

LSO Type 1A & 1B Non-propagating Shot Procedure S-AB-P-121 Rev A

Type 1	Termination	Applicable Source
1A 15-cm Glass Amp Shot	'Pre-15-beam block' and ISP-Calorimeter	1 or 2
1B 40-mm Rod Amp Shot	'Pre-LARA beam block' and ISP-Calorimeter	3 or 4

Introduction:

This procedure is to be used on Sources LS1 thru LS4 to perform a short- or long-pulse configuration, non-propagating shot. Sources Qualification Shots (Type 1C) are covered in procedure S-AB-P-071. Type 1A or 1B non-propagating shots are those where the 15-cm Glass Amp or 40-mm Rod Amplifiers are fired, but no laser beams are propagated.

The purposes for these shots include:

- Assuring that the head is ready for a propagating shot
- PCU testing
- Hold-off tests

The ISP-Calorimeter, located prior to the periscope of the Source being tested, shall be inserted into the beam path to prevent any light propagating into the Laser Bay. A beam termination may also be installed prior to the 15-cm Glass Amp and/or 40-mm Rod Amp for upstream protection if required. A second beam termination may also be inserted within the LARA ring, if required.

Closed access in the Laser Sources Bay (LSB) or the Capacitor Bays is not required; and the LST may remain in the LSB.

Prerequisites:

- LSO Shot Preparation Checklist, S-AB-P-085 (minus the Qualification shot)
- LST Shot Preparation Checklist, S-AB-P-092

Procedure:

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- 1 Review the Laser Facility Day Orders to obtain the starting pulse shape (LP-mode) or pulse width (SP-mode). Crosscheck with the current shot instructions.
- Discuss any issues with the SD
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- 2 Review the Master Template pop-up on the *ep-lse* when the SD sends the PRESHOT signal.
- Confirm the Source PCU's to be included in the shot.
 - Confirm or correct the M W C status of the software processes listed in the Day Orders/Master Template or verbal instructions from the SD.
 - Press the "Accept" button on the Template review pop-up when complete.
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- 3 Coordinate with the LST to make the necessary configuration changes. Review the following list with the LST: (Note the special setups in the log book)
- Pre- glass amplifier beam block in beam path
 - BL 3&4 Ring beam block in the beam path
 - Burn paper hung at input and output of glass amplifier
 - Fluorescence detector oscilloscope ready for trigger
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- 4 Ensure that the pre-amplifiers are **NOT** enabled. Report as such to the SD when asked.
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- 5 Confirm with the LST that the ISP-Calorimeter for each Source is **IN** the beam path.
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- 6 Run the Source configuration macro(s)
- Select **Restore** ⇒ **LS(1,2,3,4)_Non-prop_Amplifier Test Shot**
- from the Macros pull down menu
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- 7 Select **lock** from the commands menu for each macro run
- Select **Compare** ⇒ **LS(1,2,3,4)_ Non-prop_Amplifier Test Shot**
- from the Macros pull-down menu.
- **Review** the macro reports for errors. (Do not proceed until each macro is clean.)
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- 8 Click the "Checklist" button on the *ep-lse*.
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- 9 **SD:** "LSO: Are the preamplifiers for LS 1 and/or 2 DISABLED?"
- LSO:** "Disabled, aye."
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- 10 **SD:** "LSO: ISP-Cal of Sources LS1, 2, 3, and/or 4 inserted?"
- LSO:** "Inserted, aye."

(continues)

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SD: "LSO: Non-Propshot procedure complete for Sources LS1, 2, 3 and/or 4?"
11 LSO: "Completed, aye."

Participate in the shot:

- On entering POSTSHOT: Follow the LSO POSTSHOT Procedures in S-AB-P-102.
 - In the event of an ABORT: Report any issues or concerns to the Shot Director and receive direction as to how to proceed. (Record the information in the LSO logbook)
- 12**
- Report any issues or concerns to the Shot Director and receive direction as to how to proceed.

(done)

Document Release:

S-AB-P-121 LSO Type 1A or 1B Shot Checklist

This document is a component of Vol. VIII OMEGA EP System Shot operations Manual, Chapter 2, Laser Sources Operating Procedures, S-AB-P-005.

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