CesrTA Machine Studies Task Overview

I. Experiment Description

Experimental Topic	vBSM Characterization of vertical beam size	
Classification[*]	INST	
Coordinator/ Experimenters	SW	SW
Primary Goals	Investigate possible measurement of vertical beam size with vBSM	
Description[†]	1. Make sure vertical beta knobs work for both species 2. Make sure the coupling knobs work 3. Alight the horizontal slits (d=10 mm, 5mm) • Check whether the Be mirror is uniformly illuminated • Check the imbalance factor between two slits • Determine the possibility to imbalance the intensity between two slits to measure small beam size. • Test the 377nm bandpass filter 4. Implement the interferometer • Measure visibility vs beta, and vs coupling 8 • Measure visibility vs imbalance factor 5. Check the possibility to unbalance the intensity between two slits • Measure the visibility and extract small beam size Better scheduled after obtaining the low emittance condition. May coordinate with xBSM to compare the vertical beam size.	
SpecialNeeds/Requests		
Prerequisites[‡]	**Personnel**	**Description**
Modify the Labview	SW	Modify Labview program to allow unbalanced factor
Time Requested[§]	**No. Shifts**	**Principal Tasks**
4hr	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