



**Session: Current Capabilities in Space Weather in  
Latinoamerica**

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## Argentine Antarctic Space Weather Observatory: AASWO

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### Abstract

A new space weather laboratory was inaugurated in February/2019 at the Argentinean Antarctic Marambio base. This laboratory has its own building, it was constructed and is maintained by LAMP ('Laboratorio Argentino de Meteorología del esPacio', Argentine Space Weather Laboratory). Different space weather instruments are in operation since 2019, including a cosmic rays detector, magnetometers, a meteorological station, among others. The laboratory is able to withstand extreme weather conditions (-60 Celsius and winds of more than 200 km/h). Its infrastructure is designed for having power with redundancy by gel batteries and built with materials resistant to Antarctic conditions, and it makes possible GPS time stamp for the recorded data, thermal control for the interior of the building (stable in the range 20-22 Celsius), data acquisition in real time (5 minutes from Antarctic to the servers of LAMP located in the south American continent). Data from these instruments are processed and offered by LAMP as operative space weather products in its web-portal.

Additionally, a new LAMP laboratory is in preparation to be installed in another Argentinean base, inside the polar circle, where more space weather instruments are planned to be installed. These laboratories make up the Argentinean Antarctic Space Weather Observatory (AASWO), which has major capabilities and will permit the expansion of space weather instrument networks in Argentina and Latin America.

Antarctica is a prime location for space sciences observations and given that there is a clear gap in monitoring and scientific instrument coverage in this region, the

southernmost in the world, AASWO will allow us to significantly enhance space weather capabilities in our society.

An AASWO description will be presented, focusing on the Antarctic laboratory in Marambio (in operations from 2019) and the new laboratory in construction, planned to be installed during this summer campaign.