



# IMPERIAL LATES

#ImperialLates

## Key to events

-  Map reference
-  Pre-registration required
-  Time-specific event

## PLANNING TO ATTEND A TALK?

See below to help you plan. Our talks are first come first served, apart from '1.5 degrees: Avoiding peril in Antarctica'. All of our other activities are drop in.

 **Talk**  

### 1.5 degrees: Avoiding peril in Antarctica

Martin Siegert, Grantham Institute; Rod Downie, WWF UK; Bethan Davies, Royal Holloway University of London; Jane Rumble, Foreign and Commonwealth Office

19.00–20.00 **Pre-registration required**

Join an expert panel discussing the science behind warming limits for Antarctica and their influence on global policy makers.

 **Exhibit**

### Cryo-printing brains

Zhengchu Tan, Department of Mechanical Engineering

Find out what your brain really feels like with the team behind a new Cryogenic 3D Printing technique that replicates soft biological structures.

 **Exhibit**

### Flash frozen molecules

Eugene Chua Yue Dao, Luke Yates, Kailash Ramlal and Christopher Aylett, Department of Infectious Disease

Play with 3D molecules imaged by cryo-electron microscopy, and see how cryogenic liquids are used to flash freeze molecular machines.

 **Exhibit**

### Chilling with new-born babies

Sudhin Thayyil, Department of Brain Sciences

Wrap baby dolls in the latest, low temperature, low-cost approaches to brain damage prevention during the first hours of life.

 **Exhibit**

### Cooling an artificial sun

Antonis Sergis, Department of Mechanical Engineering

Shake up shimmering bottles of liquid turbulence to see how heat moves with engineers developing nanofluid coolants for nuclear reactors and engines.

 **Exhibit**

### Melting poles and mental health

Emma Lawrance, Institute of Global Health Innovation

Share your fears about global warming and hopes for global action with researchers exploring how climate change may impact mental health.

 **Exhibit**

### Temperature fluctuations in the early universe

Dave Clements, Department of Physics

Thermal image yourself and build models of the Planck satellite, which observed the (very cold) cosmic microwave background.

 **Workshop**

### Christmas chemistry crafts

Maxie Roessler, Department of Chemistry

Make scientific Christmas decorations inspired by low temperature research into the chemistry of life.

 **Exhibit**

### Traversing Europe's largest icecap

Glen Gowers, Department of Earth Science and Engineering

Discover a polar research adventure with explorers retracing the route and scientific achievements of a 1932 student expedition.

 **Exhibit**

### Liquid nitrogen ice cream

Richard Kong, Department of Chemistry

Choose your flavour, select a topping, and learn the science of this cryogenic fluid with our culinary chemists giving out festive, frozen treats.

 **Exhibit**

### SuperPosition

Ben Stickler and Kiran Khosla, Department of Physics

Grab a drink and play your way through the quirky world of ultra-cold physics with this quantum card game.

 **Exhibit**

### Off-the-shelf melting

William Scott, Department of Earth Science and Engineering

Discuss the stability of polar ice shelves in Antarctica with glaciologists, geochemists and oceanographers.

 **Talk** 

### Next stop Neptune

Adam Masters, Department of Physics

Talks will start in the **College Café at 18.30, 19.10 and 19.50**

Journey out to the coldest planet we've ever visited with a planetary scientist working with NASA to plot our return.

 **Talk** 

### A day in the life of...

Imperial academics take to the stage to tell stories of their career.

Talks will start in the **Business School Lecture Theatre at:**

**18.40**

A cold matter physicist (Noah Fitch)

**19.20**

An insulating feather powered designer (Elena Dieckmann)

**20.00**

A mental health researcher exploring climate change (Emma Lawrance)

 **Workshop**

### Temperature spectra art station

Geraldine Cox

See temperature in a new light by contributing to a gigantic, colourful, paper cut-out artwork inspired by Matisse.

