

Public Engagement Small Awards - successful applicants in round 2013A

Professor Andrew Cameron
University of St Andrews

The transparent observatory: opening the James Gregory Telescope to the public
Award £6,350

The aim of this award is to transform the James Gregory Telescope (JGT) at the University of St. Andrews into a 'transparent observatory', i.e. an observatory where the public can experience world-class research as it happens. Weekly open nights at the JGT will be set up, where the public can visit the telescope and experience it in action. The visitors will be introduced to the history and the research of the observatory by the on-site astronomer. Part of this grant will help to advertise the observatory & project, producing leaflets & posters to be distributed via the Tourist Office and the university & to schools and amateur astronomer organisations throughout Scotland.

There will also be a permanent exhibition illustrating the equipment, historic context, the observations and the ongoing research. A new website for the observatory will be established, where all information about the telescope and the open nights will be presented. This project will enable the public to experience the world-class research carried out with the JGT and at the School of Physics & Astronomy, including the hunt for exoplanets and the study of the birth of stars and planets.

Dr Andrew Charalambous
University College London

Another Way of Seeing - Contemporary Art responds to Planetary Science
Award £2,625

This project will create an interdisciplinary event where planetary science is used to inspire the making and exhibiting of art work. The aim is to create a dialogue between artists and scientists.

The intention is to bring together a small group of artists who will explore the areas of research carried out by planetary scientists. The artists will then develop an artistic response to whichever of these ideas are most inspiring, and produce work which will be exhibited in September 2013, and will inform as wide an audience as possible about planetary research.

The art work will be shown in an art exhibition in UCL which will overlap with the European Planetary Science Congress in September. This exhibition will be an independent project and is not part of the congress.

Dr Rebecca Crawford
University of Glasgow

Three Minute Learning - an online story library and interactive resource that uses proven pedagogies to improve understanding of STFC research
Award £9,987

Three Minute Learning is designed to take science learning and literacy to a new level, by engaging users with short, readable texts on a wide range of topics. Simple reading activities will be employed within an appealing online learning resource. This project now plans to use this resource as a vehicle to engage schools and the wider community with cutting edge physics research. It will create and test a new library of stories based on interviews with STFC-funded researchers in Scotland and at CERN and aims to give teachers in other subject areas, the confidence to use science stories in their classroom.

The project will include a pilot study of 10 schools using the resource to demonstrate how teachers can use science stories and the 3ML structure. It will produce 100 new 3ML stories and is designed to provide a structure that all teachers can use, without specialist science knowledge. The resource will also be made available to researchers and science communicators for other public engagement events across Scotland - such as National Science Engineering Week, the British Science Association's programme and the Scottish science festivals. It will be released to museums, science centres, libraries and university labs.

Mr Simon Jago
Techniquist

Lights in the Sky "Planetarium Show"
Award £9,996

This project will develop a facilitated full dome digital planetarium programme together with supporting resources to engage new audiences in the STFC research associated with the Rosetta, Gaia, STEREO and SOHO missions. It will also increase public understanding of the science associated with observing the stars, planets, comets and meteors. The show will be developed for small horizontal domes and portable planetaria, and provided free of charge to operators around the UK, meeting a current gap in provision.

Its aims include inspiring up to 6,000 public visitors per year in astronomy, cosmology and current STFC research, reaching up to 30,000 people over the next 5 years. Online supporting resources will be distributed via the national STEM e Library for public use.

Ms Alice Lacey
now>press>play

Sound Science
Award £8,182

Four new science experiences workshops, aimed at KS3 students will be produced during this project and delivered to 12 schools via 48 free workshops. These will be developed by a professional scriptwriter and a practicing scientist and the topics covered will include Astronomy, space science and Particle physics. They will be aimed at schoolchildren aged 11-14 to get them thinking about STEM careers. It will stimulate and inspire Science Communication and get children excited about science, linking exploration, imagination and fun with science in their minds and motivate them to study science beyond 16, with a particular focus on the gender disparity in Physics at A-Level and beyond.

Resource packs for each experience, which support teachers in extending scientific learning beyond the workshop will also be produced and will include lesson plans and worksheets, 'at home' activities, links to existing online resources and details of careers opportunities in Science.

Ms Heather MacRae
The Ideas Foundation

Multi Media Space
Award £9,800

This project will result in an exciting multi-media magazine created by young people, together with astronomy and media experts, which will promote leading edge research relating to the Sun. Based in Manchester, students aged 10-19 years, from mostly disadvantaged areas will work alongside leading astronomers, universities, authors and media experts to create magazines about astronomy targeted at their peers. Themes will include solar weather, solar winds, sun grazing comets, sun observation, solar spacecraft, magnetosphere, auroras and eclipses.

The magazines would be produced during 'Media Space Schools' in the North West, involving over 1000 students in initial teaser activities and competition that will generate interest in the project across a range of schools. Two smaller groups of students will then work as editorial teams on magazine design, writing, production and promotion. Students who have previously taken part in media space programmes and who are now at university, will be invited to work alongside the students as mentors. Young graduate 'solar guides' will support the programme and assist with images, case studies and news items linked with the Sun Trek content. The production workshops would also provide opportunities for students to experience university research facilities, observatories and also media production facilities.

