

## This month...

- PhytoLux features on BBC's "Stargazing Live"
- Attis-7 installed in university's new roof-top glasshouses
- RHS Chelsea Flower Show "Rocket Science" project to use Attis-7 growth lights
- LED growth lights to quadruple sales worldwide



The latest news, views and industry information from the LED plant growth lighting specialists

## PhytoLux features in BBC's "Stargazing Live"

**The new Attis-Panel from PhytoLux was featured in the BBC's Stargazing Live: Back to Earth.**

Filmed at the Jodrell Bank Observatory in Cheshire on Thursday 19th March 2015, the live broadcast was hosted by Physicist Professor Brian Cox and Irish comedian and TV presenter, Dara O'Briain and featured special guest Buzz Aldrin, the second man to walk on the Moon.



Dara O'Briain highlighted the effects on humans of travelling to and living on Mars and the potential difficulty that would be faced in terms of food production and long term food supply. One challenge is the technological requirements of growing crops such as leafy salads with artificial light and minimal energy consumption.

As is widely known, intensive research has been carried out on the benefits of using LED lights for this purpose with the key focus on the red and blue spectrum. Within an enclosed environment, such as a space station, this narrow spectrum can limit the astronauts' ability to inspect plants, as well as having adverse psychological effects. The introduction of a broader spectrum LED light assures good plant growth while addressing these concerns. Christopher Welch, Professor of Astronautics and Director Masters Programs at the International Space University in Strasbourg, briefly addressed these issues during the program. Christopher referenced the PhytoLux Attis-Panel and control system that was used on set to highlight the positive benefits of adjustable broad spectrum systems.

## A unique engineering approach...

For the past 4 years the key focus of the PhytoLux team has been the development of a suite of generic supplemental top lights that will result in winter growing becoming a commercially viable option. PhytoLux is not alone in this. With a number of credible LED plant growth lighting companies operating in the sector, the value of using this technology is now proven and becoming a solution of choice for the industry. With the unique engineering approach taken by PhytoLux we have been able to work closely with many commercial growers, universities and research institutions, at all times sharing our knowledge, to provide a high quality solution that ensures the best outcome for all involved. As a consequence, PhytoLux provides a solution that includes;

- **High quality, 'single bin' LED chips supplied by one of the world's leading chip manufacturers**
- **A patented passive thermal management system with an aluminium heat sink that doesn't require cooling fans**
- **Low maintenance and long life units**
- **Specific wavelength spectrums to provide an optimum, highly efficient and generic light source**
- **Knowledge transfer enabling optimisation for the end user**

If you would like to know more, please contact us on **0844 880 4763** or by email [enquiries@phytolux.com](mailto:enquiries@phytolux.com) so we can help you understand the potential of LED plant growth technology.



Tel: 0844 880 4763  
Fax: 01372 371 001  
Email: [enquiries@phytolux.com](mailto:enquiries@phytolux.com)

The new Attis-Panel is a thin profile, low energy, LED system with up to 9 wavelengths that are individually programmable. The panel has been designed in conjunction with one of the UK'S leading controlled environment companies with support from The Plant Sciences Department at the University of Oxford. The Attis-Panel provides a fully controllable solution for university and research growth chambers and for use in vertical and urban farming.

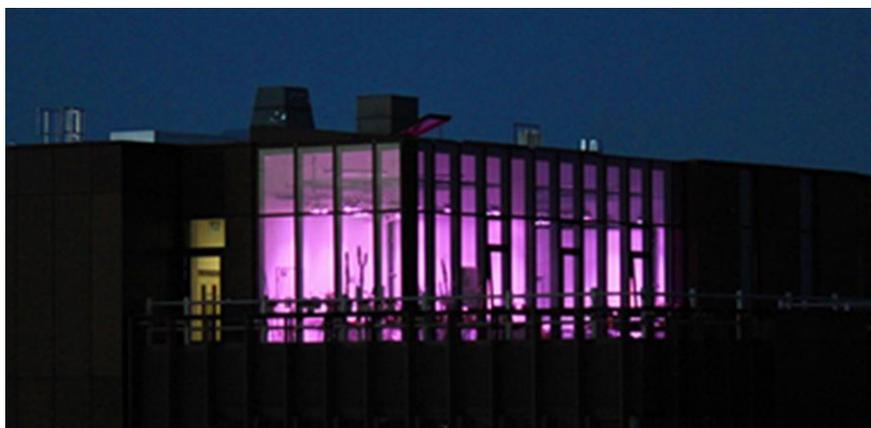


PhytoLux were invited to take part in BBC's Stargazing Live as a result of the work they are doing on the educational project "Rocket Science" that is being run by RHS Wisley and the European and UK Space Agencies. PhytoLux will provide lighting for an exhibit that will be located in the 'Discovery Zone' of the Great Pavillion at the RHS Chelsea Flower Show in May 2015.



## Attis-7 installed in university's new rooftop glasshouses

Wolverhampton University's two new glasshouses, sited on top of a new science block, opened their doors in February, with PhytoLux's Attis-7 plant growth lights having being installed throughout.



## RHS Chelsea Flower Show "Rocket Science" project to use Attis-7 growth lights

PhytoLux is working with the Royal Horticultural Society "Campaign for School Gardening" on a hydroponics system for a new project called "Rocket Science". The exhibit will be located in the Discovery Zone of the Great Pavillion at the RHS Chelsea Flower Show May 2015. Tozer Seeds and Madestein UK are also involved in this exciting project which is being project managed by Jonathan Ward of Ginger Horticulture.



One of the key objectives of this construction project was to ensure that the glasshouses were being built to as high a standard as possible, so as to ensure they would be functional for many years to come. This included a plan to install the best quality LED plant growth lights available in order to minimise energy consumption. Dr Tim Baldwin, Reader in Plant Cell Biology at the Faculty of Science and Engineering who was involved in the design of this facility commented; *"We have designed and built the new glasshouses not just for use by the current generation of staff and students, but also for future generations. As such, we wanted to install the best quality plant growth lights available, that we could afford"*.



With a number of credible plant growth lighting products on the market, the decision regarding which product to select was taken very seriously and even involved making contact with other universities that had already had some experience with this technology. Tim continued; *"Sodium lighting is old technology and uses much energy. Everyone knows that LED technology is the way forward. We wanted the latest technology, and talking to friends at Cambridge and Birmingham Universities, found out that PhytoLux were the best company to deal with"*.

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## LED Growth lights to quadruple sales worldwide

*Horticulture Week Magazine, 16 March 2015*

Worldwide markets for LED Agricultural Growth Lights are growing as units support more efficient indoor growing.

RnRMarketResearch.com's 2015 to 2021 report has found LEDs are less costly than alternatives and save "significantly" on electricity costs. The company says rapid adoption of LED lighting in general is occurring and rapid adoption of LED growth lights worldwide is occurring as systems provide peak growing efficiently.

The market research company says rapid growth is anticipated as greenhouse and plant factory growers find the LED growth lights improve agriculture.

It adds: "LED growth lights are more powerful and efficient than the older generation high-pressure sodium and metal halide bulb grow lights. They lower the electricity bill and produce less heat. Less heat allows putting the light closer to plants, the plants do not get burned.

LED grow light module markets at \$395 million in 2014 are forecast to reach \$1.8 billion by 2021.

*by Matthew Appleby*

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