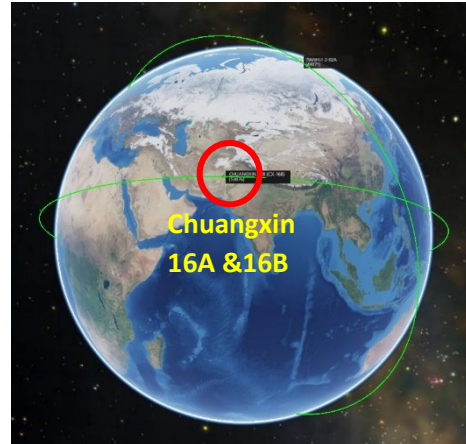
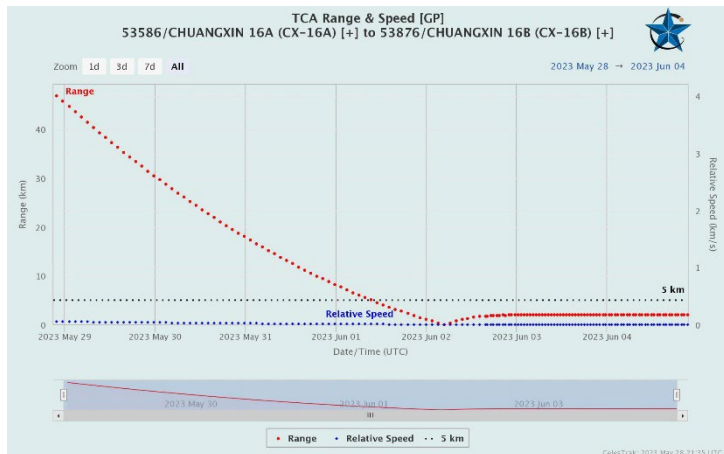
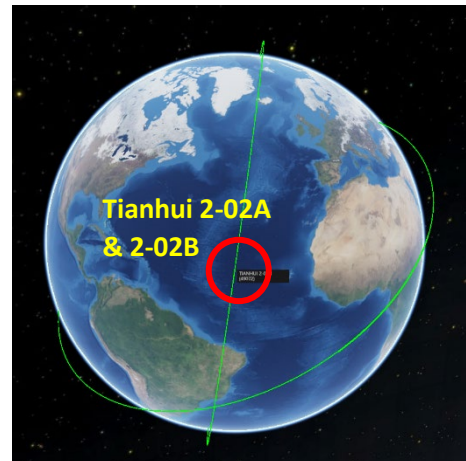
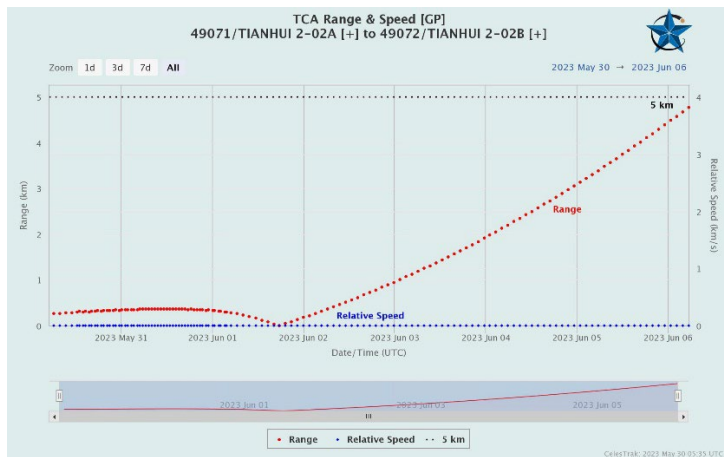


Quick Flash: 29 May 2023

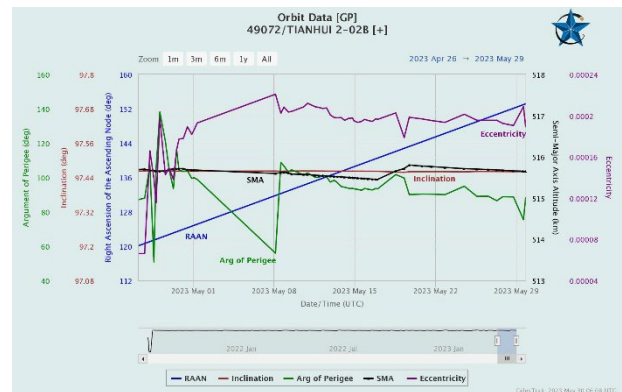
Bottom Line Up Front: China appears prepared to conduct proximity operations for two sets of satellites in the coming days. The first conjunction is between Tianhui 2-02A (49071) and Tianhui 2-02B (49072) on 1 June 2023 (range .001km and relative speed 0.00km/sec). The second is between Chuangxin 16A (53586) and Chuangxin 16B (53876) on 2 June 2023 (range .002km and relative speed .002km/sec). See graphs: <https://celestrak.org/SOCRATES/graph-tca-range-speed.php?CATNR=49071,49072&MAXRANGE=0> & <https://celestrak.org/SOCRATES/graph-tca-range-speed.php?CATNR=53586,53876&MAXRANGE=0>



Background:

Tianhui 2-02: [China launched the Tianhui 2-02A and 2-02B satellites on 18 August 2021 on a Long March 4B from Taiyuan.](#) The Tianhui 2 ("Sky drawing") series are a quasi-secretive group of Earth observation satellites designed to monitor Earth's surface. They are constructed by Dong Feng Hong and operated by the People's Liberation Army. [The TH-2 satellite system is China's first microwave surveying satellite system based on synthetic aperture radar technology.](#) The satellites are in a sun synchronous orbit as is typical for imaging satellites. *Conducting proximity operations with SAR imagery satellites is extremely unusual and may indicate a secondary mission objective.* Recent observations indicate both

satellites have conducted recent maneuvers changing SMA, Eccentricity and Argument of Perigee (<https://celestrak.org/NORAD/elements/graph-orbit-data.php?CATNR=49071> & <https://celestrak.org/NORAD/elements/graph-orbit-data.php?CATNR=49072>).



Chuangxin 16: [On 23 August 2022 China, through its CASC subsidiary, ExPace, launched a Kuaizhou-1A from Xichang carrying the Chuangxin-16 payload onboard](#), developed by the Chinese Academy of Sciences (CAS). The spacecraft will reportedly be used for verification of new technologies. Neither CASC nor ExPace provided many details on the Chuangxin-16 and there was some confusion over the number of satellites carried to orbit (either 1 or 2). Launch [Video](#). The Chuangxin (translated as “innovation”) payload is meant for technology research...one possible demonstration would be automated undocking, rendezvous, and re-docking of these two satellites. Both satellites are in a 29 degree inclined orbit and it appears that Chuangxin-16A has routinely been decreasing its SMA since January 2023. Chuangxin-16B does not appear to have changed its SMA or other orbital parameters since being placed into orbit in August 2022 (<https://celestrak.org/NORAD/elements/graph-orbit-data.php?CATNR=53586> & <https://celestrak.org/NORAD/elements/graph-orbit-data.php?CATNR=53876>). *Conducting proximity operations between two technical verification satellites, while unusual, should not be unexpected and appears to be consistent with stated mission purposes (vague as they were).*

