**Astronomers Identify Closest Black Hole to Earth**

**天文学家发现离地球最近的黑洞**

European astronomers say they have found the closest black hole to Earth ever discovered.

欧洲天文学家称，他们发现了有史以来离地球最近的黑洞。

The black hole is believed to be at least 4.2 times the mass of the sun. It sits about 1,000 light years from Earth, or about 9.5 trillion kilometers away.

据悉这个黑洞大小至少是太阳质量的4.2倍。它距地球约1000光年——约9.5万亿公里。

The discovery was made by researchers from the European Southern Observatory. They found the black hole using a telescope based in Chile. The research recently appeared in the publication Astronomy & Astrophysics.

该发现由欧洲南方天文台的研究人员得出。他们利用位于智利的一个望远镜发现了这个黑洞。该研究最近发表于《天文学与天体物理学》出版物。

Thomas Rivinius led the research for the European Southern Observatory. In an interview with Reuters news agency, he admitted the black hole is still very far from Earth. But he noted that in terms of the universe and the galaxy, we should consider the new find “just around the corner.”

托马斯·里维尼乌斯代表欧洲南方天文台领导了这一研究。在接受路透社采访时，他承认黑洞距离地球还很远。但同时他也指出，就宇宙和星系而言，我们应该认为这一新发现“已然很近了”。

Rivinius said the next closest black hole to Earth is probably about three times further, about 3,200 light years away.

里维尼乌斯说，距离地球第二近的黑洞比当前发现的这个黑洞要远三倍——约3200光年。

Black holes are extremely dense objects with gravitational pulls so powerful that not even light can escape. Some are huge, like the one at our galaxy’s center 26,000 light years from Earth. That black hole is four million times the sun’s mass.

黑洞是极其密集且引力极强的物体，由于其引力极为强大以至于连光线都无法逃脱。有些黑洞非常大，例如距地球26,000光年，处于银河系中心的黑洞，其质量是太阳质量的四百万倍。

The newly discovered black hole is gravitationally attached to two stars in a so-called triple system, the researchers said. It sits in the constellation Telescopium in the sky’s Southern Hemisphere.

研究人员称，新发现的黑洞在一个三重系统中被引力附着在两颗恒星上。它坐落在南半球天空中的望远镜星座。

Astronomers theorize there are between 100 million to 1 billion of these small but dense objects in the Milky Way. But usually they cannot be seen. Scientists can only find them when they are eating away at parts of a partner star or something else falls into them. Astronomers think most black holes remain unseen because they do not have anything close enough to swallow up.

天文学家推论，银河系中大约有1亿至10亿个这种小而密的物体，不过通常都是不可视的。科学家只有在它们吞噬其恒星搭档时或其他物体掉入其中时才能发现它们。天文学家认为，大多数黑洞仍然不可视是因为它们附近没有足够近的东西可以供其吞食。

Astronomers found the new one because of the triple system formation. They say their telescope observations confirmed that there was an object about four times the mass of our sun pulling on the inner star. They decided it could only be a black hole.

天文学家发现这一新黑洞是因为三重系统的形成。他们的望远镜观测结果证实，有一个质量约为太阳质量四倍的物体在拉近内层恒星，因此他们判定唯一的可能就是这是一个黑洞。

Other astronomers say the theory makes sense. “It will motivate additional searches among bright, relatively nearby stars,” said Ohio State University astronomer Todd Thompson. He was not part of the research.

其他天文学家认可了这一理论。俄亥俄州立大学的天文学家托德·汤普森表示：“这将促使人类在相对较近的恒星中进行更多搜索。”他并未参与这项研究。

Rivinius said these are young, hot stars compared to our 4.6 billion-year-old sun. They may be 140 million years old, but at 15,000 degrees Celsius, they are three times hotter than the sun. About 15 million years ago, one of the stars got too big and too hot and went supernova, turning into the black hole in a violent process, he added.

里维尼乌斯说，与已存在46亿年的太阳相比，这些恒星是年轻的，炙手可热的。它们可能有1.4亿年的历史，但温度却达15,000摄氏度——是太阳温度的三倍。他补充说，大约在一千五百万年前其中一颗恒星变得太大、太热而成为超新星，并在剧烈变化的过程中变成了黑洞。

Rivinius said the two stars are far enough away from the black hole that it is not pulling material from them. But in a few million years the closer star is expected to grow as part of its life cycle.

里维尼乌斯还说道，这两颗恒星距离黑洞足够远，因此黑洞没有从它们身上吸收物质。但几百万年内，距离稍微近一些的恒星或会在其生命周期中不断增长。

Avi Loeb is director of Harvard’s Black Hole Initiative. He was not part of the study. “It is most likely that there are black holes much closer than this one,” he told the AP. “If you find an ant while scanning a tiny fraction of your kitchen, you know there must be many more out there.”

阿维·勒布是哈佛大学“黑洞计划”的负责人，他也未参与这项研究。他告诉美联社：“极有可能存在比这个黑洞离地球更近的黑洞。就像如果您在观察厨房时，在某个小角落发现了一只蚂蚁，那么那里一定还有更多。”

I’m Bryan Lynn.

布莱恩·林恩报道。

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