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SPACE TECHNOLOGY- CHINESE ROCKETS FROM THE SEA

China Launches Rocket into Space from Sea Based Platform for First Time. China successfully launched a rocket into space from an afloat launch platform at sea on 05 Jun 19. A Long March 11WEY rocket was launched from the ship in the Yellow Sea and inserted five commercial satellites and a pair of technical experiment probes named Bufeng (Wind Catchers) into their designated orbits after about six minutes. The payloads reportedly included Jilin 03A high-definition Earth observation satellite, as part of a network which will eventually comprise more than 20 satellites. Others included an Earth-imaging cubesat, Tianqi-3 experimental communications satellite, China's first two Ka-band communications satellites, and a satellites belonging to Shanghai-based Link-Sure Network, which has ambitious plans to provide free Wi-fi on Global scale with a constellation comprising 200 satellites. Dimensions of the unnamed platform are about 360 by 260 feet (110 by 80 meters).

Chinese Space administration also stated that It will allow China to provide better aerospace commercial launch services for countries who are partnering in the 'belt and road initiative'. The Long March 11 is a four-stage, solid fuel rocket with a design similar to a ballistic missile. It can carry a payload of about 700 kg to the Earth's lower orbit. The first two stages of the rocket dropped in open waters in the northern Pacific Ocean.

Comments. This technology has the advantages of high flexibility and good adaptability for specific tasks; and is expected to significantly reduce the cost and risk of space missions. It will enable China to select launch point and touchdown area to meet the needs of various payloads and orbital requirements. For example, China can now choose a point closer to the equator for rocket launch, where Earth's spin naturally provides a speed boost and decreases the fuel needed to reach designated orbit. In addition to bolstering the officially stated commercial space sector, this sea launch capability will enable China to meet critical defence requirements like plugging geographical surveillance gaps, launching small spy satellites, or even enhancing range of its ballistic missiles for a limited pinpoint strike.

There are four Chinese space launch sites inland – Wuzhai, Jiuquan, Xichang and Wenzhou (Hainan). It has in addition, become the first nation to fully own and operate a floating launch platform for its space missions. The first sea-based rocket launch platform, 'Sea Launch', was jointly built by Russian, American, Norwegian and Ukrainian companies in the 1990s. However, its operations stopped in 2014 after military conflict between Russia and Ukraine.

Sources:<https://www.scmp.com/news/china/science/article/3013150/standby-sea-launch-china-space-rocket>; <https://www.space.com/china-first-sea-rocket-launch-success.html>