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July 24, 2006
Memo for Monday weekly ILC meeting

Integer tunes, T-multiplier, and IBS growth rates

The purpose of this memo is to show the results of using a higher integer tune to reduce IBS effects.

					Initial IBS rates	
Horiz. Integer Tune	pre-IBS Horiz. emittance	IBS Horiz. emittance	Avg. Horiz. T-mult.	Avg. Long. T-Mult.	x	z
14	1.81 nm	6.16 nm	4.62	.207	166	7.87
15	1.84	6.21	4.22	.225	164	8.69
16	1.92	6.37	3.94	.239	158	9.07

Table 1: IBS properties of 2.0 GeV CesrTF at 2.0 GeV. .0025 emittance coupling and $2x10^{10}$ particles per bunch used in calculations.

Conclusion:
By using a higher integer tune to decrease the horizontal T-multiplier, a larger proportion of the total IBS blow-up can be shifted to the longitudinal dimension, but the total amount of IBS increases, resulting in increased equilibrium horizontal emittance.