

Surprise in Modeling CHESS-lattice Tune Shift Measurements for 20-bunch Positron Trains

New modeling effort motivated by two discoveries since John San Soucie's 2016 REU work:

1) bug found in ECLOUD calculation of image charge contribution to beam kick by centered beam,

2) STP reasoning led to rediscovery of necessity to use modeled field gradients prior to bunch passage instead of longitudinally bunch-charge-weighted average, viz. IPAC10 Fig. 3 and Phase I Report.

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Electron Cloud/Impedance Meeting 12 April 2017





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ECLOUD tuned to 6/21/2016 **CHESS-optics** 20-bunch measurements



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