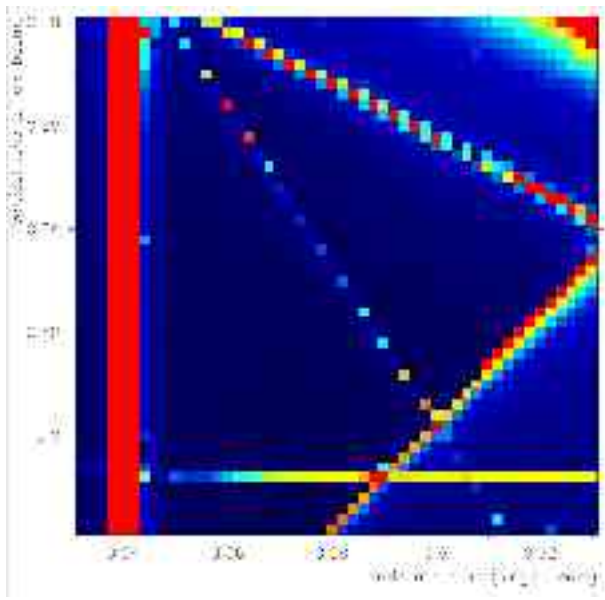
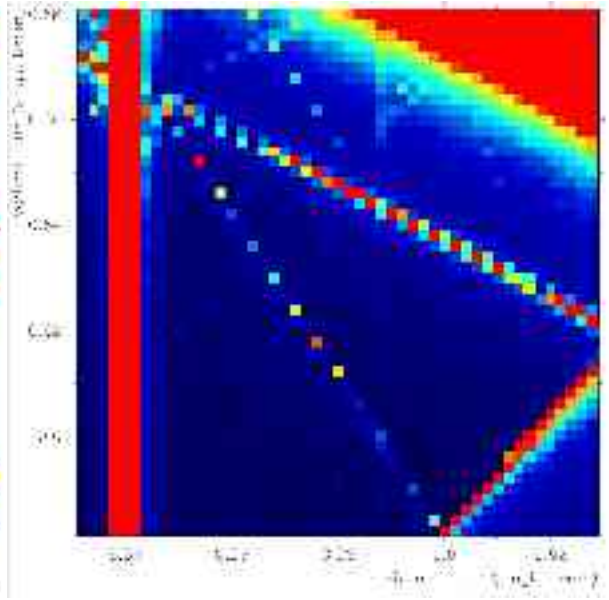


Tune Scans Incorporating Space Charge Effects

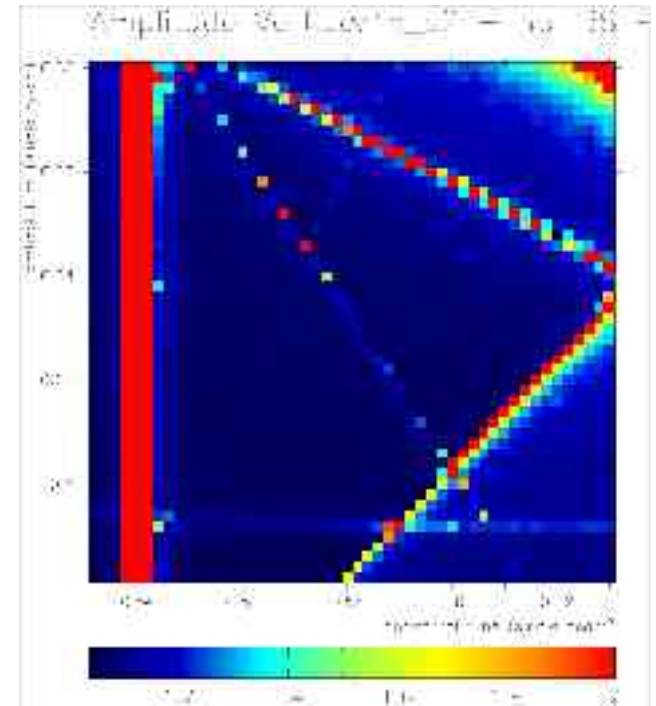
-Prevented tune shift by partially masking trans_space_charge_on



zero-current



2.0E10 particles – 1.25mA
(without masking)

