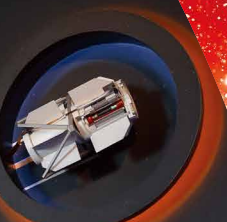


透視太空船  
SEE  
THROUGH  
SPACECRAFT



能量之源  
POWER  
SOURCE



香港  
Hong Kong 太空館  
Space Museum

通訊  
Newsletter

1 3  
2023

# 先鋒號星際之旅展品推介：能量之源

## Highlight Exhibit of The Pioneer Interstellar Mission and Beyond: Power Source

無人探測器先鋒10和11號的能量來自核能：放射性同位素熱電機(RTG)，利用放射性同位素釷-238散發的熱能，和太空冰冷環境之間的溫差產生電能，過程稱為塞貝克效應。由於RTG供電穩定，所以亦應用到旅行者號、卡西尼號、新視野號、好奇號和毅力號等太空任務。展覽會展出RTG模型，和互動展品解釋其科學原理。

The unmanned probes Pioneers 10 and 11 are nuclear-powered: radioisotope thermoelectric generators (RTG), which makes use of the temperature difference between the heat released from radioactive isotope Plutonium-238 and the coldness of space to generate electricity. The process is known as Seebeck effect. RTG is a stable electricity source and has been used in other space missions, including Voyagers, Cassini, New Horizons, Curiosity and Perseverance, etc. The exhibition showcases a RTG model and interactive exhibits to demonstrate the scientific principles.

📍 香港太空館大堂  
Foyer, Hong Kong Space Museum

📅 26.10.2022 – 29.5.2023

💰 免費參觀 Free admission





# 宇宙展覽廳新展品：月球|火星虛擬實境

## New Exhibit in the Hall of the Cosmos: Moon | Mars VR

全新互動展品「月球|火星虛擬實境」利用由國家航天局及香港理工大學(理大)提供的數據，構建出月球及火星虛擬實境，讓參觀者親身體驗「探月落火」之旅，遊走於嫦娥四號和天問一號的著陸區。展品亦介紹中國深空探測任務、理大團隊的科研貢獻及成果。

The new interactive exhibit "Moon | Mars VR" makes use of the data provided by the China National Space Administration and The Hong Kong Polytechnic University (PolyU) to create a virtual reality environment of our Moon and planet Mars, allowing visitors to experience spacewalking on the two celestial bodies and explore the landing sites of Chang'e-4 and Tianwen-1. The exhibit also introduces Chinese deep space explorations, PolyU team research efforts and contributions.



# 真菌的神秘王國

## Nature's Hidden Kingdom

真菌這種生物真奇妙，在地球上幾乎無處不在。它們有不同種類，但大部分都太微細而毫不起眼，既可以附在我們身上或體內，亦可在周圍環境當中找到。真菌可以醫治我們，滋養我們，甚或毒害我們。它們的生命力非常頑強，儘管經歷地球五次大滅絕仍能存活至今。

在球幕電影《真菌的神秘王國》中，著名的英國生物學家梅林·謝爾德雷克博士會帶我們走進全球其中一個最古老的溫帶雨林，尋找那些非常罕見又怪異的真菌，並探索如何利用真菌解決困擾大城市的一些嚴峻環境挑戰。

進入真菌神秘王國的奇妙旅程剛剛開始，還有數以百萬計的種類仍等待着我們發現。

Fungi are miraculous organisms which can be found almost everywhere on Earth. They have a wide range of species, of which most are inconspicuous due to tiny size of their structures. They can be found on us, in us, and all around us. They can heal us, nourish us, or poison us. Fungi are some of nature's greatest survivors, enduring through five mass extinctions on Earth.

In the Dome Show "Nature's Hidden Kingdom", we will join acclaimed British biologist, Dr. Merlin Sheldrake, on a quest to find rare and strange fungi ever discovered in one of the most ancient temperate rainforests on Earth. We will also explore how fungi might help address some of our biggest environmental challenges in the present mega-cities.

With millions more species to discover, our amazing journey into the secret kingdom of fungi has just begun.

