

### 本集内容

Nasa says this is what a black hole 'sounds' like 美国国家航空航天局发布黑洞的“声音”

### 文字稿

Spooky or soothing? You decide.

这个声音是诡异，还是舒缓？你觉得呢？

This is what a huge black hole in space 'sounds' like.

这就是太空中一个巨大黑洞的“声音”。

US space agency Nasa recorded it from the Perseus galaxy more than 200 million light-years away.

美国国家航空航天局录下了这个两亿多光年外的英仙座星系黑洞的“声音”。

The sound has been edited so it can be heard by human ears.

声音经过编辑合成，使人耳能够听到。

Scientists say it's not the actual black hole we're hearing...

科学家们说，这个声音并不是黑洞本身.....

Dr Rebecca Smethurst, Author of A Brief History of Black Holes

"We hear what the sound is actually like from this black hole that's essentially given off this big burp of energy from the regions around it. So, not the black hole itself, because nothing can escape a black hole. But the regions around the black hole, in this big cluster of galaxies, the gas is dense enough, that you can get this pressure wave, or sound wave, travelling through that gas, and then recreate that pressure wave, which is also very, very, very, low in frequency. But then we pitch it up about 50 octaves so that, you know, humans can actually hear it."

丽贝卡·斯密瑟斯特 博士 《黑洞简史》作者

“我们人耳所听到的这个黑洞的声音，本质上其实是黑洞从周围区域释放的一股巨大能量。所以，这个声音并不是黑洞本身发出的，因为没有任何东西能逃出黑洞。但在黑洞周围的区域，在这个巨大的星系团中，气体密集到足以使压力波或声波从中穿过，让我们能探测到，然后重现这个压力波，但波动频率也非常非常低。但我们把频率调高了约 50 个八度，这样才能被人耳听到。”

视频链接

<https://www.bbc.co.uk/learningenglish/chinese/features/lingohack/ep-220908>