CesrTA Machine Studies Task Overview

I. Experiment Description

Experimental Topic	Electron Cloud Time Resolved RFA (TR-RFA) Measurements	
Classification[1]	EC, INST(TR RFA)	
Coordinator/ Experimenters	JPS	
Primary Goals	Get useful data from TR-RFA	
Description[2]	**5.3 GeV Conditions: Positrons** **Data with multibunch trains 10b and 20b positrons to 8mA/bunch.** **Take data vs. Chicane magnet field (using Grid at +50V, -25V, -50V)** **Add witness bunch at 14ns through 84ns after then end of the train.** **Take data with chicane OFF then ON (19200cu).**	
Special Needs/Requests	Need to connect/disconnect 40-50 cables in L3 to/from TR-RFA scopes. Access needed before/after the MS to do this.	
Prerequisites[3]	**Personnel**	**Description**
Hardware Setup	JPS	Need to connect 40-50 cables in L3 to TR-RFA scopes Need procedure to "eject" the witness bunch.
5.3 GeV e+ injection	???	Need positron injection to high current
Time Requested[4]	**No. Shifts**	**Principal Tasks**
8 hrs (e+)	1	For TR-RFA vs. Chicane
8 hrs (e+)	1	For TR-RFA with witness bunches

---

[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