**WEEKLY REPORT DE BENEDETTI MATTEO**

**WEEK 18: 13/01/2020 – 17/01/2020**

SLAM INTEGRATION:

I started integrating the SpartanVO in the script that runs the GNC Architecture on a dataset recorded during a test campaign in Tenerife, Canary Islands, in July 2017.

At first, I managed to make it work using the VO on the bb2 camera, but the images are not very clear, therefore the VO was often unable to find more than a few temporal matches, resulting in very low performances.

Then I moved to use the bb3 camera, which shows much better images.  
The VO has now a good number of matches, both temporal and spatial, but the estimate is still not working well.

GNC COMMISSIONING:

After discussing with my supervisor the work done in the previous week, we decided to better define the procedure by adding pre-test and post-test operations and including which tests serve as a prerequisite for others.

A word document containing the table can be found at: <https://github.com/MatteoDeBenedetti/ESA-Thesis/blob/master/GNC%20Commissioning/gnc_commissioning_table.docx>

MASTER THESIS:

I started writing the table of contents of my Master Thesis and a draft of the first Chapter containing an introduction about ESA, the lab and the Mars Sample Return mission.

The thesis, both source and compiled, is available at: <https://www.overleaf.com/9369988924ynjjwzzprxbg>

FUTURE OBJECTIVES:

Next week I plan on talking with my Internal Supervisor to decide how to proceed with the GNC Commissioning project.

I will continue working on the SLAM integration, trying to improve the VO on the bb3.