

# Communication and outreach activities within the CLF

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## Introduction

Public engagement encompasses outreach activities that inspire the next generation and raise the profile of our world-class research as well as communication activities that offer a platform on which to demonstrate the high-impact and inspiring science that the Central Laser Facility (CLF) delivers. UNESCO established 2015 as the International Year of Light and Light-based Technologies, providing many additional platforms on which to engage and inspire new audiences. Opportunities for communication and engagement in the reporting period 2015-2016 have been diverse, reaching across the UK. This year also saw the Harwell Open Week during which the CLF, along with all other major facilities onsite, opened their doors to school groups and the public for a week-long celebration of science, technology and engineering on the Harwell Campus.



## International Year of Light

The CLF welcomed 2015 being named as the International Year of Light (IYOL) and Light-based Technologies - an opportunity to celebrate and educate about light and the photonics industry.

CLF staff attended the opening and closing ceremonies of IYOL 2015 where they were able to network with a range of key figures from the photonics sector.



International Year of Light

A “night sky laser” was deployed by the CLF as an unusual and unique means of stimulating interest in science. The bright green beam swept across the Harwell Campus in the early evenings throughout 2015 and projected logos onto the side of the Research Complex at Harwell Building. It could be seen as far away as Newbury.



## Harwell Open Week

Harwell Open Week was held 8th – 11th July 2015 and welcomed around 18,000 visitors to the Harwell Campus, with ~ 16,000 on the Saturday alone. The week was the largest event at the site for 17 years and achieved an average customer satisfaction rating of 4.65 out of 5. 93% of visitors said they would recommend the event to a friend and 92% said they found out more about what people do at Harwell with 86% saying that the work STFC does is important to society. The event was a huge success thanks to the support and volunteering of over 1,000 STFC staff. A day for school groups was hosted on 8th July and saw students enjoying all the equipment and demonstrations on display. The CLF were centre-stage for two of the school workshops hosted by the central public engagement team. For key stage 3 students (age 11-14) the session included a visit to see the Vulcan and Gemini lasers up close, learning how they work and why we use them – from building stars to imaging bones. As well as touring the laser facilities, there was also a series



Harwell Open Week



Harwell Open Week

of hands-on activities and demonstrations, including a Jacob's ladder and bursting balloons with lasers, and the "Incredible Power of Light" roadshow. For key stage 5 students (age 16-18) the lasers in the Research Complex at Harwell, Octopus and Ultra, were visited as part of a workshop entitled "Stargazing in cells". Students toured the laboratories and laser facilities used for studying such diverse fields as alternative energy sources and structural analysis of bacteria. In addition, they ran a series of hands-on activities including extracting and amplifying DNA

from strawberries. 9th July was reserved for corporate visitors and allowed for a day dedicated to communicating the science, innovation and opportunities for industry to engage with the CLF.

The Central Laser Facility opened doors to all of its facilities and engineering departments: Vulcan, Gemini, Artemis, Octopus and Ultra. The main public open day was held on Saturday 11th July 2015 where visitors got to learn all about lasers and the science they enable as well as have fun some with them along the way.

Many visited the heart of the Vulcan laser and walked through the laser bay which was made accessible especially for this day. A lucky group of 216 people were able to press the FIRE button for a (simulated) full power shot sequence with sirens blaring. We made science fun and a total of around 5000 people were able to see at least one of our lasers. Many had fun shooting 2500 balloons using a balloon-blasting laser built into a specially-made and interlocked enclosure. About 400 children found treasure looking through infrared viewers doing the lasers treasure hunt. Some even took a wander through the nano-quantum world, visiting Danceroom Spectroscopy, an interactive display where visitors could see themselves as energy fields in the quantum world. Children got the chance to dress up as a scientist, make their own laser targets and rather than eating marshmallows got to do a real experiment with them using vacuum equipment.

## STFC Incredible Power of Light Roadshow

The CLF worked with the STFC events team to produce the “Incredible Power of Light” roadshow in time for the start of the International Year of Light 2015 (see annual report 2014-2015). In the reporting period 2015 - 2016 the roadshow was installed at the Scottish Parliament, Edinburgh, and the National Assembly for Wales, Cardiff, the ‘Science Lates’ event at the Science Museum, London, and was part of the Winchester, Durham, and Dundee science festivals. The exhibition has now visited a total of 13 venues, travelling 4,748 miles, and over 94 days captured the attention of around 69,371 people from all walks of life. For more information and details of how to book the “Incredible Power of Light” roadshow, please visit the STFC website: [www.stfc.ac.uk/news-events-and-publications/events/stfc-events/stfc-s-incredible-power-of-light-roadshow/](http://www.stfc.ac.uk/news-events-and-publications/events/stfc-events/stfc-s-incredible-power-of-light-roadshow/)

Incredible Power of Light Roadshow



## New outreach publications

A new version of the CLF highlights brochure was published in July 2015. "Central Laser Facility: Making Light Work" features short articles on CLF science, technology and engineering for a general audience. It captures the breadth of research and technology development carried out within the CLF across all disciplines of science - from fundamental explorative research to applied research aligned to the grand challenge solutions for societal benefit. A PDF copy can be found on our website: [https://www.clf.stfc.ac.uk/Pages/Lasers\\_Brochure\\_2016.PDF](https://www.clf.stfc.ac.uk/Pages/Lasers_Brochure_2016.PDF) and print copies are available on request.

The STFC communications team commissioned science journalist Ben Gilliland to generate a booklet called "The Little Book of Big Lasers" pitched at a general public audience. The booklet includes layman introductions to lasers and laser light, descriptions of the CLF's lasers and includes examples of the research carried out at the CLF. The booklet is also suitable for school students and is available as PDF copy on the STFC website: [www.stfc.ac.uk/files/educational-publications/little-book-of-big-lasers/](http://www.stfc.ac.uk/files/educational-publications/little-book-of-big-lasers/) or print copies are available on request.

## Continuing the good work

If you would like to work with us to promote your research or any aspect of CLF work, then please get in touch with Ceri Brenner ([ceri.brenner@stfc.ac.uk](mailto:ceri.brenner@stfc.ac.uk)). Whether it be through outreach events and activities, or via press releases and website content, we welcome collaboration on communicating CLF science.

## Acknowledgements

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