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

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

3.17) 12.9 dB

3.18) \( r_{max} = 73.75 \text{ kHz} = 73.75 \text{ kpps} \)

3.19) A) \( f_{d1} - f_{d2} = 59.61 \text{ Hz} \)
B) \( t_{n-n} = 16.78 \text{ ms} \)
C) \( v = 1.24 \times 10^6 \text{ mph} \)