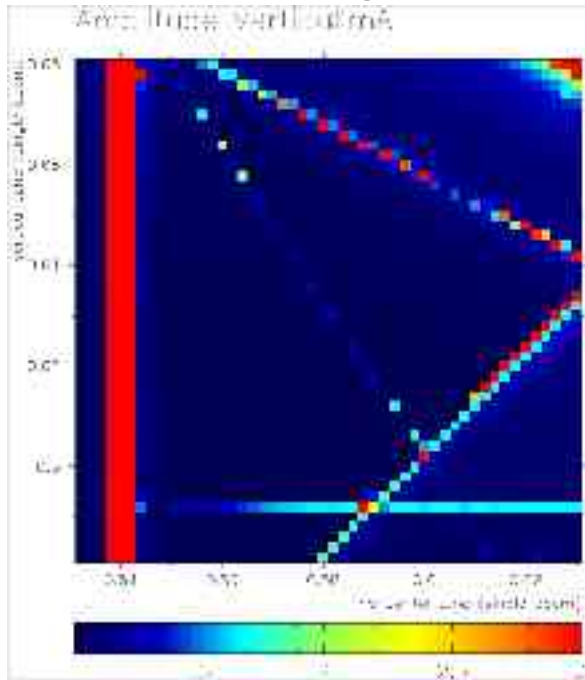


2.0E10 particles – 1.25mA
(with masking)

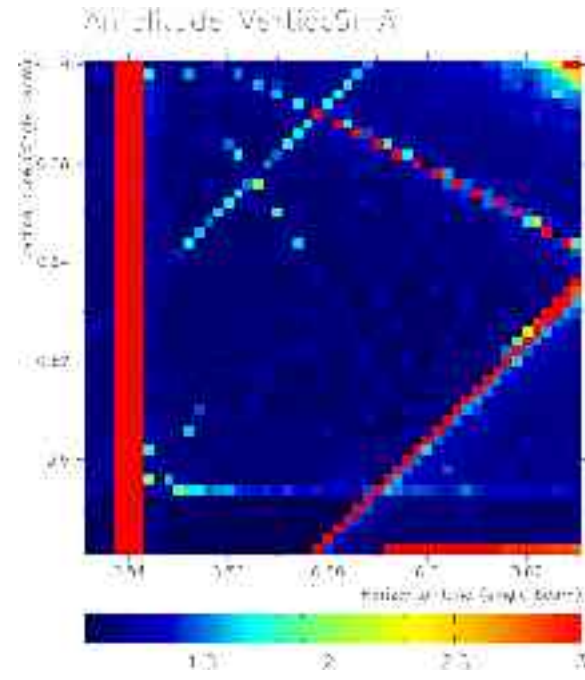
Note: All plots are from 0.53-0.63 in the horizontal, 0.58-0.68 in the vertical; same color scale

Significantly Increased Current

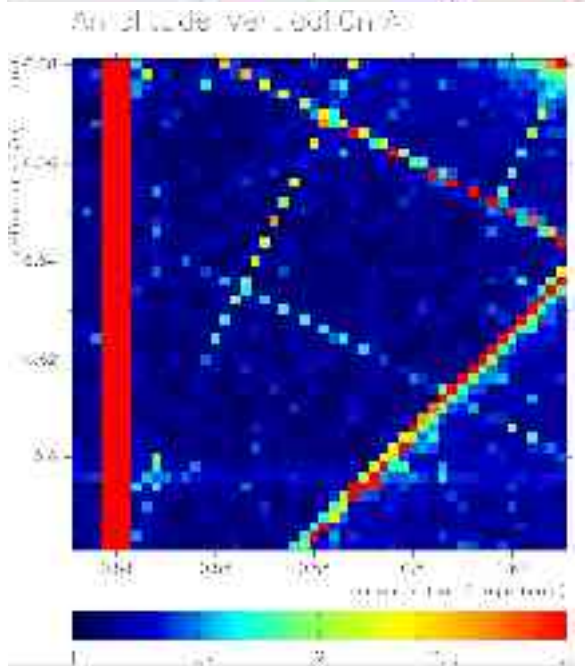
0mA



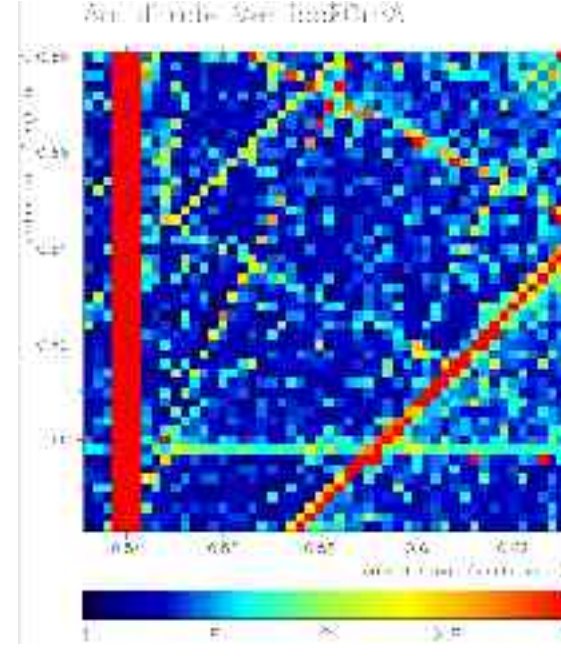
5mA



10mA



20mA



Note: All plots are from 0.53-0.63 in the horizontal, 0.58-0.68 in the vertical; same color scale