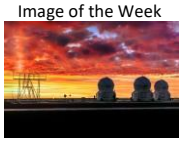
Image of the Week



INTEGRITY ISR

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The Final Frontier Flash

Russia gearing up to launch moon mission in 2021

- Luna-25 is the opening moonshot of a reactivated Russian lunar program that includes an orbiter and a plan to haul lunar samples back to Earth.
- The mission will perform research around the moon's south pole. To date, no spacecraft have been to this region, which is eyed by many nations as a site for future moon bases.
- The last of the Luna series of robotic spacecraft to get off the ground was the Luna-24 probe in 1976

Luna 25 is expected to launch in October 2021. Luna 26 is expected to launch in 2024 and will also function as a telecomm relay between Earth and Russian landed assets. Luna 27 is expected to launch in 2025 and would send a lander to the South Pole–Aitken basin, an area on the far side of the Moon. Its objective will be to detect and characterize lunar polar volatiles.

China's Long-Range Surveillance Development:

View full Jane's 2017 report: Complete Jane's Article.pdf

- China's array of long-range surveillance assets have increased and improved dramatically since 2006.
- Satellites and Over the Horizon Radars (OTHR) provide targeting data to anti-ship cruise missiles (ASCMs) and anti-ship ballistic missiles (ASBMs) such as the DF-21D (see picture)& DF-26.
- China has fielded electro-optical, infra-red (EO/IR), synthetic-aperture radar (SAR) imagery, & electronic intelligence (ELINT) satellites
- EO/IR Imagery: In 2017 China had five satellites in a sun-synchronous orbit with close interval daylight passes suggesting that these are for optical imaging. At their 1,200-km orbit height the satellites will have a relatively wide field of view, with resolution in the bracket of 3–10 m
- SAR: China likely has six military surveillance satellites carrying synthetic aperture radar with a maximum interval between SAR passes of four hours. The swath imaged by the SAR sensor is probably selectable, from a broad 100-km swath at 20-m resolution to a narrow 10-km swath at a resolution of 1.5 m. It is possible that the SAR sensor could be cued by either OTH-B radar or an ELINT satellite to cover the longitude of a contact of interest.
- ELINT: The most numerous of China's surveillance platforms are the 18 satellites believed to have an ELINT function. These satellites operate in triplets, provide global coverage with a coverage radius for each triplet of ~3,500 km. The constellation has a revisit time of < 3hrs.

China seeks to continuously monitor its seaward approaches for national defense and to underpin its goal of exerting sea control in its exclusive economic zone (EEZ), which would expand vastly if China's claims in the South China Sea were to be established.