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Intensity vs. RF Gap Voltage on J-Station

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The useful time of about 2 hrs. was used to do the following:

1. Observe the RF gap voltage on station J as a function of intensity. A small change for 1.6, 3.4 66×10^{12} was noted.

2. Install a spare clamp in the RF "Gun" electrode that gives 25% more attenuation and raises the low frequency cutoff from 1 to 1.6 MC. This reduced somewhat the overloading in the neighborhood of transition at 6×10^{12}.

3. Reduce the intensity to 2×10^{12} and adjust transition for no dilution and for no radial shift and measure the phase jump for these two cases. The former results in a smaller phase jump plus an outward radial excursion.

4. Activate the triple switch chassis and using only the third jump to reproduce the conditions of 3.

5. Return to high intensity (at most 6×10^{12}) and using all three 8 jumps try to carry the beam through transition. Using only pulses at the required intervals for the triple switch it was not possible to obtain satisfactory results.

6. At $2^{+}\times10^{12}$ and with the triple switch chassis on the first two jumps were used as a phase lock to blow up the bunch before transition. This was done with the bunch shape dumps on and hence there was considerable intensity

7. The B, RF ~~Atten~~ Amplitude readout, V_x, 2Vp and 2o were measured at 230 msec. from which the true peak gap voltage and phase angle can be computed.

Comments: The triple switch will be tried again using computed intervals and turning ~~about~~ around these values. Also the phase lock debunching will be attempted without the dumps activated until filamentation takes place.