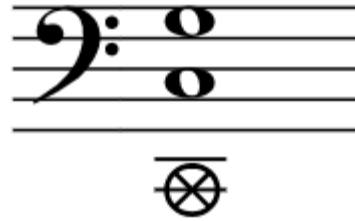


# Musical Physics

Chirag Gokani  
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GSP Seminar

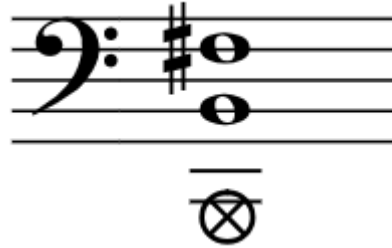


$$f_G = 97.77 \text{ Hz}$$

$$f_C = 65.19 \text{ Hz}$$

$$f_G - f_C = 32.59 \text{ Hz}$$

$$32.59 \text{ Hz} = f_C' \text{ (one octave below } f_C)$$

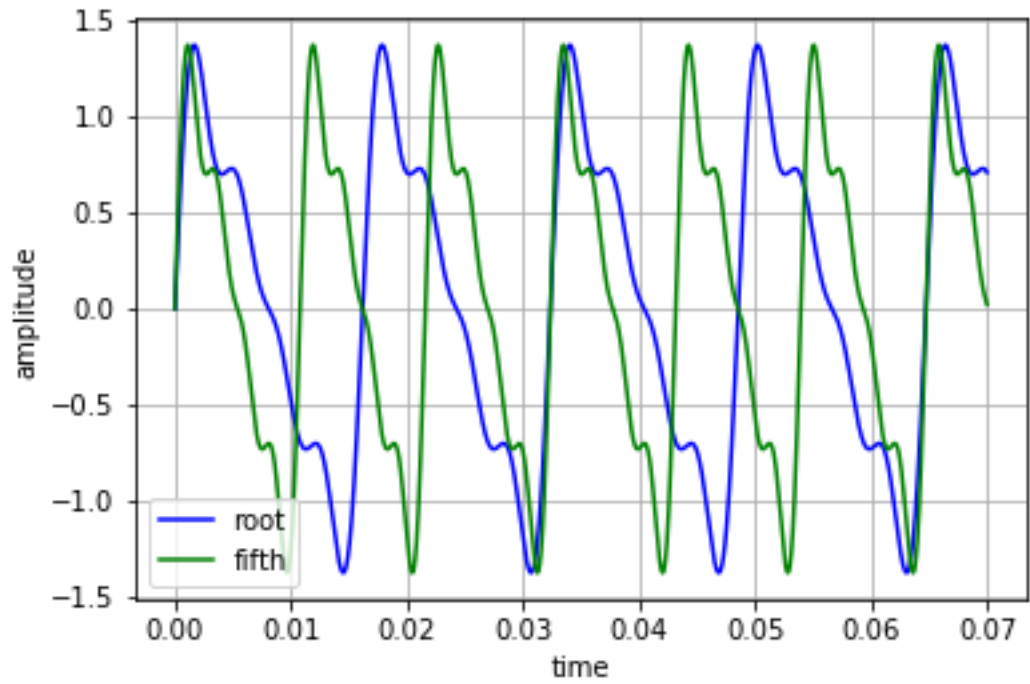


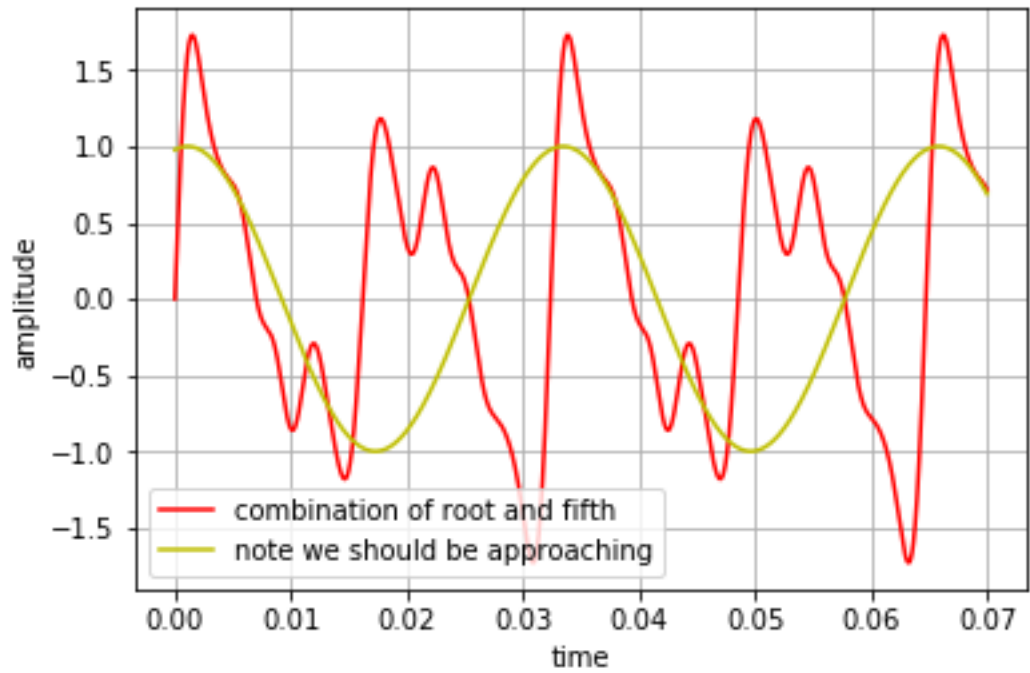
$$f_{F\#} = 82.5 \text{ Hz}$$

$$f_B = 55 \text{ Hz}$$

$$f_{F\#} - f_B = 27.5 \text{ Hz}$$

$27.5 \text{ Hz} = f_B'$  (one octave below  $f_B \Rightarrow$  threshold of human hearing)

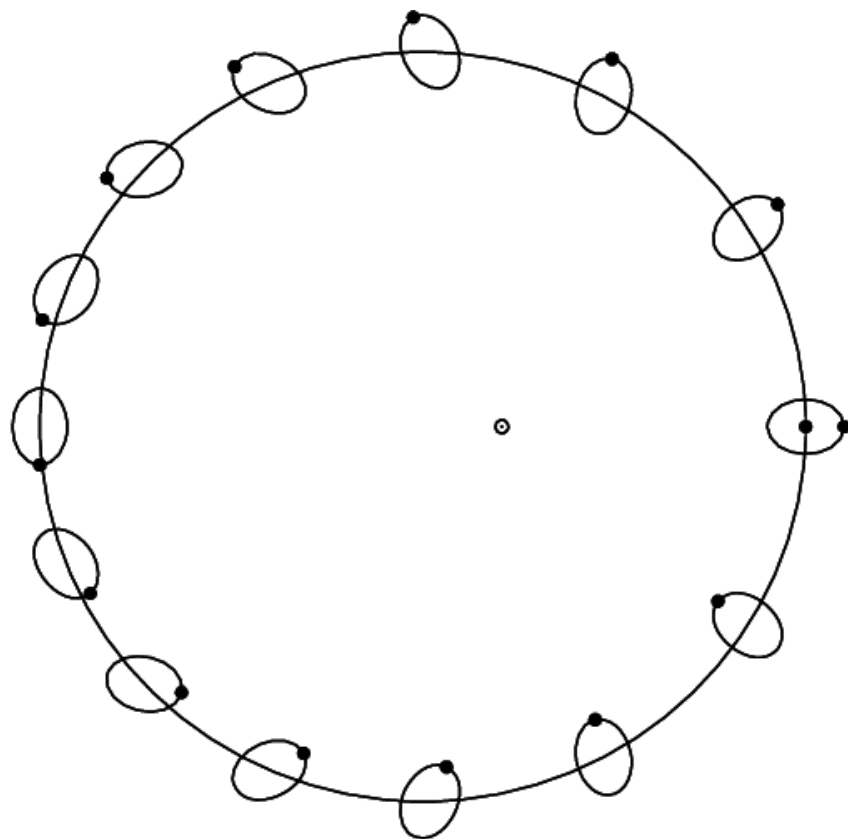






$$1 = \frac{27}{16}A + \frac{3}{2}B + \frac{5}{4}C$$

$A, B, C \in \{\text{integers}\}$



$$f_{\text{orbit}} = \frac{1}{T_{\text{orbit}}} = \frac{1}{87.969 \text{ days}}$$

$$f_{\text{spin}} = \frac{1}{T_{\text{spin}}} = \frac{1}{58.646 \text{ days}}$$

$$\text{“Fundamental of Mercury”} = \frac{1}{f_{\text{spin}} - f_{\text{orbit}}} = 174.938 \text{ days}$$

FIRST HARMONIC PLANETARY THEORY

The image displays three musical staves, each representing a different planetary chord. Each staff consists of a treble clef and a bass clef. The notes are arranged in a specific order from top to bottom: Mercury, Venus, Earth, Mars, Jupiter, and Saturn. The chords are as follows:

- Staff 1: Mercury (G4), Venus (A4), Earth (B4), Mars (C5), Jupiter (D5), Saturn (E5)
- Staff 2: Mercury (F4), Venus (G4), Earth (A4), Mars (B4), Jupiter (C5), Saturn (D5)
- Staff 3: Mercury (E4), Venus (F4), Earth (G4), Mars (A4), Jupiter (B4), Saturn (C5)

Mercury  
Venus  
Earth  
Mars  
Jupiter  
Saturn

FIGURE 6.2. Alternate planetary chords of 1599

from  
*The Music of the Heavens*  
Bruce Stephenson



223 synodic periods of the Moon (lunations) at 29.5306 days each	= 6,585.32 days
19 eclipse years of the Sun at 346.6201 days each	= 6,585.78 days
239 anomalistic months of the Moon (revolution from perigee to perigee) at 27.55455 days each	= 6,585.54 days

from

*Totality: Eclipses of the Sun*

Fred Espenak, Ken Willcox, and Mark Littmann

