

# CesrTA Machine Studies Task Overview

## I. Experiment Description

<b>Experimental Topic</b>	<b>Electron Cloud TEWave Development</b>	
<b>Classification<sup>1</sup></b>	<b>EC, INST(TEW)</b>	
<b>Coordinator/ Experimenters</b>	<b>JPS</b>	
<b>Primary Goals</b>	<b>Look for EC trapping/clearing in a quadrupole using TE Waves</b>	
<b>Description<sup>2</sup></b>	<b>2.1 GeV Conditions: Positrons</b>  <b>Data with a multibunch train with and without a “clearing bunch”.</b> <b>Look for evidence of cloud trapping and/or clearing using change in the spectrum and direct phase detection.</b>	
<b>Special Needs/Requests</b>		
<b>Prerequisites<sup>3</sup></b>	<b>Personnel</b>	<b>Description</b>
Hardware Setup	JPS	Probably looking at Q00 (?)
2.1 GeV e+ injection	???	Need positron injection to high current
<b>Time Requested<sup>4</sup></b>	<b>No. Shifts</b>	<b>Principal Tasks</b>
4 hrs (e+)	0.5	Development

<sup>1</sup> 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)

<sup>2</sup> Attach additional pages for experimental description if needed

<sup>3</sup> Indicate other machine work that is required in preparation for this machine studies experiment.

<sup>4</sup> Indicate the principal shift topics and estimated number of shifts required

## II. Machine Studies Assignments

Reserved for Project Management Team Use		
Topic ID		
Priority <sup>5</sup>		
Shift Assignments	Date	Shift

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<sup>5</sup> 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

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