

IAF SPACE COMMUNICATIONS AND NAVIGATION SYMPOSIUM (B2)
Fixed and Broadcast Communications (2)

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CHINA COMMUNICATION SATELLITES LAUNCHED IN 2017

Abstract

China launched 4 communication satellites in 2017, including Chinasat-16, Chinasat-9A, Shijian-18, and Alcomsat-1. Up to now, there were 12 domestic satellites and 8 international satellites based on DFH-4 platform had been launched. The customers included government users and commercial operators, distributed in different countries of Africa, Asia, South America and Europe. Chinasat-16 satellite is the first high throughput satellite for china, which can provide 20Gbps capacity, will contribute more to China Information Highway Strategy. Chinasat-16 satellite is also the first satellite using electric propulsion system for station keeping, which will extend the lifetime and improve the benefit much. Chinasat-9A is the first DTH broadcasting satellite made by China, will provide the direct-to-home TV broadcast service to more than hundreds of million people. Although it was injected into an incorrect orbit with about 20000km deviation by the launcher, the satellite was saved and recovered to a normal orbit to avoid a total loss. Alcomsat-1 is the first satellite of Algeria, which will serve the immediate demand of domestic communication. This satellite is so important that the presidents of two countries sent congratulatory message to each other after launch. Shijian-18 is the first technical validation satellite based on newly developed platform DFH-5, which is the most powerful platform in China with a launch mass more than 7500kg. Shijian-18 was planned to verify many high technology for next generation satellite, but it was unfortunately lost due to launcher failure. This paper will introduce the main characteristics of these satellites and the key techniques they adopted.