

3.7.1

3.7.1 (C)

The problem should read "place a zero- and first-order null at $u=0.285$ and $u=0.625$." First and second-order constraints just make the beam pattern flat. A zero-order null is needed to make the beam pattern = 0.

- The beam pattern with zero and first-order nulls is shown in the top panel (4 total constraints). It is very similar to the 4 zero-order constraint beam pattern, with a slightly narrower and deeper null region.
- The beam pattern with zero, first, and second order constraints (6 total constraints) is shown in the bottom panel. The 6 constraints give a wider and deeper null region, but at the expense of higher sidelobes.

Problem 3.7.1

