

Doppler Effect

moving observer (v_o)

- When moving toward source ($v_o < 0$)
 - Time between waves peaks decreases
 - Frequency is higher
- When away from source ($v_o > 0$)
 - Time between waves peaks increases
 - Frequency is lower
- $f_o = f_s (1 - v_o/v)$

Combine: $f_o = f_s (1 - v_o/v) / (1 - v_s/v)$