 **Exhibit**

### Ultra cold molecules

Noah Fitch, Department of Physics

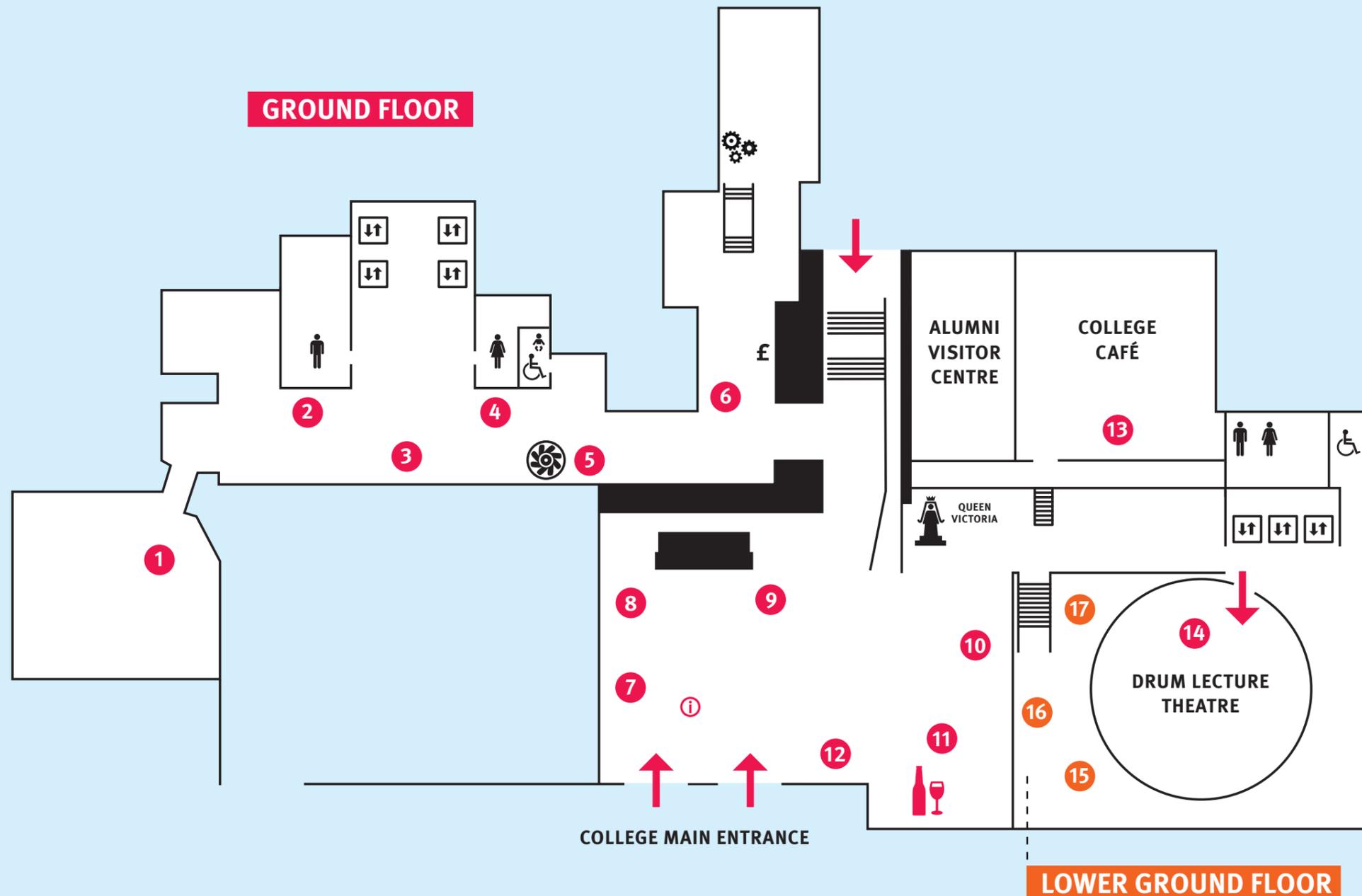
Catch and trap dust particles using light techniques developed for cooling molecules down to the coldest temperatures imaginable.

 **Workshop**

### Keeping cool in the glare of the Sun

Helen O'Brien, Department of Physics

Build your own spacecraft to avoid overheating in orbit close to the Sun with engineers and physicists working on ESA's Solar Orbiter mission.



## GROUND FLOOR

- 1 1.5 degrees: Avoiding peril in Antarctica  
🕒 19.00–20.00
- 2 Cryo-printing brains
- 3 Flash frozen molecules
- 4 Chilling with new-born babies
- 5 Cooling an artificial sun
- 6 Melting poles and mental health
- 7 Temperature fluctuations in the early universe
- 8 Christmas chemistry crafts
- 9 Traversing Europe's largest icecap
- 10 Liquid nitrogen ice cream
- 11 SuperPosition
- 12 Off-the-shelf melting

- 13 Next stop Neptune  
🕒 Talks will start at 18.30, 19.10 and 19.50
- 14 A day in the life of...  
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A cold matter physicist (Noah Fitch)  
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An insulating feather powered designer (Elena Dieckmann)  
20.00  
A mental health researcher exploring climate change (Emma Lawrance)

## LOWER GROUND FLOOR

- 15 Temperature spectra art station
- 16 Ultra cold molecules
- 17 Keeping cool in the glare of the Sun

### Key:

- |                    |                             |                          |
|--------------------|-----------------------------|--------------------------|
| 1 Lates listing    | 🕒 Pre-registration required | 🚗 Lift                   |
| 📍 Information desk | 🕒 Time-specific event       | £ Cash machine           |
| 🍷 Bar              | 🚪 Stairs                    | 🚻 Toilets                |
|                    |                             | 👶 Baby changing facility |

Tell us what you think! We want to make sure these events work for you – tell us what you like and what you don't

[bit.ly/WinterWonderlabEval](https://bit.ly/WinterWonderlabEval)

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