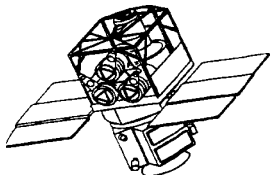
EUVE

Extreme Ultraviolet Explorer

Spacecraft Sketch	Mission Objective
	The primary objectives of the Extreme Ultraviolet Explorer (EUVE) mission are to: 1) perform an all-sky survey in the Extreme Ultraviolet (EUV) band of the electromagnetic spectrum (at wavelengths from approximately 100 to 1,000 A); 2) perform, concurrent with the all-sky survey, a higher sensitivity deep survey of a representative portion of the sky, at wavelengths from 100 to 500 A; 3) produce maps and catalogs of positions and intensities of EUV sources observed in the all-sky and deep surveys; and 4) study the observed source emission and spectral energy distribution in broad bandpasses and variability, and study the spatial distribution of the diffuse EUV background.

TYPE OF MISSION	PROGRAM OFFICE	PROJECT LEAD CENTER	MANAGEMENT APPROACH	S/C CONTRACTOR	I&T CONTRACTOR
ASTROPHYSICS	SPACE SCIENCE & APPLICATIONS	GSFC	HYBRID	FAIRCHILD	GSFC IN-HOUSE

Payload Description

The EUVE flight segment includes a payload module (PM) and an Explorer Platform (EP). The PM consists of a science payload (SP) which includes four telescope assemblies and associated support hardware. The associated support hardware includes electronics boxes, an instrument support platform, support electronics, thermal radiators and control devices, and support structure for restraining the solar arrays during launch. The EP consists of a Multimission Modular Spacecraft (MMS) and a platform equipment deck (PED) which provides mechanical and electrical interfaces between the MMS modules and the PM.

INSTRUMENT NAME	ACRONYM	PI AFFILIATION	PRINCIPAL INVESTIGATOR	I&T CONTRACTOR
DEEP SURVEY SPECTROMETER	DS/S	UCB	C. S. BOWYER	APL/JHU
LONG WAVE SCANNER	NONE	UCB	C. S. BOWYER	APL/JHU
SCANNER 1	NONE	UCB	C. S. BOWYER	APL/JHU
SCANNER 2	NONE	UCB	C. S. BOWYER	APL/JHU

Instrument Descriptions
The EUVE Deep Survey Spectrometer (DS/S) telescope is actually four telescopes in one. The unit is 1.63 meters long, 1. 07 meters in diameter at the base, and tapers to 56 cm in diameter at the front. The telescope utilizes Wolter-Schwartzchild Type 11 optics, a collimator, state-of-the-art gratings, and four separate detectors. One detector is used to support the deep survey observation and the other three are used for spectroscopy. The telescope detector has its filter elements broken into three discrete bandpass segments so that the deep survey can be done in the range of approximately 100 to 500 A. The spectrometer filter elements contain one to three filters depending upon the bandpass desired, so that spectroscopy can be accomplished in the range of approximately 100 to 900 A.
The EUVE Long Wave Scanner instrument is one of three scanning telescopes that are used to perform an all-sky survey. Each of these scanning telescopes is approximately 56 cm in diameter by 89 cm long. The Long Wave Scanner telescope uses a Wolter-Schwartzchild Type II mirror and filters that will allow it to scan in the range of 500 to approximately 1,000 A. The telescope has a microchannel-plate detector with a filter element in front of it. The filter elements are broken into quadrants, each containing a different filter capable of passing photons in a selected range.
The EUVE Scanner 1 is one of three scanning telescopes that are used to perform an all-sky survey. Each of these scanning telescopes is approximately 56 cm in diameter by 89 cm long. The telescopes in Scanners 1 and 2 are identical, and are designed to use Wolter-Schwartzchild Type I grazing incidence mirrors and filters that allow them to scan, in four bandpasses, from 100 to 500 A. The Scanners 1 and 2 have a microchannel-plate detector with a filter element in front of it. The filter elements are broken into quadrants, each containing a different filter capable of passing photons in a selected range.
The EUVE Scanner 2 is one of three scanning telescopes that are used to perform an all-sky survey. Each of these scanning telescopes is approximately 56 cm in diameter by 89 cm long. The telescopes in Scanners 1 and 2 are identical, and are designed to use Wolter-Schwartzchild Type I grazing incidence mirrors and filters that allow them to scan, in four bandpasses, from 100 to 500 A. The Scanners 1 and 2 have a microchannel-plate detector with a filter element in front of it. The filter elements are broken into quadrants, each containing a different filter capable of passing photons in a selected range.

Launch
6/7/92