

# Measured Coupling in the Tevatron

Present skew quad currents (3/6/03)

Tev tuned up with  $\Delta v_{\min} < 0.003$

Circuit	Number Elements	Current at 150 GeV (amps)	Current at 980 GeV (amps)	Scaled current at 980 GeV (amps @ 150 GeV equivalent)
T:SQ	42	<b>-2.89</b>	-25.98	<b>-3.98</b>
T:SQA0	2	6.29	36.55	5.59
T:SQA4	1	-5.18	-33.81	-5.18
T:SQB1	1	0.56	3.92	0.60
T:SQD0	2	0.00	0.72	0.11
T:SQE0	2	0.00	0.00	0.00

Why so strong?

Why is T:SQ ~ 40% stronger at 980 GeV compared to 150 GeV?

How do we choose which circuits to use?

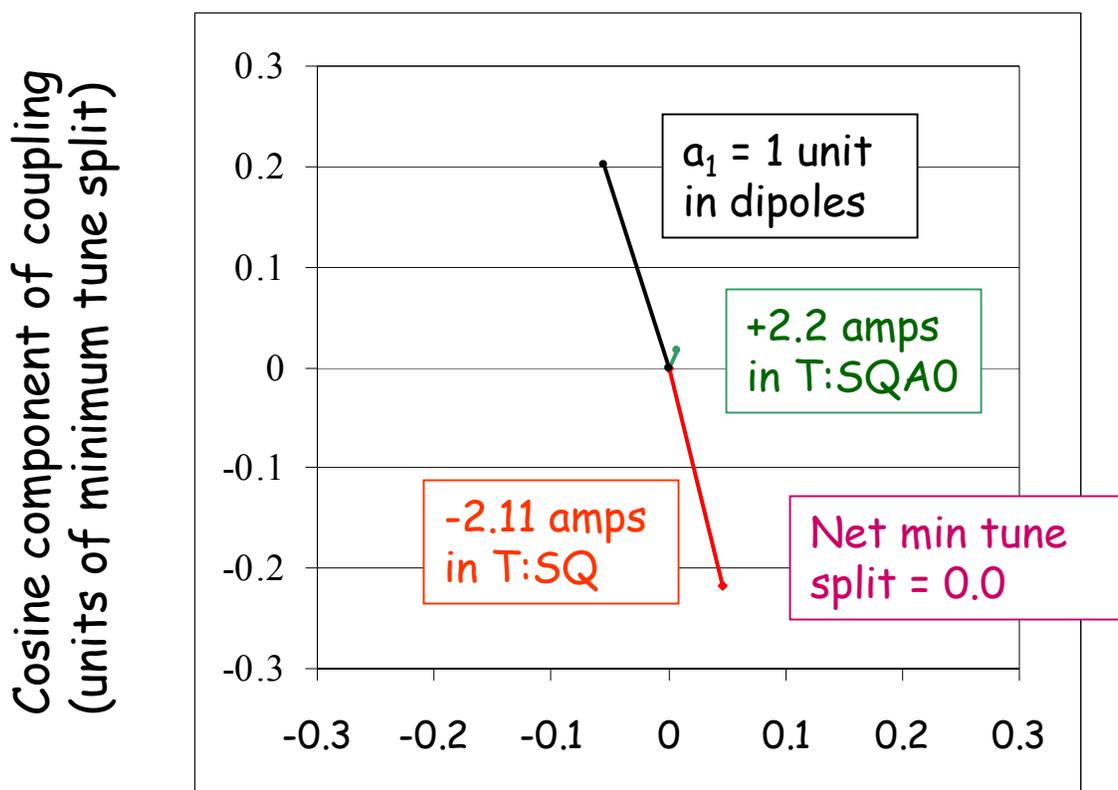
## Example calculation

Coupling from  $a_1=1$  unit in dipoles

T:SQ = -2.11 amps

T:SQA0 = +2.2 amps

(Calc. using design lattice @ 150 GeV)



# Coupling: present settings @ 150 GeV

T:SQ = -2.89 amps

T:SQA0 = +6.29 amps

T:SQA4 = -5.18 amps

+  $a_1=1.37$  unit in dipoles

(Calc. using design lattice @ 150 GeV)

