

INTEGRITY **ISR**

25 October 2020

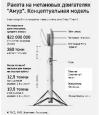
The Final Frontier Flash



15 September 2020: China launches Long March 11 from an ocean platform in the Yellow Sea. Nine satellites successfully placed in low-earth orbit. Watch Launch Video.

- This was China's second ocean-based launch, first was a Long March 11 sea launch in June 2019. This was the first launch of China's new seaport facilities at Haiyang in eastern China.

- The launch put 9 Jilin-1 (Gaofen-03 High Resolution-03) imagery satellites into 332-mile orbits. Six of the satellites are imaging satellites, capable of 1.1m resolution. The other 3 are video satellites. - The satellites are part of the planned Chang Guang Satellite Technology (CGST) constellation of 138 commercial Earth observation satellites, capable of imaging any location on Earth five to seven times a day. China is only the third country to perform a sea launch, following the U.S. and Russia. China established a spaceport/space industrial cluster in Haiyang City, Shandong Province. Per Haiyang's deputy Mayor the complex will be able to produce 20 solid propellant boosters per year.



6 October 2020: Russia announces development of reusable rocket: aims at \$22M launch cost in 2026

- Russia's plans to develop the Amur methane-fueled rocket
- Roscosmos projects development cost at \$880 million.
- The booster will be reusable, but the rocket will have a "non-recoverable" second stage.
- Amur will be about 180-feet tall and capable of launching 12.5 tons of payload into low-earth orbit.
- The Vostochny Cosmodrome spaceport in the Russian Far East is the expected launch site. The development contract was signed on 5 October. If successful the Amur's \$22M launch cost will be economically competitive with any of the Western Launch platforms. The current cost of a Falcon 9 launch is \$62M.



- 2 October 2020: China and Ethiopia confirmed launch details of a jointly developed nanosatellite
- Launch date is 20 December 2020 and total cost of the satellite project is about USD 1.5 million.
- Funding is provided by China's One Belt, One Road (OBOR)

Initiative and Sunny Group, a Chinese exporter and manufacturer.
-Given the launch is from Wenchang, this is likely on the first Long March 8 launch. The Long March 8 is projected to have re-useable first stage.

This coordination is an example of the PRC's One Belt, One Road (OBOR) initiative which seeks to expand China's overseas development and security interests. OBOR serves to strengthen China's strategic partnerships, enlarge its network of strategic partners, and advance reforms to the international order to support China's strategy.