

A mega-star is born — and here's how

「巨星」的誕生



Using powerful telescopes peering into deep space, astronomers have **drawn back the veil** on one of the mysteries of the universe to confirm a key theory about the formation of massive stars, the journal *Nature* reported last week.

Images obtained by NASA's orbital Spitzer Space Telescope and from a ground-based European telescope showed a dusty disc closely **encircling** a newly-born but huge star.

It is the first direct evidence that very large stars — those with masses at least 10 times that of the Sun — are born in the same way as their smaller **brethren**, from a disk-shaped cloud of dust and gas.

A competing theory was that massive stars were formed from smaller stars that merged.

"This is the first time we could image the inner regions of the disc around a massive young star," said Stefan Kraus of the European Southern Observatory.

"Our observations show that formation works the same for all stars, regardless of mass."

The astronomers looked at a large star known as IRAS 13481-6124, about 20 times the mass of the Sun, located about 10,000 light years away in the **constellation** of Centaurus. (AFP)

《自然》科學雜誌上周報導，天文學家使用大型天文望遠鏡觀測外太空，證明了「巨星」形成的某個重要理論，為這個神秘的領域掀開面紗。

美國航太總署安置在軌道上的史匹哲太空望遠鏡，及歐洲地面望遠鏡所得到的影像顯示，某個新生的龐大星體周圍緊緊環繞著盤狀星塵。

這是首次發現直接證據證明這種超大星體（質量至少是太陽十倍）的誕生，和較小的星體一樣，都是由盤狀的氣體雲組成。

持相反論點的理論認為，「巨星」是由較小的星體集結而成。

歐洲南天文台的史蒂芬·克勞斯說：「這是我們首次成功取得環繞新生巨星盤狀霧團內部的影像。」

「依照我們的觀察，無論其質量大小，所有星體都是這樣形成的。」

天文學家觀察的這個龐大星體名為IRAS 13481-6124，位於人馬座內，距離地球約一萬光年，質量約比太陽大二十倍。

(法新社/翻譯：吳岱環)

This handout image released by the European Southern Observatory (ESO) shows a massive baby star. The image was obtained by NASA's orbital Spitzer Space Telescope and from a ground-based European telescope.

PHOTO: AFP/ESO/SPITZER/S.KRAUS

歐洲南天文台所提供的這張資料照是一顆「新生巨星」。該影像由美國航太總署安置在軌道中的史匹哲太空望遠鏡，及歐洲地面的天文望遠鏡拍攝。

照片：法新社 / 歐洲南天文台 / 史匹哲 / S·克勞斯

TODAY'S WORDS

今日單字

1. encircle /ɪn'sɜːkl/ v.

環繞 (huan2 rao4)

例：The rioters were encircled by a well-coordinated police operation. (暴民被配合良好的警方團團包圍。)

2. brethren /'brɛðrən/ n.

弟兄 (di4 xiong1)

例：We must do everything we can to help our brethren. (我們必須盡一切所能幫助自己的弟兄。)

3. constellation /,kɒnstə'leɪʃən/ n.

星座 (xing1 zuo4)

例：The telescope brought back images from a distant constellation. (天文望遠鏡傳回遠方星座的影像。)

LANGUAGE POINT

重要片語

draw back the veil

掀開神秘面紗

If you **draw back the veil** on something, you reveal it. According to the article, the scientists revealed the answer to a question that had been puzzling them for a long time. The word "reveal" can trace its etymology to the Latin word "revelare" which literally means to **draw back a veil**.

「draw back the veil」形容掀開某事的神秘面紗。上文中提到，天文學家找到了困惑許久的問題之答案。「reveal」一字源自拉丁文的「revelare」，字面的意思就是掀起一層面紗。