



Festival of Physics, Saturday 24 October 2026

At H H Wills Physics Laboratory, Tyndall Avenue, Bristol BS8 1TL(*)

Programme

9:00 Doors open for exhibitors

9:30 Doors open for public

All lectures will be in the Powell Lecture Theatre. Activities will be in the Frank Lecture Theatre.

Both theatres are on the ground floor at the front of the building – entry at right-hand door.

Tea, coffee, etc and exhibitors' stalls will be in the Enderby Room, in the basement.

Lecture programme (See below for description of `Activities`):

10:00 - 10:50 Unlocking Rocky Exoplanet Atmospheres: Sten Vermeiren, University of St Andrews

Bio: Sten Vermeiren is a former Physics Teacher who is currently completing a PhD studying exoplanet atmospheres at the University of St Andrews.

Description: The population of known planets around distant stars continues to grow, bringing us closer to the reality of searching for signs of life on rocky worlds beyond our own. In this talk I'll take us through the journey of how we detect these distant worlds, how we probe their atmospheres, and what we might be lucky enough to discover in the not-too-distant future.

11:00 - 11:50 Microscopy Success With Materials Failure: Dr Stacy Moore, University of Bristol

In this talk, I will explore the advanced microscopy techniques used and developed for materials physics at the University of Bristol. I will also describe how researchers at the university are using these cutting-edge techniques to study fundamental materials degradation and failure mechanisms such as corrosion.

12:00 – 14:00 Lunch Break (**)

14:00 – 14:50 Climate Change and the UK: Professor Adam Scaife, Met Office and University of Exeter

The Earth's atmosphere and ocean are fluids, bound to the rotating Earth by gravity and fuelled by solar energy. Although the Earth is a very complicated system, climate prediction is therefore fundamentally a physics problem centred around the equations of fluid motion and thermodynamics.

Computer climate models, developed over the past 50 years and originating in weather forecast models, are probably the most complex in all of science. They have already proved their worth with startling success in spontaneously generating the phenomena we see in the atmosphere and oceans and are used to produce forecasts on all timescales from the daily weather you see on your TV to long term projections of future climate as greenhouse gases increase.

This talk will provide an overview of the processes that are involved in this fascinating subject and give quantitative information on what is projected for future climate with a focus on the UK.

15:00 – 15:50: A tourism guide to the Solar System: Dr Michael Kearney

We imagine moons and planets as holiday destinations and consider what we might be able to do when visiting.

16:00 End of event for public

16:30 End of event for exhibitors

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Activities in the Frank Lecture Theatre:

10:45 – 12:00 Chris Atkins: The Water Bottle Flip Trick - landing a spinning bottle of water stably on its base (or, sometimes, its cap) - emerged online about ten years ago and became an internet sensation for a while. But how, and why, does it work? Chris Atkins will explain the physics involved in the trick in an interactive demonstration that will include audience participation and explain how it links to other practical applications.

12:15 -12:45 Dr Peter Ford: Liquid Nitrogen demonstrations. Peter will show the effects of very low temperatures on everyday materials, culminating with the `Bubble Monster' (have your mobile phone cameras ready!)

12:45 – 13:15 Dr Vince Smith: Instant ice cream. Using liquid nitrogen to make ice cream. NB not suitable for those with lactose intolerance, or allergy to milk products.

13:30 – 14:45 Chris Atkins: The Water Bottle Flip Trick (repeat)

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(*) The H H Wills Physics Laboratory is easy to reach by bus: No.72 stops outside, and many others (eg no. 8 from Bristol Temple Meads station) stop down the hill, on Clifton Triangle. The university has a guide at: [How to get here | Maps and travel information | University of Bristol](#)

Parking. Public transport is best, but you may be able to park in University car parks (eg University Walk) on a Saturday. There is a paying multi-storey car park nearby at Trenchard Street [Trenchard Street long stay car park](#)

(**) **Lunch** We are not able to provide lunch for our visitors, but we will have a supply of free coffee, tea, and soft drinks available in the basement Enderby room.

You can bring your own sandwiches, or visit one of the nearby cafes, restaurants, or pubs. The university has a number of food outlets nearby: see [Cafés and bars | Current students | University of Bristol](#) NB Not all of these will be open on a Saturday. There are also a number of other places on Cotham Hill (turn right out of Physics, then left at the end of Tyndall Avenue.)