***This was derived from TM251 AMove Probe from FIST Ops to Clean Room≅***

GRAVITY PROBE-B

OPERATIONS ORDER FOR

SCIENCE MISSION DEWAR

# PROBE TRANSPORT TO FIST OPS

July 13, 1999

Originator
D. Murray
Approvals:

_____ Date _____
Mike Taber
Test Director

_____ Date _____
Dave Murray
Test Director

_____ Date _____
Dorrene Ross
GP-B Quality Assurance

_____ Date _____
John Janicki
GP-B System Safety

_____ Date _____
Sasha Buchman
GP-B Hardware Manager

Operations Number
Date Initiated
Time Initiated

## A SCOPE

This module effects the moving of Probe-C, mounted on the Gurney, from the HEPL GP-B clean room to the FIST Ops area.

## B GENERAL REQUIREMENTS

B.1 None.

## C CONFIGURATION REQUIREMENTS

C.1 Probe-C is secured in Gurney and double bagged inside the HEPL GP-B clean room.

## D HARDWARE REQUIRED

D.1 Hardware installed/used:

a) Probe-C mounted on the Gurney and bagged.
b) Recording accelerometer (Impactograph or equivalent)
c) Fork lift
d) Worm Gear Assembly
e) Large C-clamps (4)

D.2 Hardware removed:

a) None.

## E PERSONNEL:

Personnel qualified to perform the various functions in this procedure are:

| | |
|---|---|
| Test Director: | Mike Taber |
| | Dave Murray |
| Fork lift Operator: | J. Perales |
| | P. Cruz |
| Technicians: | T. Welsh |
| | K. Bower |
| | C. Gray |
| | C. Warren |
| RSE | J. Janicki |
| | M. Jeung-Wesoloski |
| RQE | D. Ross |
| | R. Leese |
| ONR | E. Igraham |

NOTE: The ONR, RQE and RSE shall be notified 24 hours prior to beginning this procedure.

## F Redline Authority:

Redlining of this procedure can be done by M. Taber or D. Murray and shall be approved by the RQE representative. Additional approval by Hardware Manager shall be required if , in the judjement of the Test Director or RQE representative, experiment functionality may be affected.

## G OPERATIONS

### 1 Prepare to move Probe:

1.1 This procedure requires one Test Director, one qualified fork lift operator and two technicians and the program Safety Engineer (RSE). The qualified personnel are listed in the front of this procedure.

1.2 The Test Director is in charge of controlling and executing all steps of this procedure;

Record Test Director: _____ .

1.3 Verify ONR, RSE and RQE have been notified of move (24 hours prior). Date/Time:

1.4 Verify Probe-C is installed on the Gurney in the HEPL GP-B clean room and is securely fastened to the Gurney and the yoke worm gear is locked in place.

1.5 Install/verify installed an recording accelerometer (Impactograph or equivalent) on the Gurney frame with one of the two sensing directions in the vertical and the other crosswise of the frame.

Record: Vertical sensing _____ axis

Record: Cross axis sensing _____ axis

1.6 Install/verify installed a double wrap of clean room plastic over the Probe.

1.7 Verify Fork Lift is available for use.

1.8 Clear all equipment from the End Station I lower floor area between the FIST roll up door and the outside roll up door.

1.9 Clear all equipment form around the Weld Shop rollup door.

### 2 Moving Probe:

# CAUTION

**In the following take care to not jar the Probe when rolling the Gurney across the floor or when moving the Gurney/Probe with the fork lift as damage to the Probe could result.**

2.1 Turn on the Impactograph.

2.2 Roll the Gurney with Probe-C out of HEPL GP-B clean room to just outside the Weld Shop rollup door.

2.3 Use the fork lift to raise the Gurney and Probe approximately 2-in off the ground.

2.4 Secure the Gurney frame to the forklift forks with four C-clamps (use wood blocks for clamping as required).

## CAUTION

**In the following step use spotters on both ends of Gurney as clearance with door is minimal.**

2.5 Use the fork lift to raise the Gurney/Probe clear of the pavement and move the hardware to just inside the rollup door at the FIST Ops area (the lower level of End Station I).

2.6 Set Gurney on floor and remove C-clamps and back Fork Lift away

## CAUTION

**Use extreme care in rolling Gurney over rough spots of floor.**

2.7 Roll Gurney into FIST Ops.

2.8 Turn off Impactograph recording and record:

Maximum vertical axis acceleration: _____ g.

Maximum cross axis acceleration: _____ g.

2.9 Remove Impactograph from Gurney.

**3 Completed.**

Completed by: _____.

Witnessed By: _____.

RSE :_____.

Date: _____.

Time: _____.

RQE :_____.