CesrTA Machine Studies Task Overview

I. Experiment Description

Experimental Topic	**Electron Cloud Comparison with August Data: TEWave, SPU**	
Classification[1]	**EC, INST(TEW, SPU)**	
Coordinator/ Experimenters	**JPS**	
Primary Goals	**Compare TEW and SPU at 15E, SPU at 15W**	
Description[2]	**5.3 GeV Conditions: Positrons and Electrons** **Data will be taken using** • **Shielded Pickups at 15E/W** • **TE Wave detector at 15E** **Bunch plus witness bunch at 28 – 84ns** **Single bunch with solenoid field +/- 150 Gauss** **(if time allows, I will put in multibunch trains and take SPU TEWave data vs. current).**	
Special Needs/Requests	Will want to "steal" BPM at 15E - access required before/after main data taking.	
Prerequisites[3]	**Personnel**	**Description**
Hardware Setup	JPS	"steal" BPM at 15E
5.3GeV e+ injection	???	Need positron and electron injection
Time Requested[4]	**No. Shifts**	**Principal Tasks**
4hrs (e+/e-)	0.5	For witness bunch studies
8 hrs (e+/e-)	1	For solenoid studies

[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)

[2] Attach additional pages for experimental description if needed

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

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

II. Machine Studies Assignments

Reserved for Project Management Team Use		
Topic ID		
Priority[5]		
Shift Assignments	**Date**	**Shift**

[5] 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