

Scientific Balloon Activities in Brazil: National Report

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In this talk I will present the latest developments in scientific balloon activities in Brazil, and prospects for the future. Since the last COSPAR Scientific Assembly, the activities at INPE, Brazil's National Institute for Space Research, have been concentrated in the development of the protoMIRAX experiment and its balloon gondola. protoMIRAX is a prototype of the space experiment MIRAX (Monitor e Imageador de Raios X - Monitor and Imager of X Rays) that is currently under revision by INPE and the Brazilian Space Agency. protoMIRAX is a hard X-ray (30 to 200 keV) coded-mask imager with an angular resolution of 1.75 degrees in a 20 x 20 degrees fully-coded field-of-view. The detector plane comprises an array of 13 x 13 planar CdZnTe detectors with dimensions 10mm x 10mm x 2mm. The X-ray imager is housed in a balloon gondola with a complete attitude control and pointing system developed in a partnership between INPE and COMPSIS, a private company in Sao Jose dos Campos, Brazil. The development of protoMIRAX has given the Balloon Launching Center at INPE the opportunity to upgrade its technology and prepare for the provision of important services to the scientific ballooning communities both in Brazil and abroad. I will also present some recent initiatives carried out in Brazilian universities and centers to conduct astrobiology-related and atmospheric experiments in small balloons.

Publication:

42nd COSPAR Scientific Assembly. Held 14-22 July 2018, in Pasadena, California, USA, Abstract id. PSB.1-7-18.

Pub Date:

July 2018

Bibcode:

2018cosp...42E.423B