ARF1 performance
March 2004

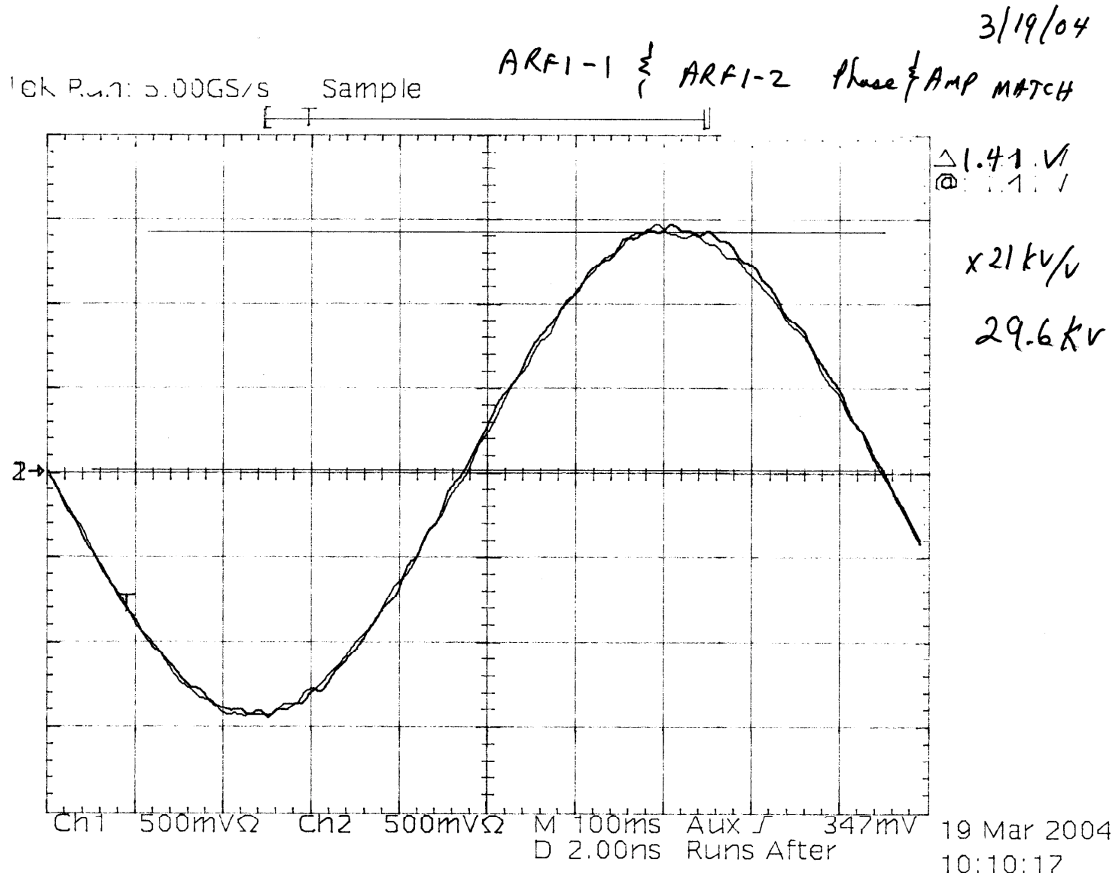
Careful measurements were made of the ARF1 system. After routine maintenance operating parameters were measured and are recorded here. A test curve entitled ARF1 test curve was created on the backup page of P2. These curves are shown below.

