参考译文

**Saturn Becomes ‘Moon King’ with 20 New Discoveries**

**土星成太阳系新晋“卫星之王”。**

The planet Saturn is being recognized as the "moon king" of our solar system.

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[Jupiter](https://m.51voa.com/a/study-massive-planet-may-have-crashed-into-young-jupiter/5051615.html) used to hold the record for most moons orbiting around it. It has 79. But scientists in the United States have announced the discovery of 20 new moons around Saturn. That gives the planet a new total of 82 moons.

木星曾是环绕其运行的卫星最多的记录保持者。它有79颗卫星。但是美国科学家宣布在土星周围发现了20颗新卫星。这使得土星总共有82颗卫星。

The researchers made the discovery using the powerful [Subaru telescope](https://subarutelescope.org/) in Hawaii. They gathered information over a period of several years.

研究人员在夏威夷使用强大的斯巴鲁望远镜发现了这一现象。他们花了几年时间收集信息。

The team also used new computing models to identify moons and follow orbiting activity.

该团队还使用新的计算模型来识别卫星并跟踪其轨道活动。

Scott Sheppard led the research team. He is with the Carnegie Institution for Science in Washington, D.C. "Saturn is the moon king," Sheppard told Reuters news agency.

斯科特·谢泼德负责这个研究小组。他就职于华盛顿卡内基科学研究所““卫星之王”，”谢泼德告诉路透社。

The discovery was announced last week by the International Astronomical Union's [Minor Planet Center](https://minorplanetcenter.net/). The center is responsible for identifying all the world's minor planets, comets and "outer natural satellites." The organization also measures the orbital movements of such objects.

国际天文学联合会的小行星中心上周宣布了这一发现。该中心负责识别世界上所有的小行星、彗星和“外部自然卫星”。该组织还监测这些星体的轨道运动。

Researchers say the newly found moons are very small, measuring about five kilometers across. The team was able to discover them now because of better technology that became available in recent years. This includes more powerful telescopes and increased computing power.

研究人员表示，新发现的卫星非常小，直径大约5公里。由于近年来出现了更好的技术，这个团队现在彩能够发现它们。这包括更强大的望远镜和更强的计算能力。

Saturn is a gas planet made up mostly of hydrogen and helium. It is the second-largest planet in the solar system and the sixth from the sun. It measures about 116,000 kilometers across.

土星是一颗主要由氢和氦组成的气体行星。它是太阳系中第二大行星，距日距离第6位。它的直径约为11.6万公里。

One of the newly identified moons [orbits Saturn](https://m.51voa.com/a/cassini-death-dive-into-saturn-ending-mission/4031013.html) from a huge distance away, about 25 million kilometers from the planet. This is farther away than any of Saturn's other moons. By comparison, Earth's moon orbits about 386,000 kilometers from the planet.

其中一颗新发现的卫星在距离土星2500万公里远的地方绕其运行。它是距离土星最远的卫星。相比之下，月球轨道距离地球约386,000公里。

Seventeen of the moons orbit Saturn backwards. In other words, their movement is opposite of the planet's **rotation**. The other three orbit in the same direction as the planet rotates.

其中17颗卫星绕土星向后旋转。换句话说，它们的运动与土星的自转方向相反。其他三个轨道的卫星与行星旋转的方向相同。

The researchers said a number of the moons appear to have been formed from parts of larger moons. Those past moons likely broke up in crashes with other moons or with comets or **asteroids**. This is similar to how some of Jupiter's 79 moons were formed.

研究人员表示，许多卫星似乎是大卫星的一部分形成的。那些过去的卫星可能在与其他卫星或彗星或小行星的碰撞中解体。这与木星79颗卫星的形成过程类似。

Sheppard said scientists can learn many new things from Saturn's moons.

谢泼德表示，科学家可以从土星的卫星中学到很多新东西。

"These new moons show us the solar system was a very **chaotic** place in the distant past, with objects flying all over the place," Sheppard said. He added that the moons are among the last pieces of evidence left over from the formation of the solar system. All other objects were either pushed out or became parts of other planets.

“这些新发现的卫星向我们表明，在遥远的过去，太阳系是一个非常混乱的地方，到处都是飞行的物体，”谢泼德说道。他补充道，这些卫星是太阳系形成留下的最后证据。所有其他物体要么飞离太阳系，要么成为其他行星的一部分。

Sheppard hopes the discovery can help scientists keep learning more about how planets in our solar system came to be.

谢帕德希望这一发现能帮助科学家们更多地了解太阳系行星是如何形成的。

"Studying the orbits of these moons can **reveal** their **origins**, as well as information about the conditions surrounding Saturn at the time of its formation," he said.

“研究这些卫星的轨道可以揭示它们的起源，以及土星形成时周围环境的信息，”他说。

Sheppard added that there are likely more moons around [Saturn](https://m.51voa.com/a/cassini-amazing-photos-of-saturn-rings-and-moons-/4030983.html) that are even smaller than the latest discoveries. But he says astronomers will need larger telescopes to find them.

谢帕德补充道，土星周围可能有更多比最新发现的卫星还要小的卫星。但是他说，天文学家需要更大的望远镜才能找到它们。

The Carnegie Institution for Science is [asking the public](https://carnegiescience.edu/NameSaturnsMoons) for help to name the newly discovered moons.

耐基科学研究所请求公众帮助命名新发现的卫星。

I'm Bryan Lynn.

我是布莱恩·林恩。

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## ****Words in This Story****

**rotate**– n. to turn in a circular direction

**asteroid**– n. a rocky object that goes around the sun like a planet

**chaotic**– adj. in a state of disorder

**reveal**– v. to give someone a piece of information that is surprising or that was previously secret

**origin**– n. the cause of something, or where something begins or comes from

听力原文

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