3.15) Peaks: \( f = n f_o + \frac{\Delta \phi}{2\pi} f_o \)

A) Nulls: \( f = n f_o + \left(1 + \frac{\Delta \phi}{2\pi}\right) f_o \)

With \( f_o = 2 \text{ MHz} \), peak at 850.3 MHz corresponds to \( n = 425 \)

B) Peaks at \( n = 426 \) and \( n = 427 \) give peaks at \( f = 852.33 \text{ MHz} \) and \( f = 854.33 \text{ MHz} \)

These results are consistent with the peak locations in the figure.

3.16) \( \text{Prob}\left[ P_r \geq \bar{P}_r \right] = 0.368 \)

3.17) 12.9 dB

3.18) \( r = 73.76 \text{ kbps} \)

3.19) A) \( f_{d1} - f_{d2} = 154.4 \text{ Hz} \)

B) \( t_{n-n} = 6.476 \text{ ms} \)

C) Slow fading, \( v = 477,400 \text{ mph} \)