

CBERS - Disclosing a Successful International Space Cooperation

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On 14th October, 1999 the first satellite developed, assembled, integrated and tested by two emergent countries, Brazil and China, was successfully launched by a Long March series type rocket, from the Chinese launch base of Taiyuan, and its designed 2 years long life has already been extended by one year more. Since then, the China Brazil Earth Resources Satellite - Flight Model # 1 (CBERS-FM1) satellite is providing imaging services for both countries and also offering a competitive commercial products in the international market. Following the cooperation, FM1 orbit control has been conducted by both countries during different periods. For the orbit operation, both countries conduct the control once the satellite is passing inside each ground station window. The experience accumulated during the FM1 Assembly, Integration and Test (AIT), at Chinese laboratories, and its flight operation, provided important clues to implement some modification in the second satellite in order to enhance its operational performance. Succeeding these significant marks, the second satellite has already accomplished its AIT sequence at Brazilian Integration and Test Laboratory (LIT). In order to get the FM2 satellite ready to replace FM1 on time, the AIT schedule became critical, taking into account the several effects of the aspects intrinsic to this joint cooperation program. Since the AIT should be conducted in Brazil, and the later launching in China, the satellite preparation gained additional constraints for its logistic, management, follow up, technical progression, product assurance, and so on. The substantial feedback gained by both countries from their own CBERS FM1 remote sensing imagery capability, and now from the FM2 maturation, are leading the expansion of the program toward its second generation. The purpose of this paper is to present an overview of the program progresses, the FM1 satellite flight operational status, the conduction and realization of the FM2 satellite AIT at LIT, and compare the AIT approaches used during FM1/China and FM2/Brazil. The significance of the ongoing success and the program continuing certainly represent a new experience for the international space community.

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