The CDF run IIb detector must be designed so that the full capability of the high-P_T physics program can be attained. There are two requirements that must be met. The first uses the Lab's goal of $2\times10^{32}\ cm^{-2}-\sec^{-1}$ with luminosity leveling and a 396 nsec bunch separation. Since the luminosity would remain at that level throughout a store, a contingency of a factor of two should be used to allow for differences between an extrapolation from $2\times10^{31}\ cm^{-2}-\sec^{-1}$ using the current detector and real conditions at $2\times10^{32}\ cm^{-2}-\sec^{-1}$ with a new inner tracker. This is prudent given the run IIa experience, in which the COT occupancy is twice that predicted.

The second requirement is to ensure that the same physics reach can be attained even if luminosity leveling is not achieved. This would necessitate an initial store luminosity of approximately $4\times10^{32}\ cm^{-2}-\sec^{-1}$ with the usual exponential decay.

Both of these approaches reach the same conclusion, namely that the CDF run IIb detector must operate efficiently at a luminosity of $4\times10^{32}\ cm^{-2}-\sec^{-1}$. CDF should of course convince itself that the detector can do the high-P_T physics with such a peak luminosity, which corresponds to an average of 10 interactions per crossing.