

Title: ATMOSPHERIC EMISSION PHOTOMETRIC IMAGING (AEPI)

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Short Description: The AEPI consists of a dual channel, low light level video system with a filter wheel to isolate the emissions of interest, mounted on a stabilized, two-axis gimbal system for pointing and control. The objectives are to produce images of various atmospheric emissions to: investigate ionospheric transport processes; observe induced emissions from artificial particle injection; measure electron impact cross sections of atmospheric species; study natural aurora at high spatial and temporal resolutions and in the ultraviolet.

Instrument Characteristics:

Mass: 200 kg  
Volume: 1 cubic meter  
Power: 0.35 kW  
Data rate: 300 Kbs plus 1 video channel.

General Comments:

Heritage is from Spacelab I flown in 1983 and reflights scheduled on Earth Observation Missions (1986) and Space Plasma Lab (1992). The instrument provides its own pointing mount. Instrument requires a clear field-of-view from Earth nadir to limb, in all directions.

Source of Information: AEPI fact sheet

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