INTERFACE CONTROL DOCUMENT TITLE AND APPROVAL PAGE

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ICD Number: ICD-123-171-0001 Cryostat/VV	**Primary Author:** P. Goranson
Impacted WBS Elements: WBS-121, WBS-123, WBS 171	**Type of Interface:** Mechanical/Envelope Interface

Description of Interface: The Vacuum Vessel exterior surface include heating/cooling tubes to provide bakeout of the vessel and cooling of the vessel between operational shots. These lines enter and exit the cryostat at the vertical (port 12) ports. This ICD defines the location and mounting provisions for the tube penetrations through the Cryostat and establishes the interface boundaries with WBS 17.

Record of Revisions

Revision Number	Description	Date
0	Initial issue	12/16/2004

Approvals

WBS Manager:	**WBS Manager:**
Project Engineer:	**Project Engineer:**
Systems Engineering Support Manager:	

ICD DETAIL SHEET
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(Use Continuation Sheets as Necessary to Include the Following Applicable Information)

Scope of Interface:
This interface impacts the design and fabrication of the Vacuum Vessel and the Cryostat interface.

Equipment and Responsibility List:
Vacuum Vessel Heating and Cooling Distribution Systems (WBS 123): Goranson
Cryostat (WBS 171): Gettelfinger
Vacuum Vessel (WBS 121): Goranson

Related ICDs:
ICD-123-64-0001-00
ICD-123-4-0001-00

Notes and Abbreviations:

Interface Block Diagrams:

Installation Information:
A total of 192, 5/16 inch outside diameter, coolant tubes, 64 in each VV field period, enter the cryostat bottom and exit out the cryostat top. The entrance and exit locations are at the vertical ports. The coolant system tubes must be sealed by a boot at the cryostat penetrations and protected from contacting ground on the VV side of the electrical breaks (supplied by WBS 123). The tubes operatefrom room temperature up to 390 C with the cryostat operating at 80 K and the interface must be designed to permit thermal expansion relative to the cryostat. WBS 17 is responsible for the design of the Cryostat feed through. WBS 123 is responsible for coordinating the hookup interface with WBS 17.

Other Pertinent Information: