



Plans and Procedures

Document Title: LCLS-II-HE SXR Phase Shifter Assembly Upgrade Procedure

Document Number: LCLSII-HE-1.3-PP-0527-R1

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Traveler Checklist – (LCLSII-HE-1.3-PP-0527)

	Responsible Group	Pass / Fail	Confirm: Initials / Date
1. Prep Prior to Removal: Record Serial Number:	MFD Lead		
2. Prep Prior to Starting Job: Preparing and Staging <ul style="list-style-type: none"> Contact all groups involved in work and assign responsibilities Prepare all machinery, equipment, and tools 	MFD Lead		
3. Procedure Step: Remove Phase Shifter from Tunnel <ul style="list-style-type: none"> Contact EED personnel to open gap to 30mm for removal and transportation of Phase Shifter Confirm acrylic shields present and electrical cables disconnected Remove acrylic gap shields Unscrew bolts and remove phase shifter from beamline using overhead crane Once clear of vacuum chamber, remount acrylic gap shields Crate the device and load onto truck for delivery to B081 Unload device at B081 	MFD Lead		
4. Procedure Step: Dismount Existing Magnet Array Cassette <ul style="list-style-type: none"> Confirm gap is open to 30mm Confirm rive assembly controller is powered off – then, disconnect the controller Remove acrylic covers and supports Place non-magnetic block between the arrays and fix to lower jaw Dismount top cassette by removing M6 screws & store the cassette Remove non-magnetic block Dismount bottom cassette by removing M6 screws and store the cassette Replace existing baseplate with new baseplate 	MMF Physicist		
5. Procedure Step: Mount Upgraded Magnet Array Cassette <ul style="list-style-type: none"> Inspect brass shims Mount bottom cassette and insert plastic shim Insert non-magnetic block on top of cassette Mount top cassette and insert plastic shim Remove non-magnetic cover 	MMF Physicist		
6. Procedure Step: Magnet Tuning <ul style="list-style-type: none"> Perform device tuning 	MMF Physicist		
7. Procedure Step: Fiducialize <ul style="list-style-type: none"> Fiducialize the phase shifter 	MMF Physicist		
8. Procedure Step: Make RFI <ul style="list-style-type: none"> Perform controls RFI checkout 	MMF Physicist		



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<ul style="list-style-type: none"> • Confirm gap is opened to 100mm; if not, inform Motion Controls • Install new acrylic covers and supports for acrylic covers <p>9. Procedure Step: RFI Acceptance</p> <ul style="list-style-type: none"> • Responsible Physicist approves "Ready for Installation" and use on accelerator beamline in UH • Assigns HE Serial Number <p>Record New Serial Number:</p> <ul style="list-style-type: none"> • Designates Undulator Cell Location to Reinstall 	<p>Undulator Systems Physicist</p>		
<p>Record New Cell Location:</p> <p>10. Procedure Step: Return Phase Shifter to Tunnel</p> <ul style="list-style-type: none"> • Crate the device and load onto truck for delivery to UH • Unload device at UH • Remove acrylic gap shields, if necessary • Once clear of vacuum chamber, remount acrylic gap shields, if removed • Place screw bolts and reinsert phase shifter onto beamline using scissor lift • Alignment checks. • Confirm acrylic shields present and electrical cables reconnected • Notify and transfer to the Controls Department for operational checkout <p>Notes or Findings:</p>	<p>MFD Lead</p>		

Final Review: Signature – LCLS-II-HE Representative	Date	Pass / Fail
Traveler archived to SharePoint or Teamcenter.		