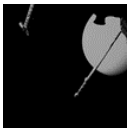
BepiColumbo's Venus Flyby Video



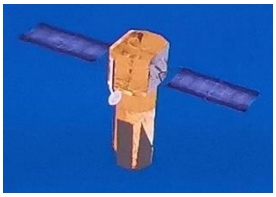
INTEGRITY ISR

8 November 2020

The Final Frontier Flash

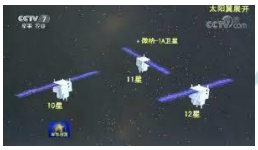
- 18 Sep 2020: China released a video captured by one of the Jilin-1 satellites, in which it claimed to continuously track the flight of a fighter jet, thought to be an F-22 stealth fighter. See VIDEO.
- The event was not reported outside of Chinese media.
- The Jilin-1 satellite constellation is the country's first self-developed remote sensing constellation for commercial use. It is part of the China High Resolutions Earth Observation System (CHEOS) and the Chang Guang Satellite Technology (CGST) constellation.
- There are multiple sensor variants including video and multi-spectral imagery. China reports its satellites are capable of collecting full-color images with resolution better than 0.76 meters and a multi-spectral resolution better than 3.1 meters.

China hopes to complete the 138 satellite CGST constellation in 2030. Fully operational the constellation would create an all-weather, full-spectrum imagery capability with a global 10 minute revisit capability. If successful CGST will provide the world's highest spatial resolution and time resolution products.



- 11 Oct 2020: China launched the Gaufen 13 on a Long March 3B. Gaufen 13 is a geostationary imagery satellite and will be located at 117.9° East near the South China Sea. See Launch VIDEO
- The Gaofen-13 ('high resolution 13') is nominally part of the civilian China High-resolution Earth Observation System (CHEOS).
- The Gaofen-13 is suspected to be an improved version of the Gaofen-4 with a significantly larger optical system potentially capable of 15 m resolution. If accurate, this would represent a significant improvement from Gaufen-4's estimated 50m resolution. China launched the Gaufen-4 in 2015.

CHEOS was initiated in 2010 to provide all-weather, all-day coverage with optical and synthetic aperture radar satellites. The constellation includes a range of optical and synthetic aperture radar satellites in low Earth orbit. Prior to Gaufen-13, the Gaofen-4 was previously the only CHEOS GEOSAT.



- 26 October 2020: China launched a seventh group of Yaogan-30 reconnaissance satellites. (see VIDEO)
- Yaogan means "remote sensing satellite" and is a family of satellites in various orbits, conducting a mixture of optical, synthetic-aperture radar, and other unknown (but probably electronic intelligence gathering) sensing.
- The three new satellites will possibly occupy the sixth plane of the system, with the satellites spaced by 120° in their orbits.

The Yaogan orbits are best suited for imagery satellites seeking to maximize revisit times. The Yaogan constellation's low inclination give the satellites good coverage of the Pacific, India, China, North Korea and even Japan, but the most northern and southern parts of the globe are not covered: the satellites spend their time in the band of latitudes relevant to Chinese national security concerns.