CesrTA Machine Studies Task Overview

I. Experiment Description

Experimental Topic	vBSM Characterization of vertical beam size	
Classification[*]	INST	
Coordinator/ Experimenters	SW	DLR, JSh, SW
Primary Goals	Investigate possible measurement of vertical beam size with vBSM	
Description[†]	1. Test vertical beta knob for electrons (or positrons) 2. Test the coupling knobs to increase vertical emittance 3. Polarization (remove unstable beam splitter) • Measure visbility vs beta and coupling 8 4. Vertical interferometer (install vertical slits to replace the horizontal ones) • Measure visibility vs beta, and vs coupling 8 5. Vertical interferometer (remove lens in tunnel and place slits on table) Measure visibility vs beta, and vs coupling 8 Item 4 and 5 need several brown key access.	
SpecialNeeds/Requests		
Prerequisites[‡]	**Personnel**	**Description**
Vertical beta knobs	dlr	Knobs to adjust vertical beta at electron and positron source
Time Requested[§]	**No. Shifts**	**Principal Tasks**
3hr	1	

[*] Machine Studies Classifications:
- EC – Electron Cloud
- LET – Optics Correction and Low Emittance Tuning
- IBS – Intra-beam scattering studies
- xBSM – x-ray Beam Size Monitor
- INST – Instrumentation (BPM development, RFA development, other)
- MDEV – Machine Development (includes injection configuration, injection tuning, custom orbit setup, instrumentation preparation, etc.)
- MREC – Machine Startup (recovering conditions after down period or access)

[†] Attach additional pages for experimental description if needed

[‡] Indicate other machine work that is required in preparation for this machine studies experiment.

[§] Indicate the principal shift topics and estimated number of shifts required

II. Machine Studies Assignments

Reserved for Project Management Team Use		
Topic ID		
Priority[**]		
Shift Assignments	**Date**	**Shift**

[**] Priority Scale:

1. Critical – results are necessary for preparation for subsequent down/run periods
2. Very high – results are strongly desired for achieving program milestones or in preparation for subsequent down/run periods
3. High – results are of immediate interest but not require
4. Moderate – results should be pursued at the first convenient opportunity
5. Low – results are not presently a high priority for either project milestones or planning