ARF1 measured parameters

3/19/04

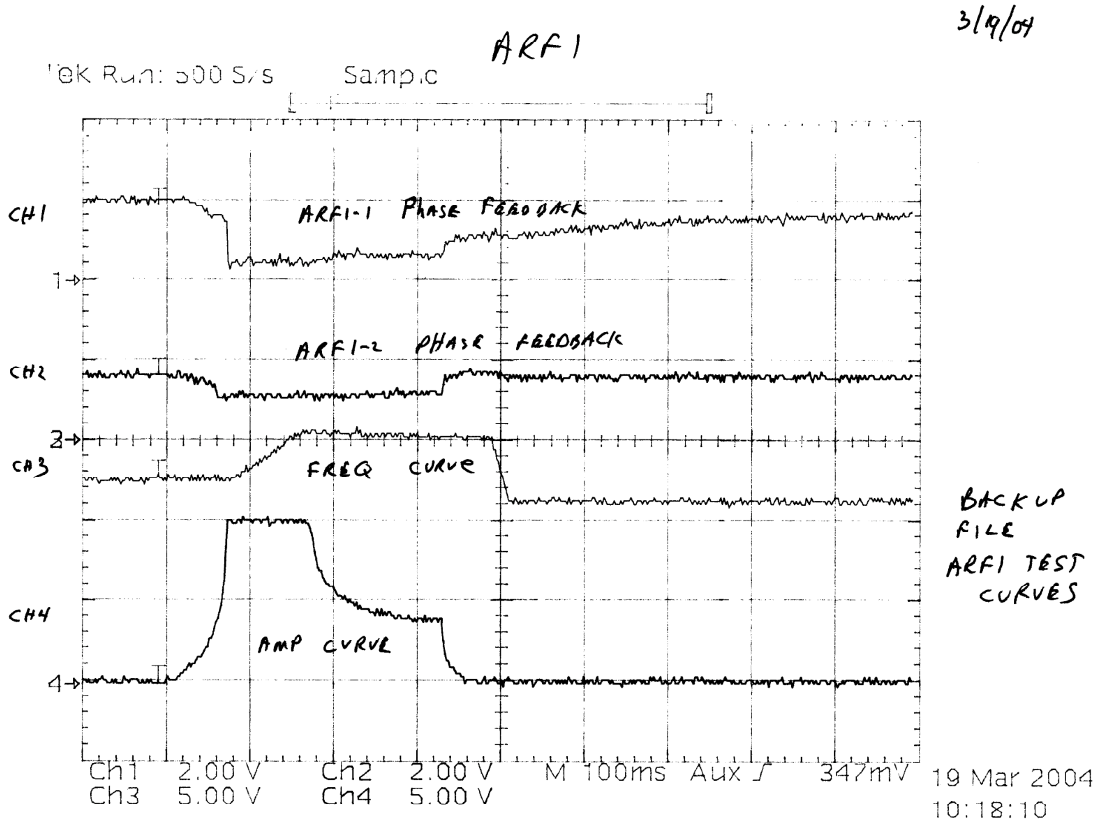
All voltages zero to peak

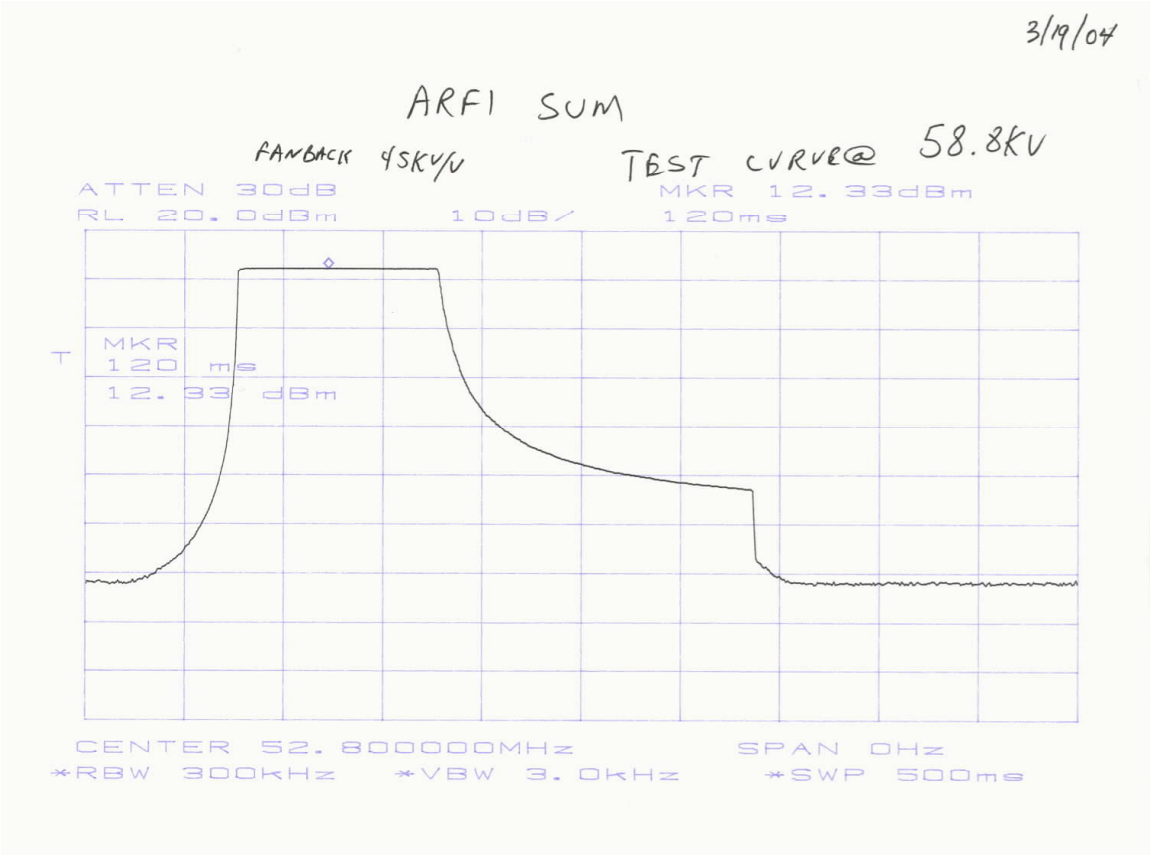
Measurement	ARF1-1	ARF1-2	units
Cavity volts	29000	29000	volts 0-p
Cavity drive forward	358	470	volts 0-p
Cavity drive reverse	35	170	
Cavity input return loss	-20.2	-8.8	dB
LLRF from panel drive	0.035	0.158	volts 0-p