📅 13.1.2023 – 30.9.2023

🕒 41分鐘 Minutes

📍 天象廳 Space Theatre





# 寰宇星空

## Sky Tour: Window on the Universe

你有沒有想過到異地旅遊，欣賞繁星燦爛的夜空？

手持天象節目《寰宇星空》門票的觀眾，可以安坐天象廳內暢遊世界各地，欣賞群星閃耀的夜色，既可以認識我們所見的星空與身處的地理緯度的關係，更會衝出地球遠赴太空，探索橫跨我們天空的壯麗銀河的真正本質。

這次旅程從北極光舞動下的冰島出發，沿北美至夏威夷徐徐南行。在南十字及銀河的映襯下，我們來到位於波利維亞、被譽為「天空之鏡」的烏尤尼鹽沼，欣賞由這塊天然巨鏡反照出來，令人嘖嘖稱奇的宇宙倒影。最後，我們會到澳洲和新西蘭感受南極光的千姿百態，為精彩的行程劃上完美句號。

《寰宇星空》是《夢幻極光》的姊妹作，同樣以悅耳動人的音樂配襯地球和宇宙展現的絕美風光，讓你可以遠離煩囂，沉醉在絢麗多姿的星夜和自然美景中。

📅 21.10.2022 – 30.4.2023

🕒 35分鐘 Minutes

📍 天象廳 Space Theatre

Have you thought of travelling around the world to enjoy magnificent starry nights?

Ticket holders of the Sky Show "Sky Tour: Window on the Universe" can sit back and relax in the Space Theatre to enjoy a world tour with spectacular landscapes and dazzling stars. In addition to learning how the starry sky we see changes with latitudes, we will also leave our planet and travel through space to explore the true nature of the majestic Milky Way which arches across our skies.

The journey begins from Iceland where the aurora borealis flames across the sky. We will then move southward to North America and Hawaii. With the Southern Cross and Milky Way as the background, we will visit Salar de Uyuni, commonly known as "Mirror of the Sky" in Bolivia, and take a look at the wondrous inverted image of the Universe reflected by this gigantic natural mirror. As we watch the aurora australis dancing above us in Australia and New Zealand, our wonderful itinerary comes to a perfect ending.

Following in the footsteps of "KAGAYA's Aurora", "Sky Tour: Window on the Universe" showcases enchanting sceneries of Earth and the Universe with melodious music. Let's stay away from the hustle and bustle and be indulged in the breathtaking starry skies and stunning natural landscapes.





# 極地尋龍3D

## Dinosaurs of Antarctica 3D

你可有想過南極洲被冰雪覆蓋之前究竟是怎樣的呢？

立體球幕電影《極地尋龍3D》運用頂尖的電腦圖像，重塑出過去的南極洲；無論是既溫暖又青蔥的森林，還是新近發現，以此為家的恐龍品種和各種奇珍異獸，都通通活現眼前。當我們跟隨侏羅紀早期已知最大型的肉食動物「冰冠龍」捕獵時，就會明白到要在史前南極洲生存絕非易事。無人機拍攝技術隨即帶我們回到現今冰封千里的南極，一睹那令人讚嘆的壯麗景色。讓我們與盡心投入的科學家並肩尋找那些獨特恐龍的化石，深入了解這片冰雪之地所經歷的驚天巨變。

歡迎來到失落的岡瓦納史前世界！歡迎到訪南極洲！

Have you ever wondered what Antarctica was like before the deep freeze set in?

Utilising top-tier computer graphics, the 3D Dome Show "Dinosaurs of Antarctica 3D" reconstructs Antarctica's hidden-greener-past when it was warm and forested with newly-discovered dinosaurs and bug-eyed creatures roaming freely. As we follow the hunt with Cryolophosaurus, the largest known early Jurassic carnivore on Earth, we learn that survival in the prehistoric Antarctica was no easy task. The drone and camera technology then brings us back to the magnificent and breathtaking vistas of the now-frozen Antarctica. Let us join a team of dedicated scientists to find the fossils of those distinctive dinosaurs and understand the ice continent's profound transformation.

Welcome to the lost prehistoric world of Gondwana.  
Welcome to Antarctica.

