TITLE

HY Arm Cavity Baffle Installation & FMy Magnet Retrieval

APPROVALS:	DATE	APPROVALS:	DATE
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2 SCOPE

Three tasks are to be performed in or near the WBSC 8 chamber during the next vented period. These tasks are the installation of the arm cavity baffle in the Y beam manifold, the retrieval of the FMy/LOS stowaway magnet and measurement of the elevation of the BSC 8 optical table. In addition, appropriate chamber entry and exit tasks will be performed.

3 APPLICABLE DOCUMENTS

Listed below are all of the applicable and referenced documents for this task procedure. This list gives the latest revisions of the documents; within the installation steps, only the document number (and not the revision) is quoted.

M990034-B	Contamination Control Plan
E000062-C	LOS Installation Procedures
E000116-00	Procedure for Realignment of Large Suspended Optics
M980133-B	Vent Isolatable Volumes
M980101-B	Procedure for Isolatable Volume Pump Down
M980136-A	HAM Chamber Access Door Removal Procedure Note: No procedure currently exists for BSC door removal with the engine hoist; Adapt this procedure in the meantime.
E000065-04	Chamber Entry/Exit Checklist

4 PRE-REQUISITES

❑ 1. A BSC cleanroom must be in place over WBSC 8 and operable.

❑ 2. The vacuum equipment purge air system must be operable before starting the task.

5 PREPARATION

All preparation must be in accordance with the Contamination Control Plan (M990034).

❑ 3. Clean the LVEA, particularly the floor; Particulates and dust should be removed by mopping with clean water.
Clean the BSC chamber (wipe or mop with clean water) from the stiffening ring above the door down, as well as the floor in the vicinity of the chamber well in advance of the opening of the vacuum system.

❑ 4. Insure that there are no large openings to the exterior or the beam tube enclosure where insects or dust can get into the LVEA.

❑ 5. Transport the following items to the LVEA:
- ❑ Appropriate cleanroom garb
- ❑ Gloves
- ❑ In-Chamber Overshoe Covers
- ❑ One flashlight
- ❑ Arm Cavity Baffle Installation Tools
- ❑ Arm Cavity Baffle components
- ❑ Arm Cavity Baffle hardware
- ❑ COS Tool pan (wrenches and allen keys)
- ❑ Camera and lens
- ❑ CO2 gun and portable bottle
- ❑ Precision Bubble level
- ❑ Class “B” razor blade with extension
- ❑ Two 2-way radios
- ❑ Sattellite octupus cable & VOM

6 TASK STEPS

All tasks must be in accordance with the Contamination Control Plan (M990034)..

❑ 6. Vent the BSC 8/Y beam manifold volume (per procedure M980133); remember to kill the power to the suspension controllers and to turn off the RGA prior to venting

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❑ 7. **NOTE!** It is very important that we limit exposure of the vacuum surfaces to atmospheric moisture, to minimize pumping time required before gate valves can again be opened. This is largely a function of purge air flow volume and the duration of chamber open times. This procedure is written to minimize the numbers of doors removed, and the durations of removal. Purge air should be adjusted to maximum flow. **Fabric door covers afford a surprising amount of shielding (with purge), so they should be installed whenever access through the door opening is not required within a short time period. This includes the practice of installing a cover when workers are inside a chamber.**

❑ 8. Remove door B8S. **Reminder: cover door openings when access is not being required!**

❑ 9. Turn up purge air.

❑ 10. Perform chamber entry tasks per applicable steps of E000065.

❑ 11. Clamp the FMy optic and the ITM optics with their 8 chamfer stops.

❑ 12. Move Y arm cavity baffle components to clean room alongside BSC 8 and assemble subassemblies.
Enter chamber with baffle subassemblies; carry them into the beam manifold. **Reminder: cover door opening when access is not being required!**
Install arm cavity baffle
Exit chamber. **Reminder: cover door opening when access is not being required!**

❑ 13. Retrieve the stowaway magnet from the FMy LOS as follows (this step may be performed in parallel with the arm cavity baffle installation):
Enter chamber. **Reminder: cover door opening when access is not being required!**
Check chamfer stop on FMy.
Record optical lever readings.
Remove OSEM from stowaway magnet location on FMy.
Use a Class B razor blade to separate and slide stowaway magnet away from adhered magnet.
Reset PAMs to nominal settings.
Look up pre-assembly open light voltages from log and record:
UL:1.72V, UR: 1.72V, LL: 1.64V, LR: 1.76, S:1.62V
This resulted in 60% OLV values of:
UL: 1.04V, UR: 1.04V, LL: 0.98V, LR: 1.06, S: 0.98V
Replace removed OSEM, setting voltage to 60% open light voltage.
Check other OSEM voltages; if necessary, adjust to achieve 60% open light voltages.
Record voltages:
UL:_____, UR:_____, LL:_____, LR:_____, S:_____
Do not adjust PAMs.
Exit chamber. **Reminder: cover door opening when access is not being required!**

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- ❑ 14. Setup optical level viewing through B8S door to read optical table elevation.
  Reminder: cover door opening when access is not being required!
  Record global elevation: Z:_____mm.
- ❑ 15. Perform exit tasks in accordance with applicable steps of E000065.
  Reinstall door.
  Log all data in electrical and hard copy logs.
  Label and file digital photos.
- ❑ 16. Pump down the BSC chamber volume per M980101.