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The New Race for the Moon

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Last Thursday, the National Aeronautics and Space Administration (NASA) sent two probes to the moon in search of a possible site for a manned lunar station. Both China and the U.S. have announced that they plan to send manned missions to the moon around 2020. India and Japan are not far behind, launching their own unmanned probes to the moon and laying out their timetables for sending men there.

Will we see a pileup on the moon around 2020? The idea of a traffic jam on the moon would have seemed preposterous to President John Kennedy when he announced the United States' goal of "landing a man on the moon and returning him safely to Earth" by the end of the 1960s. Back then, the moon seemed impossibly distant. But with the Cold War, superpower rivalry moved a lunar mission to the top of the national security agenda. Today there's been a rekindling of some of that old fervor.

The most methodical strategy to put men on the moon comes from China, with its three-stage plan. First, the Chinese placed astronauts into orbit aboard their Long March rocket in 2003. Then, in 2008 with the Shenzhou 7 mission, they began mastering spacewalks. Next, they plan to master docking maneuvers with Shenzhou 10, eventually leading to the building of a space station. This will culminate in sending Chinese to the moon by 2020. That will also come in three stages: first orbiting the moon, then landing, and finally bringing back samples.

The U.S. is not far behind. The U.S. plans to mothball the aging Space Shuttle next year. After a controversial five-year hiatus, NASA will then deploy the new Constellation program, consisting of the Ares booster rocket and the Orion spacecraft. It looks like an Apollo mission on steroids. The Constellation is designed to replace the Shuttle and then blast off to the moon and maybe even to Mars.

Global rivalries have probably stoked the lunar ambitions of India and Japan as well. India, to much domestic fanfare, sent an orbiter around the moon in November 2008 -- the Chandrayaan-1. India plans to send astronauts into orbit by 2014-15, making it the fourth nation to carry out manned space missions. The Indian Space Research Organization said it plans to send a man to the moon by 2020.

Not to be outdone, Japan sent its first probe to the moon in 1990 and a second in 2007. It plans another probe by 2012-13. The Japanese are also planning a manned mission to the moon by 2020 and a manned lunar base by 2030.

The European Space Agency and the Russians, seeing all this activity culminate around the moon, will be under pressure to accelerate their own programs as well. At present, the agency has no official manned mission to the moon, but plans a manned mission to Mars, called the Aurora Program, by 2030.

So, around 2020, we could get a bottleneck on the moon, with manned and unmanned probes from several countries whizzing around it from different directions. Various nations could even begin planting flags into its lunar soil. Let's hope they don't bump into each other, creating the first global conflict in space.

To be sure, going to the moon is largely symbolic, rather than strategic. Since it takes several days to reach the moon, while a nuclear war on Earth would be waged in a matter of hours, the moon gives no cosmic military advantage. And the moon has no air or water. The moon does have minerals, but mining the Earth is infinitely cheaper than mining the moon.

This raises another question: Can any nation plant its flag on lunar soil, claiming the moon as its own?

The Outer Space Treaty of 1967 forbade nuclear weapons in space and prohibited countries from claiming territory on the moon or any other celestial body. But the treaty is vague and out of date. Perhaps now is the

best time to strengthen and rethink this old treaty before national rivalries and tensions heat up as we approach 2020.

Mr. Kaku is the author of "Physics of the Impossible: a Scientific Exploration into the World of Phasers, Force Fields, Teleportation, and Time Travel" (Doubleday, 2008).

(See related letters: "Letters to the Editor: To Infinity and Beyond! Or at Least Back to the Moon" -- WSJ June 29, 2009)

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