📅 1.7.2022 – 31.3.2023

🕒 41分鐘 Minutes

📍 天象廳 Space Theatre



# 本季星空

## Night Sky of the Season

— 天球赤道  
Celestial Equator

— 黃道  
Ecliptic

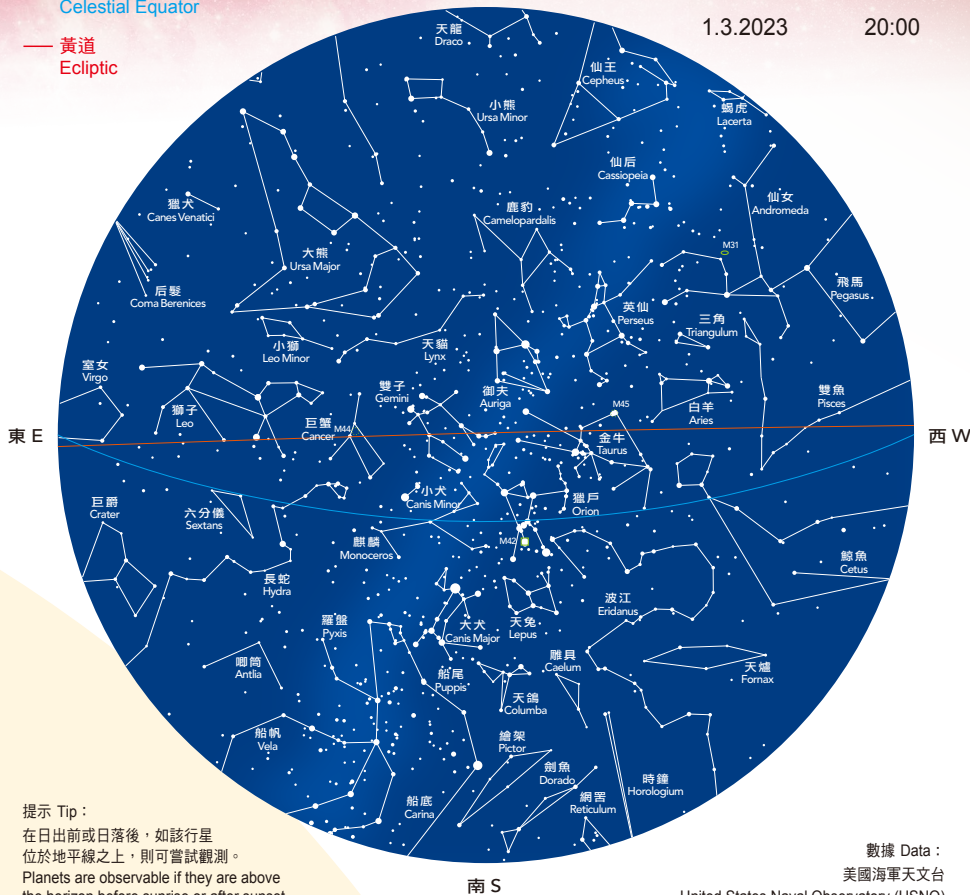
北 N

日期 Date 時間 Time

1.1.2023 00:00

1.2.2023 22:00

1.3.2023 20:00



提示 Tip :

在日出前或日落後，如該行星位於地平線之上，則可嘗試觀測。

Planets are observable if they are above the horizon before sunrise or after sunset.

數據 Data :

美國海軍天文台

United States Naval Observatory (USNO)

### 太陽及行星位於地平線上的時間

#### Time when the Sun and the planets are above the horizon

日期 Date	太陽 Sun	水星 Mercury	金星 Venus	火星 Mars	木星 Jupiter	土星 Saturn
1.1.2023	07:03–17:51	07:56–18:48	08:16–19:06	15:22–04:56	11:46–23:47	09:45–20:58
1.2.2023	07:02–18:12	05:27–16:18	08:29–19:59	13:26–02:59	09:59–22:06	07:55–19:11
1.3.2023	06:45–18:27	06:10–17:27	08:21–20:38	12:13–01:49	08:26–20:41	06:16–17:36



