



## **Asian Space Race: Rhetoric or Reality?**

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The author Ajey Lele, poses and tries to answer the question of an Asian space race, in particular a race between the three "big" Asian spacefaring nations, China, Japan, and India.

The main portion of the book is dedicated to the thoroughly researched and very detailed description of the history, developments, achievements, goals, and future programs of the Asian space arena which not only include the three big "space race candidates" but also the entire continent from West Asia (Israel, Iran) through East Asia (North- and South Korea, Taiwan).

Although the horizon of the book is limited to the timeframe up to 2013 it is interesting to compare the 2013 assessments with the actual situation almost ten years later in 2022.

The following text is a compression of chapter 17, "Scrutinizing the Race", followed by the Journal of Space Operations & Communicator (JSOC) Editor's outlook.

One basic question which is more theoretical in nature but demands attention is to appreciate the coloration between the concept of space power and space race. What could be the basic purpose behind this race?

Collin Grey (British-American strategic thinker and professor of International Relations and Strategic Studies at the University of Reading) argued that space has attracted attention:

- As a realm wherein national scientific and engineering prowess could be showcased
- As a sentimentalized zone that should not be polluted by "terrestrial nastiness"
- As a geographical medium whose exploitation is potentially vital for the effectiveness of multilayered ballistic missile defenses.

Now, the question is "are these statements still completely valid in the twenty-first century?"

In Asian context, the initial media observation of an Asian space race probably emerged only as late as 2003 with the success of China's manned space mission. This could have happened because along with China, the other two states from the region, namely, Japan and India, also have successful space programs with a well-articulated roadmap for the future. Particularly, the interest of these three states (almost simultaneously) in the development of Moon missions.

However, the author concludes (p. 261) that technologically or otherwise the chances of Asian space race in human space flights and space station arena are minimal.

Amongst these three states, China could value nationalism more (could be more of a compulsion to keep the communism intact!) and would continue to invest in such 'exotic' programs, while other two democratic states appear to be more pragmatic, the best option could be to device a multilateral mechanism for all such activities but because of China, this would be very unlikely.

It could be incorrect to view Asia's interest in the Moon only for the purpose of scientific hype. They understand the relevance of the Moon from the point of view of minerals. They are also trying to judge

the feasibility of helium-3 on the surface of the Moon offering a solution to energy security, they are also more interested in spin-offs like deep space communications and robotics.

The investments by the big three in the Moon mission could be viewed as a race for resources. China appears to be looking at the Moon not only as the backyard for mining the minerals but have larger ambitions. They desire to undertake a human mission to the Moon as the first country in the twenty-first century.

They view this mission as a 'contrivance' to achieve a great power status.

The twenty-first-century world is probably entering an era of post-nationalism. National identities are getting somewhat blurred, and the perception of the so-called prestige of a state is not remaining limited to some isolated achievements. States are found undertaking cost-benefit analysis (benefits have both economic and strategic conations) before making any big investments. All this has Asian relevance too.

Asia's space story is mostly viewed as a story of competition. The inquest is 'has the notion of competition become prevalent just because there is no co-operation'? It is understood that the main reason for the lack of cooperation is the strategic compulsions, particularly in respect of India–China and China–Japan.

It is also important to note that for many years because of its nuclear policies.

When viewed holistically at the backdrop of geopolitical realities, it appears that even though the space race is getting discussed more in the Asian region, but in a real sense, *the race is taking place between the USA and China.*

One of the most likely reasons could be that it is not about the race in space, but actually about energy security (presence of helium 3 on the Moon's surface) and the race for resources (mining of minerals from the Moon's surface). The Moon is just incidental; if such resources would have been available under the ocean, the states would have attempted to reach there!

China is targeting to match and outdo the best in the world. Naturally, their race is not with India or Japan, but they are to outperform the USA.

<p><b>Author's conclusion</b> (in 2013): The current trends indicate <i>no</i> definitive but only somewhat suggestive space race in Asia.</p>
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### ***Current Status (September 2022)***

Re-addressing the major aspects of an Asian space race nine years later it has to be observed, although a lot of unforeseeable crises occurred after 2013 (global climate change, Trump's America First, Corona pandemic and the Russian/Ukrainian military escalation and resulting sanctions), that the sings for an Asian space race have further diminished.

