



## *Dúshlán na Cruinne le Faulkes Faulkes Telescopes Universe Challenge*

One of the highlights of the International Year of Astronomy 2009 in Ireland is a school competition for using the Faulkes Telescopes - state of the art 2-metre telescopes from Hawaii and Australia, which can be remotely operated via a web-based interface by students during school hours in Ireland.

Access to Faulkes Telescopes observing time and data archive for the purposes of the Dúshlán, subject to scheduling by the Faulkes Observatory, is guaranteed to all entrant groups.

**The prize for the winners (students, teacher and mentor) is a visit, in 2010, to the European Southern Observatory (ESO) sites of Cerro La Silla and Cerro Paranal, in Chile. Cerro Paranal has the World's largest telescope – the VLT (Very large Telescope). Winners will see the telescopes in use, and will take part in a minor project on a telescope in Cerro La Silla. This prize is generously sponsored, in part, by ESO.**

### *Dúshlán na Cruinne le Faulkes*

1. The Challenge is for groups of 2-4 school students aided by their teacher. Students should be 15-17 years old (roughly Transition Year in Eire and AS level in Northern Ireland). However, entry is also open to younger or older students who wish to take part, and to individual projects.
2. The purpose of the Challenge is to promote the study of science (specifically astronomy) at third level, by exposing students to the lasting satisfaction and fascination of conducting an original research project – including, of course, the times when things do not go well, but which necessitate sticking with the project and ultimately add to its satisfaction.
3. A crucial part of the appeal of the Dúshlán to school students will be the involvement of a mentor - postgrads, postdocs and staff members from Universities and Research Institutes in Ireland. Mentors may be asked to work with one or several groups; the level of their involvement will be uniform for all groups. The mentor associated with the group which best rises to the Challenge (i.e. the winning group!) will also be invited to accept the prize.
4. The research projects, including data collection, analysis, interpretation and presentation are to be conducted over an initial period up to approximately three months from March 2009.



5. Data are to be collected using either new observations or data archive from the Faulkes Telescopes (<http://faulkes-telescope.com/>)
6. Dúshlán na Cruinne le Faulkes was officially launched at the BT Young Scientist's Exhibition (January 6<sup>th</sup>-10<sup>th</sup> 2009). Entries can now be made online at [www.astronomy2009.ie](http://www.astronomy2009.ie) until 14 February 2009.
7. Schools will work on an approved project of their own choosing – either from a list to be distributed to all entrants by February 14<sup>th</sup> 2009, or an original project. Projects will be approved by the Faulkes Telescopes Universe Challenge Committee (to be appointed) by February 28<sup>th</sup> 2009. More than one school group may attempt the same project.
8. Each school group will be offered a half-day training session on the use of the Faulkes telescopes by Faulkes Observatory staff. Training sessions will be held in March 2009 in Belfast, Cork, Dublin and Galway. Help will be provided, in the form of specialist documents, on various processes (precision photometry, astrometry, colour imaging) that will be needed to complete the project.
9. Mentors will be put in touch with school groups, and, as a minimum, will be asked to visit them once to explain the project and how it may be undertaken, and to make sure that they know how to use the telescope and analysis tools. A second, later, visit will then be needed to make sure that things are going smoothly. Students can contact their mentor by email through their teacher.
10. During the period up till the end of May 2009 each group will keep a blog of their observations and data analysis on the astronomy2009.ie web site. On May 30<sup>th</sup> 2009 the best 5 projects – decided by the panel on inspection of the blogs – will be invited to complete the project and present it as a web presentation and also in up to 2 A0 posters. The posters will be printed for each group and they will be invited to present them in person at the Galway Science & Technology Festival Sunday 22<sup>nd</sup> November 2009, where they will talk to the judges and the public. The best project will be selected and the prize presented on Sunday 22<sup>nd</sup> November 2009.
11. The rules of the Dúshlán are similar to those of the BT YS in order to enable the same projects to be used as entries to the BT YS in 2010. Rules & Regulations for the Dúshlán will be posted on [www.astronomy2009.ie](http://www.astronomy2009.ie).