# 2023年3月24日月掩金星

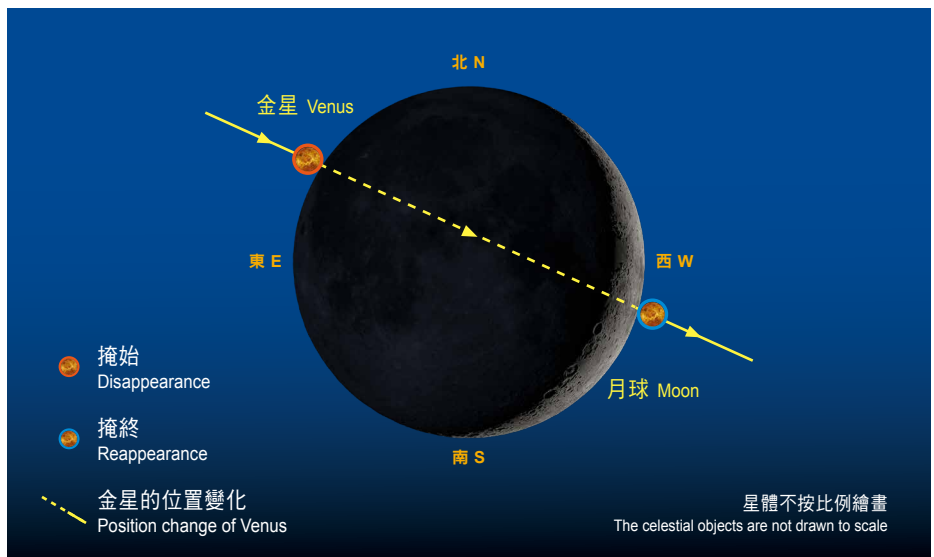
## Lunar Occultation of Venus on 24 March 2023

香港於2023年3月24日將迎來一次「月掩金星」天文現象。由於月球公轉軌道平面跟各行星的公轉軌道平面十分接近，若月球遮蓋了天上的行星，就稱為「月掩行星」。另外，金星是太陽系內亮度僅次於太陽和月球的天體，因此「月掩金星」比較容易觀測，並頗受天文觀測者關注。

是次「月掩金星」將在晚上7時47分開始，於晚上8時53分結束，歷時約一小時六分鐘。在「掩始」時，月球位於西北面離地平線大約18度，由於兩者都頗為明亮，可以用肉眼直接觀賞，使用雙筒望遠鏡或天文望遠鏡則有更清晰觀測效果。在「掩終」時，月球會運行至離地平線只有3.8度的位置，觀測者需要到西北面幾乎毫無遮擋的地方才能觀測得到。

A lunar occultation of Venus will occur in Hong Kong on 24 March 2023. Since the orbital plane of the Moon is very close to the orbital plane of the planets, when the Moon blocks the light from the planet, a lunar occultation event occurs. As Venus is the brightest celestial object in the sky after the Sun and the Moon, the lunar occultation of Venus is very easy to observe and has drawn much attention from astronomy observers.

The coming lunar occultation of Venus will begin at 7:47pm and end at 8:53pm, which will last for about one hour and six minutes. At the time when Venus disappears, the Moon will be located at about 18 degrees above the northwestern horizon. Since both objects are quite bright, they can be observed directly with unaided eyes. Binoculars or astronomical telescopes can provide a clear view. During the reappearance of Venus, the Moon will be at just 3.8 degrees above the horizon. In order to observe the event clearly, observers need to find a place with an almost completely unobstructed view towards the northwestern horizon.





## 月掩金星時間表

### Timetable of lunar occultation of Venus

事件 Event	時間 Time	高度 (度) Altitude (degrees)	方位角 (度) Azimuth (degrees)
掩始外切 First contact	19:47:07	18	279
掩始內切 Second contact	19:47:37	17.9	279
月球、金星最小角距 Moon-Venus appulse	20:20:53	10.6	282
掩終內切 Third contact	20:53:03	3.8	285
掩終外切 Fourth contact	20:53:30	3.7	285

以上預測以香港九龍尖沙咀香港太空館為參考點，掩星時間於香港不同地點可有數十秒差異。

The above predictions are based at the Hong Kong Space Museum, Tsim Sha Tsui, Kowloon, Hong Kong.  
The occultation time varies by a few tens of seconds across Hong Kong.

