36-01510.105

ACIS Verification Summary Report

Specification:	ACIS Contract End Item Specification
Requirement Number/Title:	3.2.5.8 Atomic Oxygen (VRSD 3.2.5.8)

Requirement Statement: The selection of ACIS materials shall be compatible with short term exposure (during the low earth parking orbit period) to the effects of orbital atomic oxygen.

Verification Method:	Analysis

Procedure Number: Reference Verification Report ACIS-600-A-23VR

Configuration:

Cycle Time:

Verification Discussion/Results:

Most of ACIS is enclosed within observatory structure and is therefore not exposed to the effects of atomic oxygen. There are however several components which are exposed to free space; these are the venting subsystem light shade, the telescope and sun shades, the warm and cold radiators and some MLI blanket surfaces. The materials chosen for these applications are of sufficient strength to withstand the effects of short term exposure to atomic oxygen, during orbital insertion, with negligible degradation. Materials were selected using NASA TM 100351 (Materials Selection Guidelines to Limit Atomic Oxygen Effects on Spacecraft Surfaces) as a guideline.

Due to the short period of in Low Earth Orbit, the effects of Atomic Oxygen have been determined to be of no concern for this mission.

6/22/97

ACIS Cognizant Engineer Date