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BRAZILIAN ASTRONAUTICAL HISTORY: FROM SANTOS DUMONT UP TO ASTER MISSION

Abstract

This work reports the Brazilian history of Astronautical institutions and agencies. It starts with the dream of a particular man, called as the father of aviation in Brazil, Alberto Santos-Dumont. In his book, he tells about a desire, which was regarded as the first record of the idea of creating a technical school in Brazil focused on aviation. The first school of aviation was inspired by the Massachusetts Institute of Technology (MIT), whose staff consisted of professors from sixteen different nationalities. This school, called as Instituto Tecnológico de Aeronáutica (ITA- Technological Institute of Aeronautics), was the place where astronautical studies have started in Brazil. Afterwards, there were many previous institutions founded before the creation of the Instituto Nacional de Pesquisas Espaciais (INPE – National Institute of Space Research), Departamento de Ciência e Tecnologia Aeroespacial (DCTA – Department of Science and Aerospace Technology), Instituto de Aeronáutica e Espaço (IAE – Institute of Aeronautics and Space), and Agência Espacial Brasileira (AEB – Brazilian Space Agency). In the last years, there has been a deep discussion towards a reorganization of AEB in order to better coordinate organizations involved in the Brazilian Space Program. This seems to be, due to the fact that the current government recognized and elected the space area as a strategic area for the country. Some of the main milestones were the Missão Espacial Brasileira Completa (MECB – Complete Brazilian Space Mission), when it was established that INPE would develop four satellites with environmental applications: two for data collection and two other ones for remote sensing, as Satélite de Coleta de Dados (SCD - Data Collecting Brazilian Satellite) and China-Brazil Earth Resources Satellite (CBERS). Regarding launchings, there are two approaches so far: Alcântara Cyclone Space (ACS) and Cruzeiro do Sul (in reference to the five stars of the Southern constellation). ACS is partnership between Ukrania and Brazil to use the Centro de Lançamento de Alcântara (CLA – Alcântara Launching Centre) to launch space vehicles. Nowadays, the first Brazilian mission to an asteroid is being planned and it is named Aster Mission. The target is the asteroid 2001 SN263, which has a NEA orbit of class AMOR. This mission represents a great challenge for the Brazilian space program. It is being structured to allow the full engagement of the Brazilian universities and technological companies in all the necessary developments to be carried out.