University College London

Mullard Space Science Laboratory

Department of Physics

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Satellite and Rocket Experiments in Preparation

USA Satellites

Spacecraft	Launch Site	Instrumentation	Study
OSO-D	Cape Kennedy mid 1967.	1. Broadband X-ray spectrometer 2. Solar U-V monochromator.	Total solar X-ray flux. Total solar flux of HeII 304A radiation.
OSO-F	Cape Kennedy 1968	X-ray scanning spectro-heliograph.	Solar X-rays from quiet and disturbed regions.
OSO-G	Cape Kennedy 1969	U-V monochromators.	Total solar flux of HeI and HeII resonance radiation.
OAO-C	Cape Kennedy 1970	X-ray telescope.	X-rays from galactic sources.
OGO-E	Cape Kennedy 1968	Electron temperature probe.	Electron temperatures in magnetosphere.

ESRO Satellites

ESRO I	Western Test Range USA late 1967	Electron temperature probes (2): Positive ion energy spectrometer.	The polar ionosphere.
ESRO II	Western Test Range USA mid 1967	Broadband X-ray spectrometer.	Total solar soft X-ray flux.
ESRO TD-2	Western Test Range USA mid 1969	Extreme ultra-violet spectro-heliograph.	Extreme ultra-violet radiation from Sun in quiet and disturbed regions.

UK Rockets

Stabilised Skylark 305	Woomera 1967	X-ray scanning spectro-heliograph: Hydrogen Lyman-alpha scanning spectro-heliograph.	Solar X-rays from quiet and active regions: Solar Lyman-alpha emission.
Stabilised Skylarks 501/502	Woomera 1967	U-V monochromators: Electron temperature probe.	Ionospheric processes in E and lower-F regions.
Stabilised Skylarks	Woomera 1969	High resolution UV spectrometer with image intensifier.	Stellar middle-UV studies.

UK Rockets (Contd.)

Spacecraft	Launch Site	Instrumentation	Study
SKUA 2	UK 1967	Electron temperature probe.	Correlation with magnetic activity.
PETREL	UK 1968	Ionospheric package.	Ionospheric processes.
ESRO Rockets			
S.19 (2)	Sardinia 1967	Electron temperature probe.	Electron temperature in lower and middle ionosphere.
S.26 (2)	Sardinia 1967	Lyman-alpha detectors.	Solar Lyman-alpha emission.
S.16 (2)	Sardinia 1967	Positive ion probe. Electron temperature probe.	Variation of electron temperatures and ion densities through auroral curtains.
A.50	Kiruna 1968	Positive ion probes.	Trial flight for A.40
A.40 (6)	Kiruna 1968	Positive ion probes.	Polar cap absorption.
C.48 (2)	Sardinia 1968	Hydrogen Lyman-alpha detector.	Solar Lyman-alpha emission.

Satellite and Rocket Results now being analysed.

USA Satellites.			
DME-A (Explorer XXXI)	Western Test Range 1965	Ion mass spectrometer. Electron temperature probes.	Ionospheric composition and processes.
UK Rockets			
Stabilised Skylark 304	Woomera 1966	X-ray scanning spectroheliograph: Hydrogen Lyman-alpha scanning spectroheliograph.	Solar X-rays from quiet and active regions: Solar Lyman-alpha emission.
Skylarks 421/422	Woomera 1965	Plasma wave probe.	Production of plasma waves.
Skylarks 130/131	Woomera 1965	Ion probes.	Sporadic-E ionisation.
Skylarks 105/106	Woomera 1965	Ion probes,	Comparison of various probe designs.

Spacecraft	Launch Site	Instrumentation	Study
ESRO Rockets			
C.9	Kiruna 1966	Positive ion probes.	Auroral structure.
C.13) C.14)	Andoya 1966	Negative ion probes. Positive ion probes.	Detection of negative ions. Measurement of positive ion densities.
C.10	Kiruna 1967	Negative ion probes	Detection of negative ions.
C.22) Arcas)	Greece 1966	Electron temperatures. Positive ion densities and probes.	Solar eclipse: effect on charged particle.
French Rocket			
Centaur	Hammaguir 1965/66	Ion probes.	Sporadic-E ionisation.