LLRF drive (add 10 dB)	0.11	0.158	volts 0-p
Loop gain	108.4	105.3	dB
Cavity center freq	52.8	52.8	MHz
Cavity low 3 dB freq	52.6	52.68	MHz
Cavity high 3 dB freq	53	52.98	MHz
Cavity Q	132	176	
Fanback (3) pad values	10+3+3	10+6+3	dB



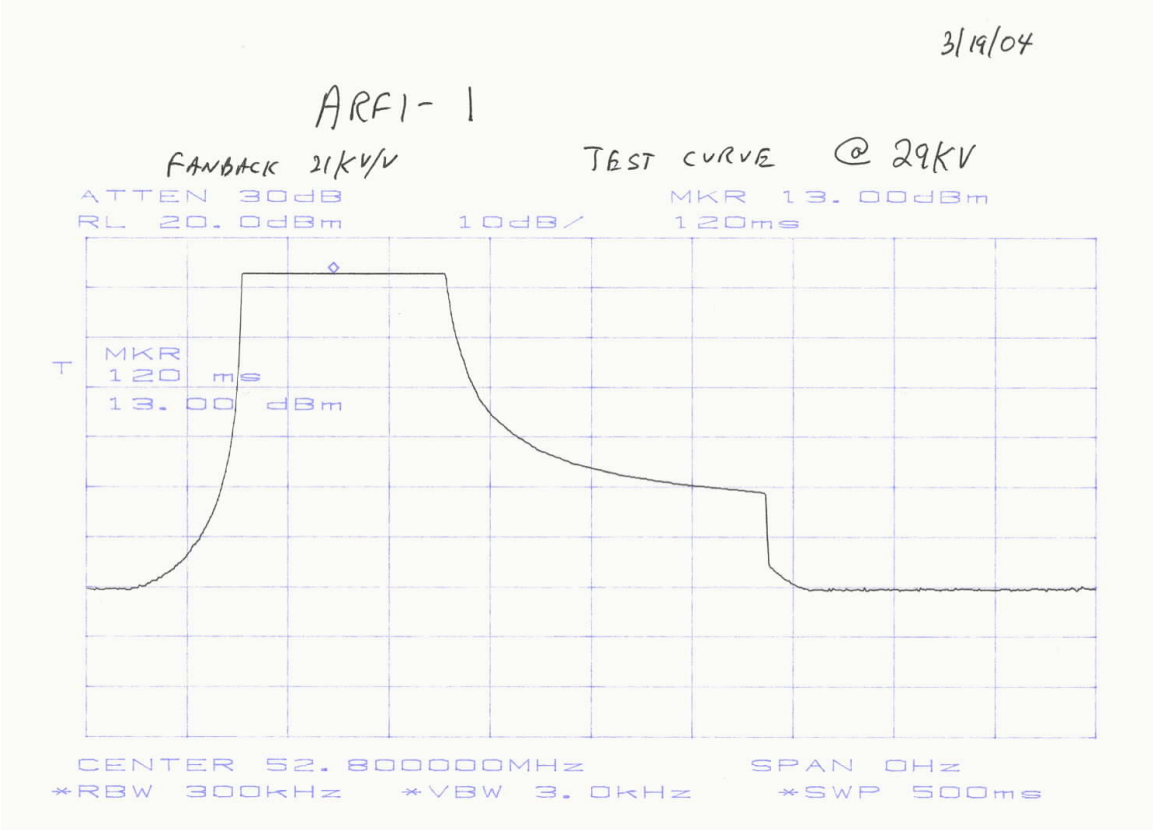
Amplitude and phase match at 29 KV each cavity

