher MDAO

Jorge L. Valderrama [1]
Dr. Annafederica Urbano [2] Dr. Mathieu Balesdent [3] Dr. Loïc Brevault [4]

[1]ISAE-SUPAERO, MSc. in Aerospace Engineering
[2]ISAE-SUPAERO, DCAS [3]ONERA, DTIS [4]ONERA, DTIS

October 16, 2020

Plan:

1. Key points discussed

Key points discussed

- The Propulsion module implemented in LAST it's based on Dr. Balesdent's thesis but does calls to Rocket CEA
- As I have problems installing Rocket CEA in Windows I can use the online version to generate the necessary tables
- Dr. Urbano shared with me tutorials on Git, this is useful as LAST is build on it.
- For the optimization of the propulsion module of the second stage we are going to use 4 optimization variables. Chamber pressure, nozzle exit pressure, mass ratio oxidizer/fuel and thrust.
- Later on, I can change thrust for thrust/mass ratio but this would required a bit more of work because of the definition of mass in Dymos.