*China* has executed unperturbed its human spaceflight goals by having established its own permanently manned Chinese Tiangong space station and launched a crew of three in June 2022 to stay for six months.

Ye Peijian, a senior Chinese scientist in deep-space exploration said in a December 6, 2021 interview: "I personally think that as long as the technological research for manned Moon landing continues, and as long as the country is determined [to achieve this goal], it is entirely possible for China to land people on the Moon before 2030". [1]

*Japan*, on the other hand, together with Canada and Europe, is firmly integrated in the US-led Artemis program to set foot on the Moon again.

Currently, Artemis-3 is planned as the first crewed Moon landing mission of the Artemis program and the first crewed flight of Elon Musk's Starship HLS lander. Scheduled for launch in 2024/2025, Artemis 3 is planned to be the second crewed Artemis mission and the first crewed lunar landing since Apollo 17 in 1972. [2]

*India* is still lagging with its human spaceflight program. The current plan is to launch the first uncrewed flight, named Gaganyaan 1, no earlier than Q1 2023 on a GSLV Mark III rocket. [3]

This outlook would not be complete without taking the human spaceflight plans of Russia into account supporting China in its human spaceflight effort with technical know-how.

*Russia*: Vladimir Solovyov, General Designer for Manned Space Systems and Complexes, discussed Russia's plans for exploring the Moon (Credit: Roscosmos) on Tuesday, January 25, 2022, at the XLVI Academic Readings in Cosmonautics ("Royal Readings – 2022") and spoke about the plans for the development of the Russian manned space program." [4]

His statement on the Russian Orbital Service Station (ROSS) was presented in January 2022 as mentioned above, approx. 1 month before the Ukrainian invasion:

"At the first stage, a 'butterfly' is being formed – the Scientific and Energy Module, which has already been created in metal, the Base, Gateway, and Nodal modules, with the help of which from 2026-2028 it is possible to start flights and master subpolar orbits. In the second stage, the Target Production and Target Modules and an arsenal of various external platforms appear as part of the ROSS. I would like to operate the station in this full-fledged composition with crews working on a rotational basis." [4]

In April 2022 Russian officials indicated they could pull out of the ISS partnership by 2025.

In July 2022 officials from both agencies spoke about Russia's announcement to leave the ISS partnership after 2024 in a gradual and staged fashion. The reason is to put the resources Russia dedicates to the ISS into the new Russian Orbital Service Station (ROSS) later in the 2020s.

"We are looking into projects for the new station, but for now, we are working on extending the [ISS] operation, and we don't know for how long it is yet," Sergei Krikalev, the Roscosmos Executive Director of human spaceflight programs, said during a Crew-5 briefing in Russian; his comments were interpreted on-site into English.

"When there is a technical reason to terminate ... we will, of course, coordinate with our partners for our interface procedures, to make this as seamless as possible for all program participants," Krikalev added. [5]

NASA noted that the U.S. government still plans to extend ISS operations to 2030 (legislation on that is pending a presidential signature) and that negotiations with other space station partners are ongoing to keep other agencies in the agreement (August 05, 2022). [6]

In the past years China and Russia have grown increasingly close under their current leaders, Xi Jinping and Vladimir V. Putin, smoothing decades of mistrust between the countries by creating a potent alliance, though unofficial, against what they perceive as the hegemonic behavior of the United States. Space has become a natural extension of the two countries' warming ties, given increasingly fraught relations with the United States". [7]

The strengthening of the China/Russian relations was demonstrated just recently by the participation Chinese President Xi Jinping and Russian President Vladimir Putin in a summit in Samarkand, Uzbekistan on September 15, 2022, pledging "to inject stability in the world". It remains to be seen how far this statement will go.

***Editor's conclusion (in 2022):*** So, indeed it looks like the books author's analysis is still very valid and if there is an undeclared "soft power" (attractiveness for cooperation) and "hard power" (ability to influence and force the behavior of others to get the desired outcomes) human spaceflight race, it is building up between the *USA and China/Russia*.

Russian Moon Infrastructure as presented by Vladimir Solovyov (January 25, 2022) [4]



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