Phase feedback and program curves

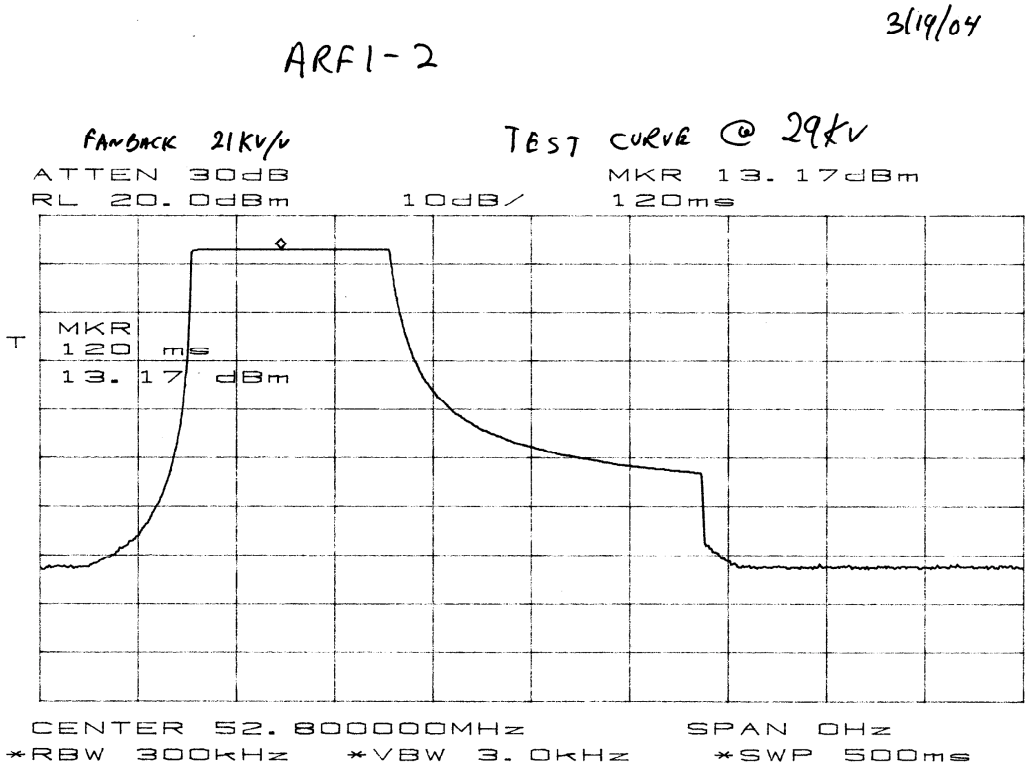




ARF1 Sum dynamic range as measured on spectrum analyzer at zero span.



ARF1-1 dynamic range as measured with spectrum analyzer on zero span



ARF1-2 dynamic range as measured on spectrum analyzer on zero span.