

Russia Proposes Moon Base in Lunar Lava Caves

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STAR CITY, Moscow Region — The United States may have put the first man on the moon, but Russian scientists and space explorers are now gazing at a new goal — setting up a colony on the moon.

The discovery of volcanic tunnels on the moon could provide a natural shelter for the first lunar colony, cosmonauts and scientists said Tuesday.

Researchers have long suspected that the moon's volcanic past left an underground network of lava tubes as its legacy, and 2008 images from Japan's Kaguya spacecraft showed a possible way down — a mysterious, meters-deep hole breaching the surface.

"This new discovery that the moon may be a rather porous body could significantly alter our approach to founding lunar bases," veteran spaceman Sergei Krikalyov, who heads the Star City cosmonaut training center, said at a forum on the future of manned spaceflight.

"If it turns out that the moon has a number of caves that can provide some protection

from radiation and meteor showers, it could be an even more interesting destination than previously thought," he said.

A slide-show image showing bunker-like inflatable tents dotting the lunar landscape gave forum participants an impression of potential lunar bases.

"There wouldn't be any need to dig the lunar soil and build walls and ceilings," Krikalyov said. "It would be enough to use an inflatable module with a hard outer shell to — roughly speaking — seal the caves."

The first such lunar colonies could be built by 2030, estimated Boris Kryuchkov, deputy science head at the training center.

As the world's space agencies debate where to fly beyond low-Earth orbit, including deep-space missions to asteroids and Mars, the European Space Agency's head of human spaceflight programs said the moon also looked attractive.

"There is still a very strong focus on the moon. It could be a natural first to go there," Martin Zell said.

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