掩星於月球東側附近開始，於西側附近結束。事實上，月球的視覺運動比金星快得多，但觀測時亦可追蹤月球，以顯示金星的相對運動。

由於金星長期位處於太陽附近，故月掩金星普遍發生在日間。下一次發生在香港晚間的月掩金星將會是2063年5月31日。

The occultation starts near the East side of the Moon and ends near the West side. In fact, the apparent motion of the Moon is much faster than that of Venus, but the Moon can be tracked during observation in order to show the relative motion of Venus.

Since Venus always appears close to the Sun, the lunar occultation of Venus mostly happen in day time. The next lunar occultation of Venus observable in Hong Kong during night time will be on May 31, 2063.

# 2023香港科學節

## HK SciFest 2023



自2021年起，香港科學節每兩年舉行一次，下屆科學節將會在2023年3月31日至4月16日舉行，主題為「常伴有理」。

究竟科學與日常生活有甚麼關係呢？香港科學館將會聯同多個政府部門、科學組織、學校及大專院校舉辦逾百項具創意及玩味的活動。我們亦首次舉辦線上科學嘉年華，讓大家在線上和線下探索常伴在身邊的「理」！請密切留意2023香港科學節的最新消息！

The HK SciFest has become a biennial event since 2021. The next SciFest will be held from 31 March to 16 April 2023 with the theme of "Science Around You".

How is science related to our daily lives? The Hong Kong Science Museum will collaborate with various government departments, science organisations, schools and tertiary institutes to organise over a hundred creative and playful programmes. For the first time, we will also organise an online science carnival where you can explore the science around you both online and offline!

Stay tuned for the latest news on HK SciFest 2023!

HK  
SciFest  
香港科學節  
31.3 - 16.4.2023



# 天文電影

## Astronomy Film Show

### 初訪木星

#### Jupiter Odyssey

英語旁述，配以英文字幕

Narrated in English with English subtitles

🕒 28分鐘 Minutes



Image Credit: NASA

### 尋找宜居行星

#### The Search for Habitable Planets

英語旁述，配以中文字幕

Narrated in English with Chinese subtitles

🕒 50分鐘 Minutes



Image Credit: NASA/JPL, Caltech

### 比鄰星b黯淡紅點計劃

#### Journey to the Pale Red Dot

英語旁述，配以中文字幕

Narrated in English with Chinese subtitles

🕒 42分鐘 Minutes



© TYF International

### 電影播放時間 Film Schedule

1月 January	15.1.2023 星期日 Sun	下午3:00 – 3:45 pm	初訪木星 Jupiter Odyssey
2月 February	5.2.2023 星期日 Sun	下午3:00 – 4:00 pm	尋找宜居行星 The Search for Habitable Planets
		下午4:30 – 5:30 pm	比鄰星b黯淡紅點計劃 Journey to the Pale Red Dot
	15.2.2023 星期三 Wed	下午3:00 – 3:45 pm	初訪木星 Jupiter Odyssey
3月 March	11.3.2023 星期六 Sat	下午3:00 – 4:00 pm	比鄰星b黯淡紅點計劃 Journey to the Pale Red Dot
		下午4:30 – 5:30 pm	尋找宜居行星 The Search for Habitable Planets
	29.3.2023 星期三 Wed	下午3:00 – 3:45 pm	初訪木星 Jupiter Odyssey

地點：香港太空館演講廳 即場免費入座，座位先到先得。

Venue: Lecture Hall, Hong Kong Space Museum Free admission on a first-come, first-served basis.

