

## ACIS Verification Summary Report

Specification:	AXAF Observatory to Science Instrument ICD (IF1-20)
Requirement Number/Title:	3.3.1.1.1.2.7 ACIS Support Structure/DPA/DEA Thermal Interfaces (VRSD 3.3.1.1.1.2.7-2)

**Requirement Statement:** The DEA and DPA shall have an emittance of  $\leq 0.1$  on the + X sides.

**Verification Method:** Similarity of previous samples tested

**Procedure Number:** N.A.

**Configuration:** The +X sides of the DEA and DPA are conversion-coated (irridited) aluminum, a low-emittance coating.

**Cycle Time:** N.A.

**Verification Discussion/Results:**

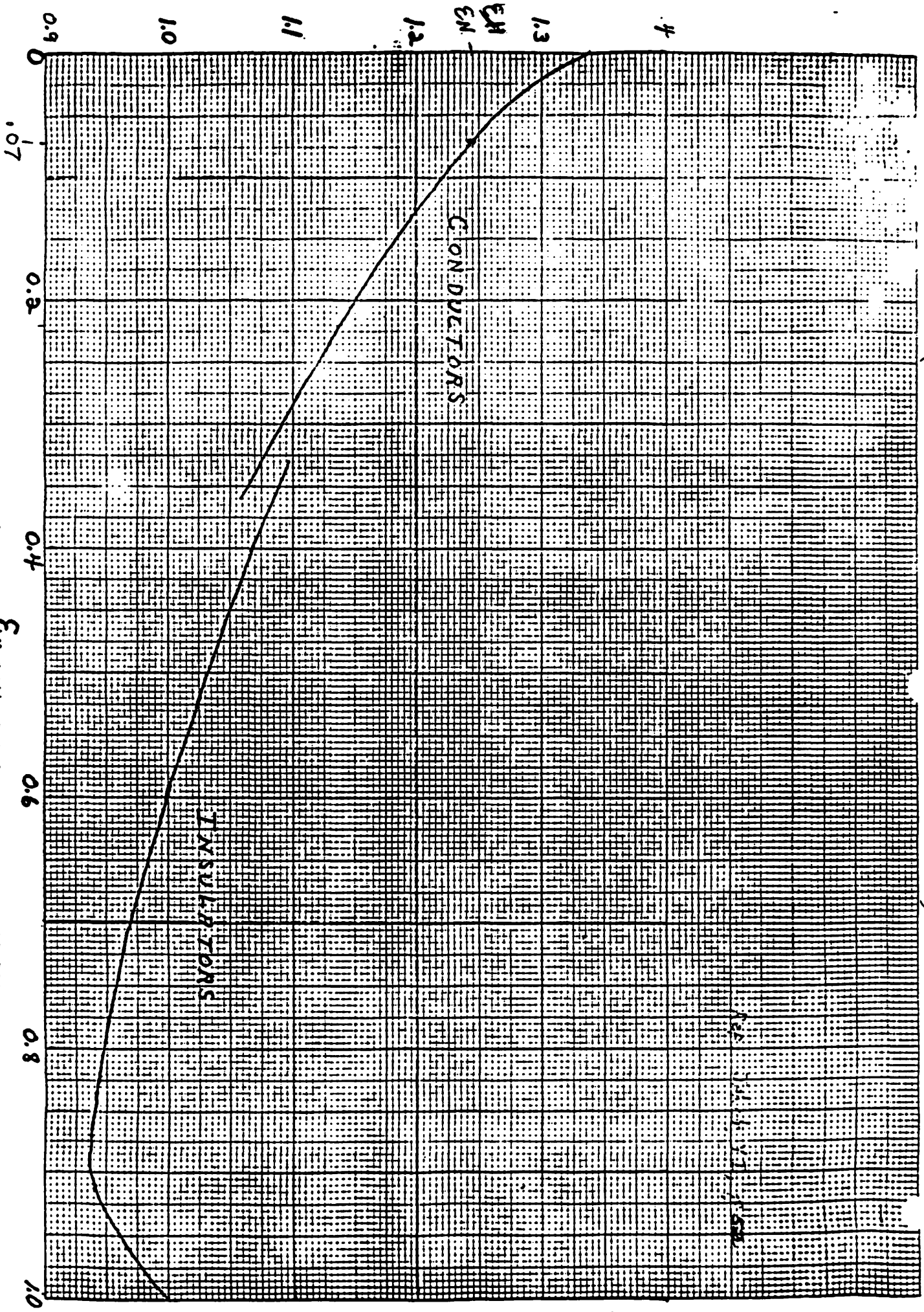
Irridited aluminum is a standard low-emittance coating for aerospace applications. On a previous MIT Project (XTE) a sample of irridited aluminum was tested at the GSFC and had a normal emittance of 0.07. Converting to hemispherical IR emittance yields 0.09.

$$\frac{\text{Emittance}_H}{\text{Emittance}_N} = 1.24 \text{ for } E_N = 0.07$$

$$(1.24)(0.07) = 0.09$$

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 ACIS Cognizant Engineer Date

Ratio of (Hemispherical Emittance to Normal Emittance) to Normal Emittance



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EM  
E  
NORMAL