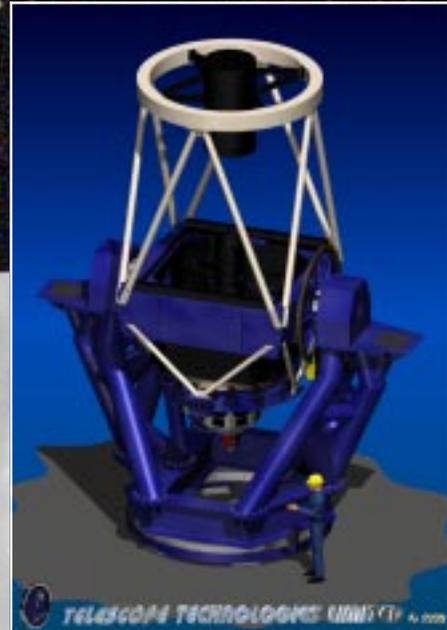


The Faulkes Telescope

Bringing the Universe to show and tell

The objectives of the Faulkes Telescope Project are:

- put the Universe right at the fingertips of students in schools
- offer older students the thrill of scientific research at the frontiers of knowledge
- bring together students in different lands, in planned astronomical observations to pool knowledge and exchange ideas



The Faulkes Telescope will be the largest telescope in the World dedicated to the Public Understanding of Science

Why Astronomy? - Young people world-wide are curious about their origins and turned on by astronomy. They can get information about astronomy from TV, books, newspapers, the Web and from active astronomers - especially in Hawaii, one of the major astronomical centers of the world.

But there's no thrill like getting your own picture, the one you yourself have chosen, from a telescope - now, this minute!

It's difficult to do this from a classroom, during the daytime. True, some schools and colleges - even some students - have their own telescopes, but nighttime observing sessions have their problems and will only ever be accessible to a minority of students. And few individuals or schools can buy a telescope of a size and quality that even professional astronomers would be eager to use.

The Project - The Faulkes Telescope is a large astronomical telescope planned to be located on Maui in the State of Hawaii. It will be operated remotely from control centres in the United Kingdom and Hawaii - no operator 'on-the-mountain' is needed. It is planned that the telescope will be available to Hawaiian local users during their evening period and to users in the United Kingdom during their daytime, due to the difference in longitude. The Faulkes telescope will deliver observations of planets, stars and galaxies right into the school and or college.

The Timescale - The telescope will be installed at the beginning of 2001 and be operational by April 2001.

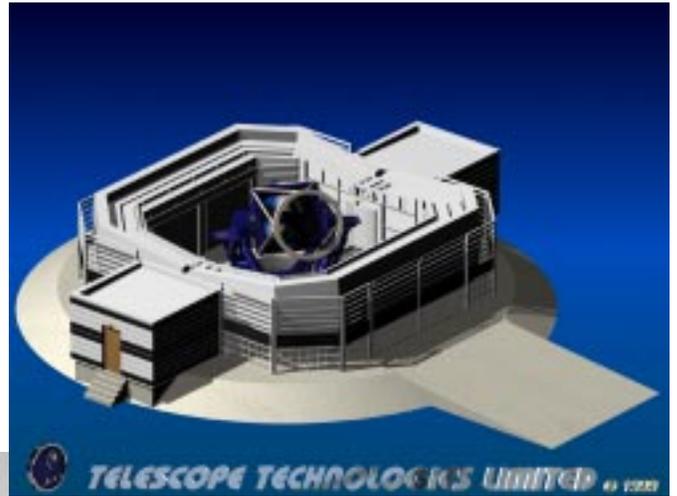
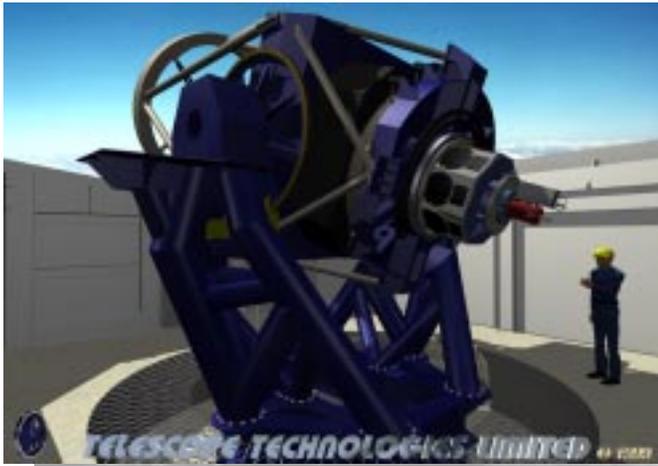
Advantages to Hawaii - Images taken with the Faulkes Telescope will allow Hawaiian school and college students to become familiar with the details of the Universe in real-time, with the telescope under their direct control. They will also be able to schedule observations to be carried out 'off-line' and the results sent direct to their schools for use in real astronomical research projects.

