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# Capture Efficiency vs. Impedance of RF Cavities

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One of the experiments of Oct 24 was repeated. Namely, cables were inserted in each side of the signals going to the phase detectors in the cavity tuning servos. The cables were 12 n sec long so that the cavity reactance should tune to about 18° off resistive. By putting the cables in both sides, both the ~~reac~~ inductive and capacitive cases were examined. In this case, the AGS was tuned to quasi-adiabatic capture. The intensity was $\sim 7 \times 10^{12}$ on early monitor and $\sim 4.5 \times 10^{12}$ on late monitor. General capture behavior was monitored and one of the tuning servo vernier signals was explicitely watched to look for high frequency instability behavior.

Again no effect was observed. The capture process, even with heavy beam loading seems to be insensitive to the reactive component of the cavities. The work done on the rf system by the rf group on Oct 24, if it changed the performance at all, probably did not do it via the net average reactance of the cavities.