

Task or Employee: Connecting and disconnecting LST HV    Routine    Non-routine

Retention: Completed Routine JHAMs are retained by the employee and supervisor. Non-routine JHAMs are retained until the task is fully closed out. In the case of an accident, the form is to be retained for use by the review team.

Complete instructions and supporting information is available at <https://www-internal.slac.stanford.edu/esh/SLACsafety/jham/>. Enter information into boxes which will expand to accommodate whatever length of text is entered. Once this JHA is complete, all participants should sign in the Acknowledgement section. Add rows by placing cursor in the right box of the last row and entering a tab.

Sequence of Basic Job Steps	Potential Hazards	Controls & Recommended Actions
1. Worker ramps down HV using EPICS control	None	
2. Worker applies hardware disable to supply.	If output voltage is not already at zero, disable will cause output voltage to go abruptly to zero. This sends a larger than normal signal to the front end electronics and may damage it. No personnel hazards.	<p><i>Engineering controls:</i> Front end electronics have protection circuit.</p> <p><i>Administrative controls:</i> Worker should wait for HV monitor to read zero volts before applying hardware disable. All 4 HV ON LEDs on the power supply should be off.</p>
3. Worker removes HV cable from supply.	HV output pins may be at voltage if the supply is not set to zero volt and disabled. Cable may remain at voltage after disconnection if it is disconnected when the supply is not at zero volt.	<p><i>Engineering controls:</i> Supplies are internally current limited to ~14 microAmp at 6000 V. They are startle hazards and are non-lethal.</p> <p>With the power supply off but the HV cable still connected, the cables and the LST detector tube are discharged through the power supply's internal resistance of approximately 60 MOhms.</p> <p>HV pins on the supply are recessed.</p> <p><i>Administrative controls:</i> Ensure that steps 1 and 2 are done.</p>

		<p>Avoid contact with any HV pins on the supply.</p> <p>Avoid contact with any HV pins on the cable.</p> <p>Ground these pins on the ground bar.</p>
4. Worker installs HV cable into supply.	Same as a) above.	Same as above.
5. Worker removes hardware disable.	Startle hazard to workers who may still be working on connection and/or disconnection.	<p><i>Engineering controls:</i></p> <p>Supplies are internally current limited to ~14 microAmp at 6000 V. They are startle hazards and are non-lethal.</p> <p>HV pins on the supply are recessed.</p> <p><i>Administrative controls:</i></p> <p>Ensure that all work in steps 3 and 4 are complete, and workers are no longer in the back of the supply.</p> <p>Close back door of the rack if available.</p> <p>Avoid contact with any HV pins on the supply.</p>
6. Worker ramps up HV using EPICS control.	None	