The magazine would be available in downloadable versions and shared through a range of multi-media channels.

Dr Becky Parker
Langton Star Centre

Langton Robotic Telescope providing wide access to a 16 inch Schmidt Cassegrain telescope via the web for schools and the public.

Award £2,300

This award will help fund a CCD (charge coupled device) camera for use with the 16 inch Schmidt-Cassegrain telescope which is currently predominantly used by students at the Langton Observatory, so that it can be used by other schools, astronomical societies and the public with the aim that the facility can be used to observe on all clear of the year.

The camera will enable users to take high quality pictures during their observations.

It will open up astronomy opportunities for students and the public and support students from other schools in their GCSE astronomy course. It will also open up astronomy to those who find coming out to observe difficult – e.g. parents with very young children. It will in effect turn the Langton Observatory into a robotic telescope available for all, very similar to the Faulkes Telescopes.

Dr Bjoern Seitz

University of Glasgow

Radiation, radioactivity and your local environment

Award £2,000

This award will enable the holder to create a stall to be deployed at the major Scottish Science Festivals, including the Glasgow Science Festival, the Edinburgh Science Festival, the Dumfries and Galloway Science Festival, TECHfest Aberdeen and Orkney International Science Festival. The purpose of the stall is to educate the interested public on the fundamentals of nuclear physics and radioactivity as well as the interaction of radiation with matter. It is also to raise the awareness of natural and man-made sources of radioactivity and radiation, focussing on the radiation environment where people spend their time.

Those people attending can then make an educated judgement on the advantages, risks and disadvantages associated with radiation and put radiation levels into perspective.

Ms Nicola Triscott

The Arts Catalyst

Republic of the Moon

Award £9,660

The Arts Catalyst exhibition Republic of the Moon will be held in London, after a highly successful showing in Liverpool in 2011. It will have a dynamic new art/science events programme, aimed at exciting interest in contemporary lunar science and provoking discussion around future exploration of the Moon. The programme will reach a wide public audience who may not generally connect with science communication. The exhibition will also feature works by international established artists from the UK, Russia, USA, Spain and Germany and aims to re-position lunar exploration as a cultural fascination. It will create a conversation about our personal relationship with the Moon in the era of advanced science

and a new space age, in which robotic landers on the Moon are being planned both by private companies and emerging space nations.

The exhibition will be accompanied by a dynamic events programme, which will include art/science talks, films, performances and workshops. The ideas and issues raised by Republic of the Moon will be documented on video (live streamed and embedded in a website) and through an illustrated publication, which will feature commissioned essays by science, space and arts writers, which will be available in both print form and a variety of e-formats, as well as on the website. The exhibition (with free entry) will be shown in central London for a period of 2 months in 2014.

Dr Jacobus Van Loon
Keele University

Seeing the Sun in a new light
Award £4,000

A specialised solar telescope, with an H-alpha etalon to enhance the contrast between the flares and the solar disc so they clearly stand out, will be purchased through this award. This equipment, together with a self-standing poster with inspiring illustrations and explanations about the Sun, including how it affects Earth, the existence of other "Earths" and the possibility of alien life, will be taken to central locations in local towns on sunny, busy days when up to a 1000 people per day will be able to experience viewing the sun via the telescope. At least 10 visits to different locations each year, for 10 years, are planned, reaching 100,000 people per decade.

Sun goggles ("eclipse shades") will also be produced, with some instructions written on it about how to view the Sun safely, as well as some links to websites for freely downloadable information. Local media will be invited to the events and information on line information packs will be produced for them.

Dr Sandra Voss
The Observatory Science Centre

National Astronomy Week 2014: Target Jupiter
Award £10,000

This award will enable the co-ordination and dissemination of information of events, via a dedicated website and social media networks, relating to the National Astronomy Week (1-8 March 2014) to all the organisations and participants involved in the NAW 2014. NAW runs approximately every 5 or 6 years and has been linked with important astronomy events in the past. Most of the week long celebrations have encouraged organisations to host events nationally and the NAW organisation has been the central hub co-ordinating these activities and disseminating information on a voluntary basis.

Many amateur astronomy societies regularly host their own events regionally throughout the UK, bringing astronomy to the general public, but when there is an important event to celebrate, impetus from a central body is needed to get more and more of the least active societies motivated to get involved. The dedicated website will be the main source for the dissemination of information regarding UK wide, events and activities. Social media and networking will provide a valuable outlet for updates and for publicising NAW2014 as a whole.

Dr Emma Weitkamp

University of the West of England

When a butterfly flaps its wings.....

Award £9,973

This award will enable performances of 'When a butterfly flaps its wings' at four events (a Science Festival, an Arts Festival and at two secondary schools). The performance, through an engaging narrative, including music, words, graphics and performance, takes an audience on the journey of Edward Lorenz, the pioneering figure in the field of chaos theory, that starts with a butterfly flapping its wings and ends with a tornado. The focus will be on raising awareness of the deterministic nature of Chaos Theory and how this is used in research areas funded by the STFC. The project seeks to illustrate how chaos theory is currently being used to study complex phenomena, including those of human systems, highlighting the relevance of physics research to everyday life.