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CHINA'S COMMERCIAL SPACE PROGRESS

Abstract

Development of commercial space, with start-ups and space ventures, is one of the most visible trends in space. Stimulated by the first initiatives related to space tourism, access to space and the growing requirements of small satellites, space activities have attracted new entrepreneurs, The revolution started in the Silicon Valley and spread worldwide. The year of 2015 is considered the first year of commercial space in China. With a large population and abundant resources, China has a huge potential market in commercial space. At present, many commercial aerospace companies have proposed dozens of commercial aerospace constellations, including remote sensing, communication, navigation enhancement, meteorology, new technologies demonstration and many other applications. However, the commercial satellite market has not been well mined out. In this paper, we will give a briefly introduction to the domestic commercial rocket, and the progress in commercial space for small satellites will be introduced in detail. We introduce the progress with the commercial market requirements, applications, key satellite constellations, technology roadmap, the domestic products series. The challenges and difficulties will be also introduced. Commercial satellite companies started earlier than commercial rocket companies. These satellite companies are mainly engaged in the research and development of micro and nano satellites, these s companies are mainly engaged in the research and development of micro and nano satellites, mainly used in remote sensing, Internet, Internet of things, deep space exploration (asteroid mining), new technology verification, space science education, etc. Satellite applications, cost control and large-scale manufacturing need to be improved. In terms of product system, China has a complete commercial satellite product system, but there is still a big gap between China and foreign countries in terms of cost and scale. It is urgent to explore innovation and practice in technology and management of real-time commercial aerospace products. Commercial rocket companies are relatively fewer, they are mainly engaged in the research and development of solid and liquid launch vehicles for small satellites launch market. Except for the Kuaizhou Rocket Company and the Long March Rocket Company, which have successful satellite launch experience, other companies have not yet completed the launch into orbit. It needs to be improved in technology maturity, technology practice, cost control and other aspects. In summary, China's commercial aerospace industry is still in the early stage of rapid development, and there is still a long way to go in terms of market, technology, cost control and management innovation.