

Shot Type 1: Shot Director Checklists S-AB-P-049 Rev H

Type 1 shots involve one or more Laser Sources propagating within the Sources Bay.

Shot Type 1A/B Sources Non-Prop: “Charge & Dump / Charge & Fire / PILC”

This procedure is to be used on Sources 1,2,3 or 4 to perform a short- or long-pulse configuration non-propagating shot on the 15-cm Disk Amp (Type 1A) or the LARA’s 40-mm Rod head (Type 1B). The purposes for these shots include:

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

The LS 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 block may also be installed prior to the amplifier for upstream protection if required. A second beam block may also be inserted within the LARA ring.

Closed access of the Laser Sources Bay IS required if the 15 cm disk or 40mm rod amp is fired, else personnel may remain in the LSB. Closed access of the Capacitor Bays is NOT required.

Shot Type 1C Sources Qualification Propagating Shot to LS Calorimeter

This shot variation is to be used to qualify one or more sources prior to the pulse being injected into the main beamline. Pulse energy, centering and spatial profile are the key metrics.

Any of the 4 sources may be involved, either individually or in a combined shot. The LS calorimeter of the source(s) being tested MUST be inserted in the beam path to prevent any light propagation into the Laser Bay. No other beam blocks may be inserted.

Closed access of the Laser Sources Bay IS required if the 15cm disk or 40mm rod amp is fired.

Shot Type 1A/B

Checklist

-
- Prepare the Master Template.
- 1
 - Select Shot Type 1, Source and SP/LP
 - Press “Advance to: PRESHOT” button.
-
- 2 Make headset announcement (to the CR, LSB):
-
- 3 Build and approve the Power Conditioning Template, if required.
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- 4 Lock the LSB and direct the LST to sweep and exit.
Note: he may NOT remain in the Bay if the 15-cm Disk Amp or 40-mm Rod Amp are fired.
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Sources Non-Prop Shot checklist

- Confirm:
- 5
 - Non-Prop shot checklist complete
 - ISP-Cal inserted
 - Pre-15-cm-disk amp beam block inserted, or not (as required per test)
 - Pre-LARA beam block inserted, or not (as required per test)
 - Report status of ring beam block in LS 3 or 4
- Note: Ring block must be OUT for Hold-off Tests and INSERTED for all other Type 1B shots.
- Include any other special PI requests in the checklist as appropriate.
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- 6 Verify LSB has been swept.
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Start of Charging

- Headset announcement: “Now charging for a Non-prop shot of Source 1,2,3 or 4.”
- 7
 - Click on the “Enable Charge” button.
 - Click on the “Charge” button.
 - Time to "at volt ", in minutes and seconds, every 30 seconds.
 - "System is At_Volt"

Monitor subsystem shot activities. IF it is necessary to ABORT, press the ABORT button: IF the count is T-5 or less, ALSO **press the red dump button.**

(continues)

Monitor the shot sequence

Announce:

- 8** • "T-20 seconds" (to the shot).
• "T-10 seconds" (to the shot) and the shot countdown

Resume Open Access

- 9** • Make PA announcement: "Shot #_____is complete, resume normal access."
• Unlock the Bay doors

(end of procedure)

Shot Type 1C (Use for Sources Qualification Shots)

Checklist

-
- Prepare the Master Template.
- 1 • Select Shot Type 1, Source and SP/LP
• Press “Advance to: PRESHOT” button.
-
- 2 Make headset announcement (to the CR, LSB)
-
- Lock the LSB and direct the LST to sweep and exit.
- 3 Note: he may NOT remain in the Bay if the 15-cm Disk Amp or 40-mm Rod Amp are fired.
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- 4 Build and approve the Power Conditioning Template, if required.
-
- Sources Qualification Shot checklist**
- Repeat this checklist for each beam in the shot
- Confirm:
- Propagating Shot checklist complete and device macros ran clean
- For Sources in long-pulse mode**
- 5 • Pulse width setting
• SBSS Systems are Enabled.
• ISP-Cal’s are inserted
• Sources injected energy setting is _____
- If LS1 and/or LS2 are in short-pulse mode**
- Pulse spectra setting
 - SBSS Systems are Bypassed
 - Preamplifiers are Disabled
 - ISP-Cal’s are inserted
 - Sources injected energy setting is _____
-
- 6 Verify LSB has been swept.
(continues)
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Start of Charging

Headset announcement: “Now charging for a Qualification shot of Source 1,2,3 or 4.”

- Click on the “Enable Charge” button.
- Click on the “Charge” button.
- 6 • Time to "at volt ", in minutes and seconds, every 30 seconds.
- "System is At_Volt"



Monitor subsystem shot activities. IF it is necessary to ABORT, press the ABORT button: IF the count is T-5 or less, ALSO **press the red dump button.**

Monitor the shot sequence

Announce:

- 7 • "T-20 seconds" (to the shot).
- "T-10 seconds" (to the shot) and the shot countdown



Resume Open Access

- 8 • Make PA announcement: “Shot #_____is complete, resume normal access.”
- Unlock the Bay doors



(end of procedure)