The project will be sharing educational materials separately targeted to the needs of schools and colleges in Hawaii and the UK.

As its contribution to the project, the University of Hawaii will provide the excellent high-altitude site on Haleakala, the observatory's connection to the Internet, and assistance with the local support of the facility. Local funding will be sought for support of these tasks.

Contact Details:

The Faulkes Telescope Project can be contacted at the following address in Hawaii: Dr Jim Heasley, Institute for Astronomy, University of Hawaii, 2680 Woodlawn Drive, Honolulu, HI 96822. E-mail: heasley@hoku.ifa.hawaii.edu, phone: 808-956-6826, fax: 808-956-9580



Technical details - The Faulkes Telescope's professional quality is inherited from telescopes built in the UK for Europe's premier observatory in the Canary Islands, off the coast of Africa.

It will have a 2 meter (80 inch) diameter main mirror and a field of view one fifth of a degree in diameter. As with all modern telescopes it is mounted so it can move in elevation and azimuth (bearing) independently, with the two axes controlled by computer to track the movement of stars across the sky. It will be housed in a state of the art enclosure that opens like a clam shell.

The telescope will be equipped with a Charge Coupled Device (CCD) sensor having 4 million individual picture elements (pixels). It will allow excellent images of stars, planets and galaxies to be sent within minutes to the classroom PC by phone and modem.

The Faulkes Telescope Project is supported by the following bodies:

- Dill Faulkes Educational Trust (see below)
 - Particle Physics and Astronomy Research Council (PPARC participates in three international telescopes on Mauna Kea)
 - the Royal Observatory, Greenwich, London
 - University of Leicester and Liverpool John Moores University
- and in Hawaii by
- The University of Hawaii



Martin 'Dill' Faulkes has a doctor's degree in Cosmology (the study of the evolution of the Universe) from Queen Elizabeth College, London. He moved into the business world, using the computing expertise he won from astronomy in the software industry. For over 20 years he has

developed software companies world wide, including the USA. His educational trust is buying the telescope, its camera and its building. If you want to join him in supporting this project, aimed at getting young people into science by putting the whole Universe at their fingertips, contact Dr Jim Heasley at the University of Hawaii.

The telescope is already being manufactured by Telescope Technology Limited located in Birkenhead, Merseyside, in NW England.

The whole telescope system is designed to operate automatically. A control center in the UK (and another in Hawaii) will send instructions via a high speed phone line stating which observations are to be carried out. The telescope control system will then decide if the weather is good enough to open the enclosure, point the telescope and take the images requested, then move on to the next observation. At the end of night, or if the weather deteriorates, the enclosure will be closed. Maintenance will be restricted to occasional cleaning and lubrication.



The Site - The telescope is planned to be located on the mountain of Haleakala on Maui, at the existing University of Hawaii High Altitude Observatory. This site provides the excellent air quality and stability needed to make the best astronomical observations. The image shows how the Faulkes Telescope (circled) might appear when it has been installed on the mountain. An environmental assessment is underway which is the first step to obtaining a permit to start work on the site.