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LONG MARCH,EASY AND RELIABLE ACCESS TO SPACE FOR SMALL SATELLITES

Abstract

The article gives the briefing of China's Long March launch services, especially the piggyback launch, including its technical interface, process, the program management and the latest development. As the typical case, the article also describes the piggyback launch mission of VesselSat-2 small satellite built by Luxembourg-based LuxSpace in 2012.

The Long March series of launch vehicles have been undergoing continuous development in China since mid - 1960's. Launch vehicles with various capabilities have been developed, which has enabled China's launch vehicles to enter into both domestic and international markets and to accomplish different LEO, SSO and GTO satellite missions. In addition, in order to improve the overall capability of Chinese launch vehicles to meet the requirement of aerospace development in the future, a new generation of high reliable and environment-friendly launch vehicles are under development now.

By the end of 2012, the current Long March family has conducted 174 flights with an overall success rate of nearly 95%, making Long March one of the most reliable launch vehicles in the world. For the past two years, Long March has conducted 19 flights per year from 3 launch sites in China, ranking the No.2 in the world. And China's high-density launch activities will continue for the coming years.

Among the Long March launches every year, quite some of them are for LEO & SSO missions by using Long March 2C\2D\4B series launchers and the others are for GTO missions by using LM-3A series launchers. And various kind of piggyback launch opportunities are available for these launch missions. Therefore, to support the small satellites development and space exploration activities of foreign space agencies, research institutions, universities and commercial entities, Long March is actively promoted to provide the piggyback services to the international customers, which has also got the full support from the Chinese government. In addition, with the new generation launch vehicle approaching, the new design of launcher and more powerful upstages will offer more choices and flexibility for the small satellite missions.

In summary, with high-density launches in China have becoming a routine, China Great Wall Industry Corporation, as the international cooperation platform of China aerospace and the professional launch services provider, will use the Long March family to provide more flight opportunities for small satellites developers at home and abroad as the dedicated passenger or the piggyback payload.