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BRASIL PLUS A PROPOSED SPACE PROGRAM WITH INNOVATIVE AND DISRUPTIVE
TECHNOLOGIES FOR AMBITIOUS GOALS.

Abstract

Brazil is the only major power with potential space faring capabilities lacking a long term ambitious plan. At the UFMT (Universidade Federal do Mato Grosso) a post graduate course was dedicated to prepare a plan to submit to the Brazilian space agency outlining a non conventional approach to achieve major goals in space development including activities in Vleo, Leo, Geo, Moon base martian colonies and asteroids outpost with affordable and minimum costs, modular and entirely reusable equipment with different ways to achieve the proposed goals the main goal by creating an efficient and profitable space economy through an innovative space technology in order to have a profit oriented approach to space development activities. Enabling technologies will be developed , reusable and modular systems to maximize utilization of equipment, utilization of asteroids to be deflected and mined for their resources as well as to be utilized as shelters are some of the planned activities. The plan has a logical sequential development and will be divided in different phases: -Near earth activities -Moon bases and martian colonies development -Asteroid utilization , that , being part of the enabling technologies, will be implemented since the beginning. The motivations can be several, space development, technological development, creation of new space related technologies (lunar, martian, asteroids and comets), new economies self sufficient and independent from our planet and purely scientific. Enabling technologies involve an entirely reusable space hybrid HTOL plane, deflection, mining and utilization of asteroids and comets, modular equipment for stations and bases, container transfer systems development of robotics and AI systems. Such approach is different from the conventional and may enable a major space faring nation to speed up its space development plans at minimum costs. In this paper such plan and needed technologies will be described and discussed.