RAL

DESIGN & DISCOVERY

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RUTHERFORD APPLETON LABORATORY

SCIENCE AND ENGINEERING RESEARCH COUNCIL

Astronomy - Future Projects

RAL is involved with two working satellites. The International Ultraviolet Explorer, IUE, is already in its eleventh year of operation studying hot stars and the interstellar medium. The Japanese satellite GINGA is in its third year of operation studying X-ray sources. Our programme of space astronomy extends into the next century with the following space missions in preparation or planning.

ROSAT is a recently launched satellite designed to study the high energy Universe in X-rays. The UK has provided a Wide Field Camera (WFC) for examining sources of extreme ultraviolet radiation. The WFC data come to RAL for processing.

CRRES is an American satellite intended to study the radiation belts around the Earth. The UK has several instruments on board, ready for launch in 1990.

Solar-A is a Japanese satellite which will study the Sun. The UK is providing an X-ray spectrometer to study the high temperature gases in the Sun's outer layers.

Polar will provide a platform to study plasma in the magnetosphere. It will be launched in 1992 or 1993, with several UK plasma sensors.

Spectrum-X is an X-ray satellite which will study very hot stars and galaxies by means of X-ray images. It is due for launch in 1993 and the UK is providing a major instrument called JET-X.

Infrared Space Observatory (ISO) will permit the study of the spectrum emitted from cool stars in the process of formation and from dust in the regions between stars. It is due for launch in 1993 with a UK designed spectrometer on board.

SOHO/Cluster is a complex series of five satellites designed to study the Sun and the Earth's environment. The UK is providing seven types of instrument for these satellites which will be launched in 1996.

LYMAN is an ultraviolet instrument planned for launch in 1996. There are many UK components being provided for this telescope which will follow up the work of IUE.

CASSINI is a mission to Saturn. There will be instruments on an orbiter which explores Saturn's rings and some on a probe which will enter the atmosphere of the satellite Titan and land on its surface. The launch is planned for 1996 and the descent to Titan will happen in 2002. The UK hopes to have instruments on the orbiter and the Titan probe.

Polar Platform UK scientists have designed an instrument called Aurio which will study the causes of the Earth's aurorae by looking down on the Earth's atmosphere from space. This may be launched in 1997.