



## The Final Frontier Flash



### China's Strategic View of Space Exploration:

- China's space program is more concerned with economic gains, geostrategic positioning and development goals.
- The [recent Mars mission](#)...forms part of a comprehensive strategy designed to propel China to the ranks of "fully developed, rich and powerful" nations by the year 2049.
- Under President Xi's command, the People's Republic has launched two prototype space stations ([Tiangong-1](#) and [Tiangong-2](#)), and a [cargo ship \(Tianzhou\) able to refuel other spacecraft.](#)
- The China National Space Administration (CNAS) intends to establish a research station on the lunar surface within the next decade.

**"The universe is an ocean, the Moon is the Diaoyu Islands, Mars is Huangyan Island. If we don't go there now even though we're capable of doing so, then we will be blamed by our descendants,"—Ye Peijian, the head of the Chinese lunar exploration program**



### Analysis of Russian & Chinese Space Cooperation

- China and Russia have initiated [several joint space-related ventures](#): remote sensing & human space exploration
  - Both countries wish to counter perceived growing U.S. military space & ballistic missile defense capabilities.
  - Notably, there has been little direct defense-related space cooperation.
  - Sharing rocket & microelectronic technology would benefit both nations.
  - Constraints stem from an inherent distrust: Russia concerned with Chinese technology theft and potential that increased Russian cooperation would lead to Chinese space capabilities eventually eclipsing Russia's.
- Russia, who is unique in having close ties to both U.S. and Chinese space programs, stands at a crossroads. Russia can seek greater cooperation in space with China and risk losing technology, or risk losing any benefit it could gain from greater cooperation and still watch China pull ahead.**



### Commercial Mission Extension Vehicle (MEV) development

- Oct 2019 Northrop-Grumman successfully docked MEV-1 to Intelsat 901 & extended service 5 years (see [VIDEO](#))
- 15 Aug 2020 [MEV-2 launched](#) & will dock with Intelsat 10-02 to extend satellite service another 5 years
- Both MEVs are designed to service multiple satellites over the next 15 years
- MEV developers and customers are discussing the need to create standard interfaces to support servicing of future spacecraft.

**The same technologies used for mission extension capabilities could be adapted to also deliver counterspace outcomes. China has also been testing satellites with robotic arms, a dual-use technology that could be used as a test bed.**