A space resource for schools

PPARC has launched a Web site of classroom materials on the theme of space. These activities use real data – and it’s free!

No need to use a telescope: use tried and tested teaching materials instead.

Space is one of those topics that always excites and enthuses children at school, yet teachers have not always had reliable and up-to-date materials in the classroom. But now, with the launch of Classroom Space, funded by the Particle Physics and Astronomy Research Council, the resources are there. The project has been developed by Martin Barstow of the University of Leicester and his team and is aimed at children from 11–16. All the material is relevant to the science National Curriculum, with some applications within maths, geography and ICT.

The emphasis is on providing teachers with immediate support, each topic contains worksheets and suggested experiments and activities as well as teacher's notes. Tasks include, for example, searching for water on the Moon and measuring the depth of a crater on Mars. The materials have been tested and refined with the help of practising teachers throughout the UK. Richard Eason of Castle Hall School, West Yorkshire said: “The idea is great – self-contained activities with real space data. And the fact that students actually use the computers as a tool to solve problems, rather than just flicking through a CD-ROM is good.”

Have a look for yourself at www.classroomspace.org.uk.

Summer school for teachers in the land of the midnight Sun

Alan Pickwick draws attention to an initiative for primary and secondary teachers.

The European Association for Astronomy Education Summer School is open to all teachers who work in primary and secondary schools in European countries and will be held between 8 and 13 July 2002 at Enontekiö, Finland (Lapland). For a week, around 50 European teachers will attend general lectures, working groups, workshops and observational sessions. The theme of the Summer School is the Sun, its movements, characteristics and structure and the nature of the midnight sun and the aurora borealis.

The closing date for registration is 15 April 2002. Contact: Alan_C_Pickwick@compuserve.com or tel. 0161 973 6796.

Prof. Patrick Thaddeus: The 2001 Herschel Medal

Citation by the President of the RAS, Prof. Nigel Weiss, on the presentation of the Herschel Medal to Prof. Thaddeus at the October A&G (Ordinary) Meeting of the Society.

The Society’s Herschel Medal has been awarded to Prof. Patrick Thaddeus from the Harvard-Smithsonian Center for Astrophysics, for his outstanding personal researches in astronomy, and for his inspiring leadership in research programmes.

He has made enduring contributions to the determination of the structure and distribution of non-stellar matter in the Milky Way and other galaxies; he has identified in the interstellar medium many new species that attest to the chemical richness of our galaxy, and through an exceptionally successful laboratory programme he has studied the spectroscopic properties of many molecular species previously unrecognized but now identified as interstellar.

Prof. Thaddeus has mapped the structure and distribution of molecular clouds in the entire Milky Way galaxy, in the Large and Small Magellanic Clouds, and other external galaxies, through their molecular line emission. These studies, continually updated and refined, represent an immense and fundamental contribution to our understanding of galaxies, their dynamics and evolution, and of the star formation that occurs within them. His work has laid the foundation for the rapid advance in galactic studies over the past several decades.

His observations of emissions from interstellar carbon monoxide, as a tracer of the much more abundant yet undetectable molecular hydrogen gas, together with his analyses of maps of diffuse gamma-ray emission from the galaxy, led to the determination of a quantitative relationship between the carbon monoxide integrated emission intensity and the molecular hydrogen column density. This relationship is now routinely used to estimate the masses of gas clouds in our own galaxy and in others, so providing an estimate of their capacity for future star formation.

Prof. Thaddeus has led for many years an exceptionally successful programme for the search and identification of organic interstellar molecules. This programme combines astronomical observations with laboratory spectroscopy. His laboratory experiments have formed and identified many species previously unrecognized and he has, through great physical insight, been able to characterize their structure and spectra. With similar great observational skill and astronomical insight he has been able to locate emissions from many of these species in molecular clouds. He has shown in particular that the interstellar medium is rich in carbon chain species and he has developed theories of their growth and of their possible relation to the unidentified diffuse interstellar bands.

Throughout his career Patrick Thaddeus has devoted great efforts to the organization of astronomy, both in universities and in observatories, and his contributions to our science are widely recognized. He has been elected to membership of the American Academy of Arts and Sciences and of the National Academy of Sciences, and he holds two NASA Medals for Exceptional Scientific Achievement.

Prof. Thaddeus, it is with great pleasure that I present this medal to you.