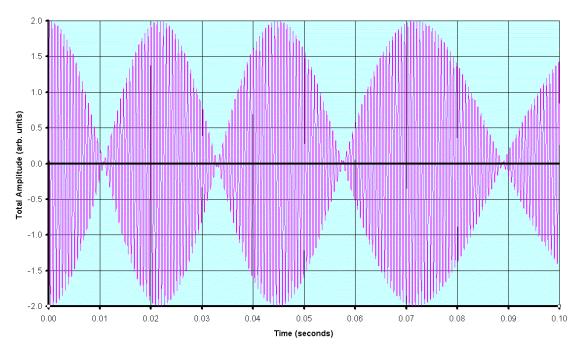
UIUC Physics 193/406 Physics of Music/Musical Instruments The Physics of a Longitudinally Vibrating Metal Rod

Total Sound Amplitude vs. Time Rotating Vibrating Rod



In the second picture, we show the total displacement amplitude, $y_{tot}(x,t) = y_1(x,t) + y_2(x,t)$ for one entire rotational period, $\tau = 1$ second. The beat pattern between the two sound sources has quite a lot of interesting structure, due to the rotational Doppler effect.

Total Sound Amplitude vs. Time Rotating Vibrating Rod

