

9.41 Given a parabolic dish antenna with a diameter $d = 10\lambda$, use Module 9.4 to select the highest value of the taper factor α without having the beamwidth exceed 6° .

Solution: At $\alpha = 0$, $\beta = 5.89^\circ$. By incrementally increasing α , the beamwidth widens, but the sidelobe levels drop. At $\alpha = 0.21$, $\beta = 6^\circ$.

