# Visit to Goddard Space Flight Center (GSFC) da NASA, Greenbelt, Maryland, USA, Períod: October, 25 – November, 08 - 2019

### **Space Geodesy Program (SGP)**

During our stay we interacted with SGP participants: Drs. Stephen Merkowitz (PI do SGP), John Gibson, Dirk Behrend, Serguei Bolotin, Leonid Petrov, David Gordon, Dan MacMillan, Frank Lemoine, Ed Himwich.

Activities concentrated in: (i) building of observational campaigns schedules for VLBI terminals worldwide including at a ROEN, Eusébio, Fortaleza; (ii) data analysis for Earth Orientation Parameters (EOP) determination.

## Agreement AEB/NASA - contract MACKENZIE/NASA

The renewal of the contract MACKENZIE/NASA for the period 2020-2024 has been discussed with the partners, and it was officially signed in January 2020.

The agreement between AEB (Brazilian Space Agency)/NASA was also considered during discussions.

A proposal for a new VLBI Terminal in Brazil is submitted and being reviewed at NASA headquarters. Details of this new and large initiative were also discussed with partners.

### **Seminar at Solar and Heliophysics Department**

On 01/11, Prof. Gopalswamy invited Prof. Jean-Pierre Raulin to give a special seminar at the Solar and Heliophysics Department untitled "Ionospheric Disturbances as Revealed by VLF waves propagation anomalies".

## Visit at Goddard Geophysical and Astronomical Observatory (GGAO)

On 06/11 there was a visit at GGAO. The objetive was to see the VGOS antena which is a candidate for the new VLBI terminal in Brazil.



There, the integration of the different sub-systems that make up a space mission is made. On the day of the visit it was possible to see the integration of the different parts of the mirror of the James Webb Space Telescope (JWST)

Pró-Reitoria de Pesquisa e Pós-Graduação Coordenadoria de Programas de Pós-Graduação Stricto Sensu



Other important equipment for the activities of Geodetic VLBI were visited, such as the DORIS system



 $\label{thm:continuous} Visit to the GSFC / NASA Integration and Testing Laboratory \\ On the same day, on 06/11, we visited the GSFC / NASA Integration and Testing Laboratory. \\$ 

