Measured detuning
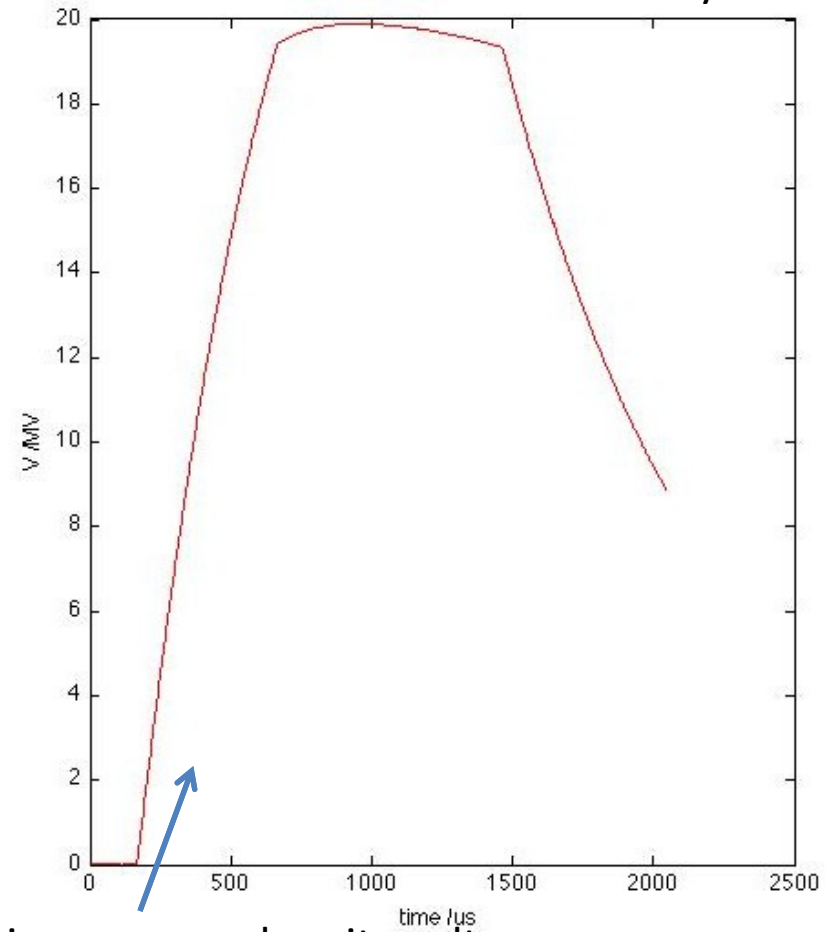
Fit to LFD model assuming measured cavity voltage

$$\tau_{LFD}\frac{d}{dt}\Delta\omega(t) = -\Delta\omega(t) - 2\pi K_{LFD}V^2(t)$$

Assumed DAQ scale for V[MV]=7.15×10⁻⁴ V_DAQ
Adjusted initial detuning $\Delta\omega_0$ and K_{LFD}
   $\Delta\omega_0$ = 310 Hz
   K_{LFD} = 4. 5×10⁻¹² Hz/V²
Assumed τ_{LFD} = 1ms

Comments

- Detuning calculated from data taken 4.02.11 by JC.

- Adjusted RF pulse length and measured detuning using phase change at end of pulse (zero forward power) where $d\phi/dt = \Delta\omega \cdot t$

- Fit also sensitive to τ_{LFD} – need data at additional gradients to get better fit.