

本集內容

Nasa says this is what a black hole 'sounds' like 美國國家航空暨太空總署發佈黑洞的“聲音”

文字稿

Spooky or soothing? You decide.

這個聲音是詭異，還是舒緩？你覺得呢？

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

這就是太空中一個巨大黑洞的“聲音”。

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

美國國家航空暨太空總署美國國家航空航天局錄下了這個兩億多光年外的英仙座星系黑洞的“聲音”。

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

聲音經過編輯合成，使人耳能夠聽到。

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

科學家們說，這個聲音並不是黑洞本身.....

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. "

麗蓓嘉·斯密瑟斯特 博士 《黑洞簡史》作者

“我們人耳所聽到的這個黑洞的聲音，本質上其實是黑洞從周圍區域釋放的一股巨大能量，所以，這個聲音並不是黑洞本身發出的，因為沒有任何東西能逃出黑洞，但在黑洞周圍的區域，在這個巨大的星系團中，氣體密集到足以使壓力波或聲波從中穿過，讓我們能探測到，然後重現這個壓力波，但波動頻率也非常非常低，但我們把頻率調高了約 50 個八度，這樣才能被人耳聽到。”

影片連結

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