# 菠蘿包下的星空

## Starry Sky under the Pineapple Bun

以為香港太空館的天象廳只放映球幕電影？身在繁忙的都市也想飽覽夜空每顆星星？就算看到滿天星斗卻不知從何入手？

太空館天象廳於2021年翻新時換上新一代無縫拼接屏幕，也配備了最新版本的數碼天象投影系統，能模擬到金星木星前觀賞它們的表面特徵，細看圍繞木星公轉的伽利略衛星，看清土星環上的卡西尼縫，更能將銀河、深空天體等一一實時展現眼前，也能為星座加上連線和圖案，配合即場講解，令你身在鬧市，也能觀賞漫天星宿與銀河！

太空館於特選的星期二晚，將免費開放給公眾人士到天象廳，邊欣賞投影的星空，邊聽講者即場講解背後的神話故事及觀星技巧。同時如天氣許可，市民可到太空館外的梳士巴利花園，即場實戰辨認當晚的星空、試用天文望遠鏡一嘗實際觀星的樂趣。活動無須登記，即場參加。

📍 香港太空館助理館長、文博義工及星匯點  
Assistant Curators of the Hong Kong Space Museum, Museum Volunteers and Starrix

📅 28.2.2023 (星期二 Tue)

🕒 晚上 7:30 – 9:00 pm

📍 香港太空館天象廳及梳士巴利花園玻璃屋  
Space Theatre, Hong Kong Space Museum and Outpost of Salisbury Garden



粵語為主，輔以英語講解

免費活動，歡迎於活動地點輪候參加。

注意：如天氣欠佳，觀測活動會以室內活動代替或取消。

To be conducted in Cantonese, supplemented with English

Free admission. Queue up at the venue to join.

The outdoor observation may be replaced by indoor activities or be cancelled subject to weather conditions.



# 講座

## Lecture

粵語講解 To be conducted in Cantonese

### 與天體物理學家對談－暢談「伽瑪射線暴」 In Dialogue with an Astrophysicist - Gamma-ray Bursts

⊗ 馬學綸博士（香港天文學會教育部部長）及  
余海峯博士（馬克斯普朗克地外物理研究所天體物理學博士）

📅 12.1.2023（星期四）

🕒 晚上7:00 – 8:30

### 2023天文現象 2023 Astronomical Events

⊗ 蘇柱榮博士（香港太空館助理館長）

📅 25.2.2023（星期六）

🕒 下午3:00 – 4:30

講座同步於香港太空館 YouTube 頻道 (<https://youtube.com/user/hkspacem>) 直播。



### 先鋒號星際之旅五十年 The 50-year Interstellar Journey of Pioneer

⊗ 張穎思女士（香港太空館助理館長）

📅 25.3.2023（星期六）

🕒 下午3:00 – 4:30

講座同步於香港太空館 YouTube 頻道 (<https://youtube.com/user/hkspacem>) 直播。



地點：香港太空館演講廳

即場免費入座，座位先到先得。

Venue: Lecture Hall, Hong Kong Space Museum  
Free admission on a first-come, first-served basis.

#### 香港太空館開放時間

星期一至三至五：下午1時至晚上9時  
星期六、日及公眾假期：上午10時至晚上9時  
星期二休館（公眾假期除外）  
農曆年初一及二休館  
聖誕前夕及農曆新年除夕提前於下午5時休館

#### Hong Kong Space Museum Opening Hours

Monday, Wednesday to Friday: 1:00 – 9:00 pm  
Saturday, Sunday and public holiday: 10:00 am – 9:00 pm  
Closed on Tuesdays (except public holiday)  
Closed on the first two days of the Chinese New Year  
Closed at 5:00 pm on Christmas Eve and Chinese New Year's Eve



票價及購票詳情  
Ticketing Information



惡劣天氣特別安排  
Inclement Weather Arrangement

封面 Front Cover :

專題展覽「先鋒號星際之旅」

Special Exhibition "The Pioneer Interstellar Mission and Beyond"

節目和票價如有更改，恕不另行通知。

All programmes and prices are subject to change without prior notice.



香港太空館 | 香港九龍尖沙咀梳士巴利道10號

Hong Kong Space Museum | 10 Salisbury Road, Tsim Sha Tsui, Kowloon, Hong Kong

☎ 2721 0226 🌐 <https://hk.space.museum>

✉ [hkspm@lcsd.gov.hk](mailto:hkspm@lcsd.gov.hk) ▶ 📺 📱 📧 [hkspacem.com](https://hkspacem.com)

香港太空館編製

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