



SPECIFICATION

**LASTI Test Mass
Handling and Shipping Procedures**

| APPROVALS | DATE | REV | DCN NO. | BY | CHECK | DCC | DATE |
|----------------------|----------|-----|---------|----|-------|-----|------|
| AUTHOR: H. Armandula | 03-16-07 | | | | | | |
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| DCC RELEASE | | | | | | | |

1 Scope

The LASTI test mass needs to be handled and shipped with extreme care to ensure that the delicate optical surfaces are not degraded.

A special mirror carrier and shipping case have been manufactured and procured for transportation and storage.

This document is a guide on the steps to follow to unpack the substrate, remove it from the aluminum mirror carrier and re-pack the optic for shipment or storage.

2 Receiving

The substrate is shipped in a wooden box.

Inside the wooden box, is a high impact, shock absorbing shipping container.

The container is fitted with casters and a pull handle.



It is recommended to move the case on its wheels for only short distances. Remove the lid by twisting the latches.



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3 Unpacking the mirror carrier

To remove the optic's carrier from the shipping container pass a strap through the aluminum case's handles and while one person holds the shipping container the other should lift the aluminum box out of the orange shipping case with the aid of a mechanical lift.

Taped to the outside of the aluminum mirror carrier are the necessary Allen wrenches (hex keys) to remove the mirror from the box.



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Remove the taped wrenches, carefully wipe clean the aluminum carrier with a dry Clean room, lint free cloth.

Take the aluminum mirror carrier to the processing area.

4 Removal of the optic from the carrier

Minimize travel of the optic when unprotected.

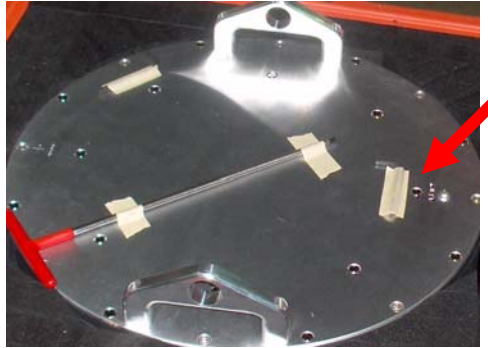
The aluminum box should only be opened in a clean room environment by knowledgeable clean room personnel.

Slowly, using the 5/32 hex key provided, unscrew the vent screw on the carrier cover.



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With the long Allen wrench provided, loosen and remove the screws from the box's cover.

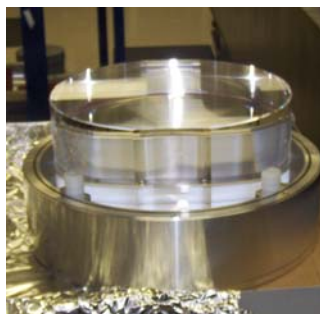


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Two people are required for the next task. One needs to lift the cover; the other should observe and guide the cover on its way up. Carefully lift the cover in an upward motion ensuring a straight lift and being careful not to bump the sides of the optic with the cover.





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Next, loosen the screws on both Teflon spring loaded, adjustable/alignment stops by the flats.



(Optic removed for easy visualization)

To lift the optic out of the box, one person must do the lifting (by mechanical means) while another holds down the box.

5 Replacement of the LASTI mirror into the carrier

Before placing the optic into the carrier, wipe all surfaces of the aluminum box with a clean room wipe. Wipe the contact faces of the Teflon stops.

Ensure that the screws on the Teflon spring loaded stops that will contact the flats are loosened.

The optic must be placed into the carrier with the registration arrow on the optic (HR surface) pointing down and the flats facing the Teflon stops.

Screw the Teflon spring loaded, adjustable/alignment stops by the flats in place with the long Allen wrench.

NOTE: The box's top (cover) has a wedged plate that matches the optic's wedge, for that reason it needs to be placed in a specific way. The aluminum cover indicates where the **thickest** part of the optic should go. The arrow indicates the **thinnest** part of the optic.

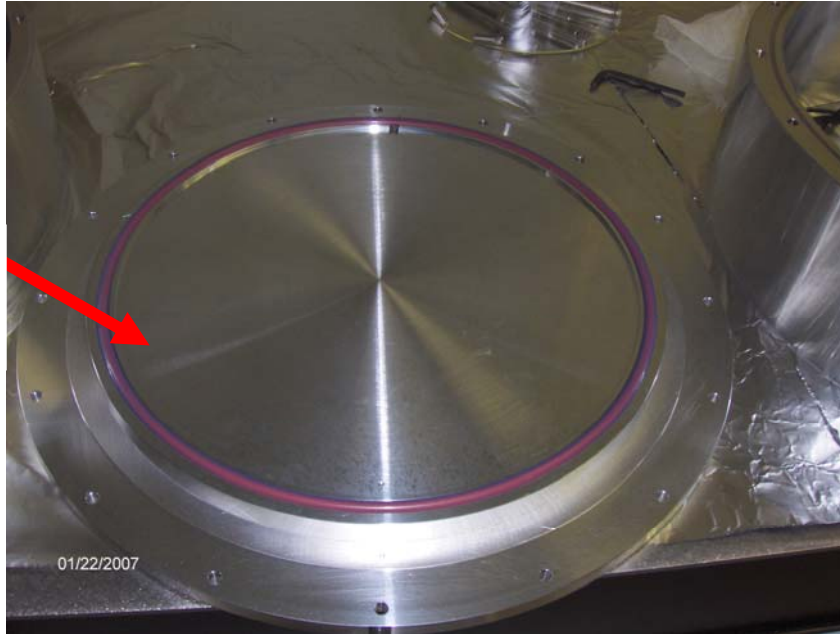
To ensure that the placement of the cover is correct, there are 3 notches (marks) on the bottom of the cover that have to align with the 3 marks on the top of the box's bottom.



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Wedged plate
(from cover's
top)



Bring the cover down exercising care not to touch the optic, verify the alignment and proceed to fasten all the screws.
Place the aluminum mirror carrier inside the shipping case.
Replace and latch the lid on the shipping container.