CesrTA Machine Studies Task Overview

I. Experiment Description

Experimental Topic	Tune scans using xBSM	
Classification[*]	xBSM, LET	
Coordinator/ Experimenters	JSh	DLR, JSh, MPE, WH, SW
Primary Goals	Measure tune scans to characterize region of the tune plane around present working points, and potentially choose a new working point to avoid crossing resonances during IBS studies	
Description[†]	1. Scan tunes using conditions with finite coupling (imperfectly corrected to amplify tune dependence (to be guided by simulation)) 2. Include scan region with fv < fh (guided by simulation) 3. Having identified promising region repeat scan at 3mA 4. Repeat scan with lower synchrotron tune	
Special Needs/Requests		

Prerequisites[‡]	Personnel	Description
xBSM functionality	NTR, JSh	Verify xBSM functionality
Simulations	MPE	

Time Requested[§]	No. Shifts	Principal Tasks
4hr	1	Items 1 and 2
4hr	1	Items 3 and 4

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[*] 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