Entering the Martian interior

NASA“洞察者”号登陆火星

火星

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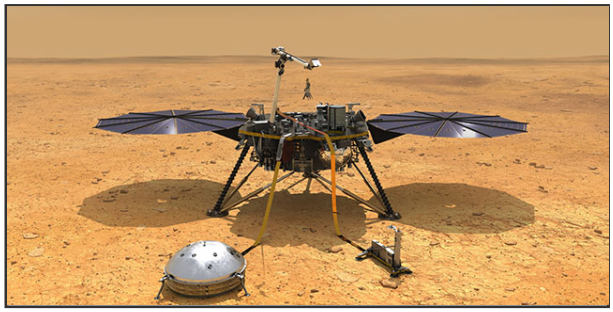
导读：人类移居火星的情节在科幻大片内并不少见，而科学家最近也对这颗红色星球展开了新的探索：NASA“洞察者”号已于11月登陆火星，然而，这一路却困难重重……



Spacecraft InSight touche down on the surface of Mars in November. CFP

Mars has often been regarded as a possible place for human beings to live in the future. But although the dream of setting foot on Mars for us may still be years away, “the Red Planet”, as the Yahoo website put it, “is turning into something of a monument park for our species all the same”.

n. 纪念碑　　n. 物种；

火星常常被视为人类未来的居所。尽管踏足火星的梦想对于我们而言或许还有多年才能实现，但正如雅虎网站所言，“这颗红色的星球正在变成我们自己的纪念碑公园。”

InSight, the latest robotic visitor from Earth touched down on the surface of Mars in November, marking the beginning of its two-year study of the Mars’ interior.
来自地球的最新机器人访客“洞察者”号已于11月登陆火星，开始其为期两年的火星内部研究。

NASA believes that this journey is quite a challenge.
美国航空航天局认为，此次征途是项不小的挑战。

According to Business Insider, as the spacecraft traveled through the Martian atmosphere it would have experienced great pressure.
据《商业内幕》报道，飞船在穿越火星大气层的过程中会遭受巨大的气压。

If InSight had reached the atmosphere at an unsafe angle at the speed of 19,795 km/h, the pressure would have pushed the spacecraft away from the planet’s atmosphere and out into deep space. If there had been an error, InSight would have been destroyed completely.
“洞察者”号目前的速度为每小时19795公里，如果其进入火星大气层的角度并不安全，那么气压便会将飞船推出大气层，抛入深太空。如果发生失误，那么“洞察者”号将会被彻底摧毁。

In order to solve the problem, NASA put InSight into an entry capsule, which helped it speed toward the atmosphere and enter it at the perfect angle.
为解决这一问题，美国航空航天局将“洞察者”号放入了一个进入舱内，这有助于其向火星大气层加速前进，并以完美的角度进入大气层。

The extreme high temperature of the Mars’ interior will make fulfillment of the project a challenge, as Jim Green, NASA chief scientist explained.
美国航空航天局首席科学家吉姆·格林解释称，火星内部的超高温会令该项目挑战重重。

“It’s like a cake,” he told Live Science. “You bake a cake, and when you take it from the oven, it’s still hot inside while it’s cooling off.”
vt.烤，烘焙；
“它和蛋糕一样，”他在接受《生活科学》杂志采访时表示。“你在烤蛋糕时会发现，从烤箱中拿出蛋糕冷却后，蛋糕内部依然是热的。”

Green believes that the planets are still cooling off from when they came into being 4.5 billion years ago. So, he said, the interior of Mars is hot, and that heat is still released from the mantle and the crust”.
n.覆盖物； vi.结成外壳
格林认为，这些在45亿年前成型的星球仍在冷却阶段。所以，他表示，火星内部温度很高，地幔和地壳依然在释放热量。

For this reason, InSight was coated with a heat shield and given a heat probe to measure the temperature.
出于这一原因，“洞察者”号的外层覆盖了一层防热罩，并装有热量探测器来测量温度。

Though the trip was actually dangerous and risky, the InSight mission is of great significance. If all goes well, the photos InSight is taking will provide us with a different angle on how this rocky planet has evolved through time.
尽管征途危机重重，但“洞察者”号的这一任务意义重大。如果一切顺利，“洞察者”号所拍摄的照片能够为我们提供不同的角度来研究这颗岩质行星的演化历程。

As InSight chief scientist Bruce Banerdt told the BBC: “The small details in how planets evolve are what ... make the difference between a place like Earth where you can go on vacation and get a tan, and a place like Venus where you’ll burn in seconds or a place like Mars where you’ll freeze to death.”
晒黑
正如“洞察者”号首席科学家布鲁斯·巴纳特在接受BBC采访时所言：“行星演化的小细节正是其产生差异之处：你能在地球上度假、晒日光浴，然而在金星上，你在数秒内便会被烤焦；但在火星上，你却会被冻死。”

(Translator & Editor: Wang Xingwei AND Ji Yuan)
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辞海拾贝

Monument	纪念	**Interior**	内部
Angle	角度	**Capsule**	进入舱
Mantle	地幔	**Heat shield**	防热罩
Probe	探测器	**Tan**	晒黑