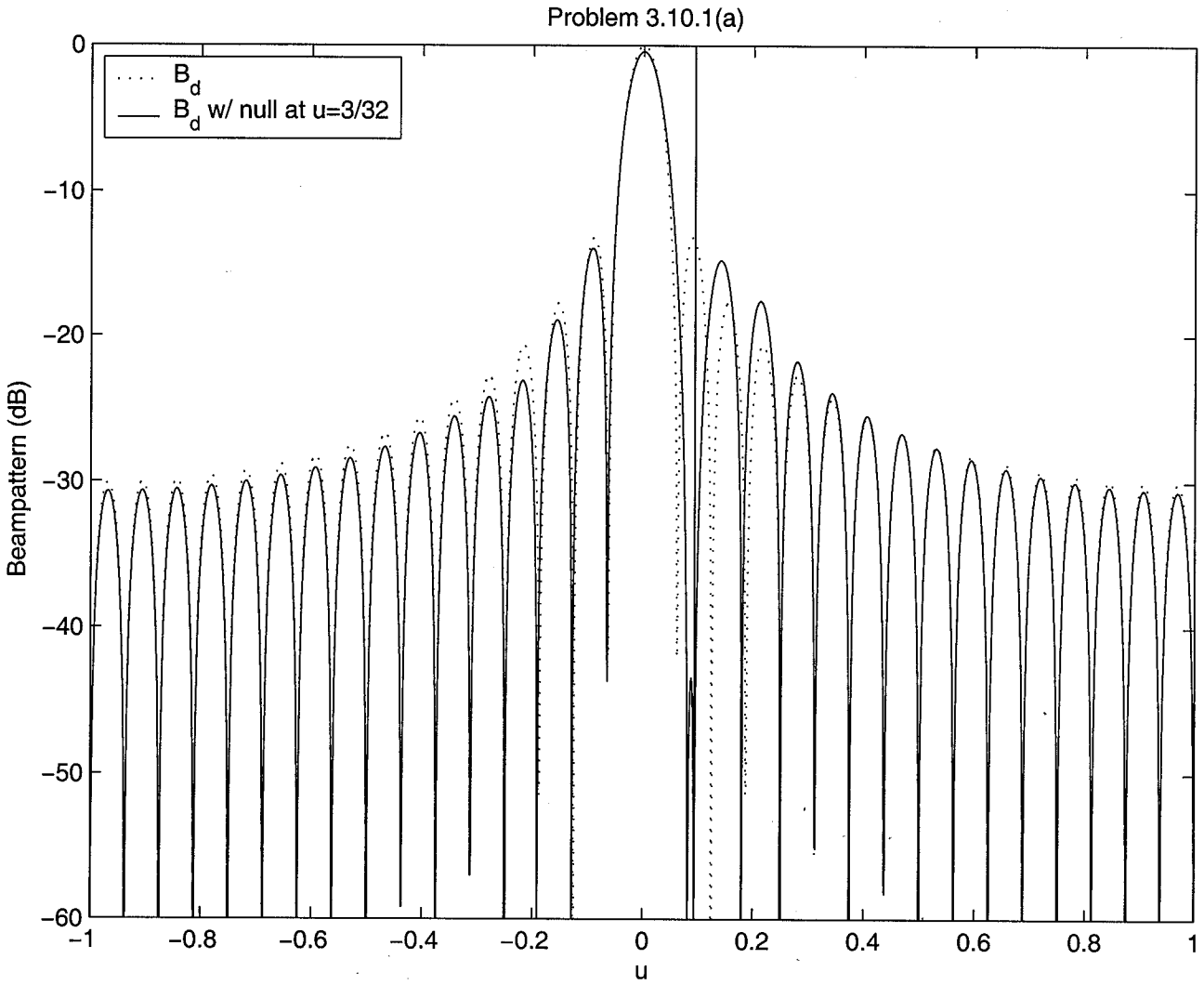
3.10.1 a

$w_d = v_{bs}(u=0)$

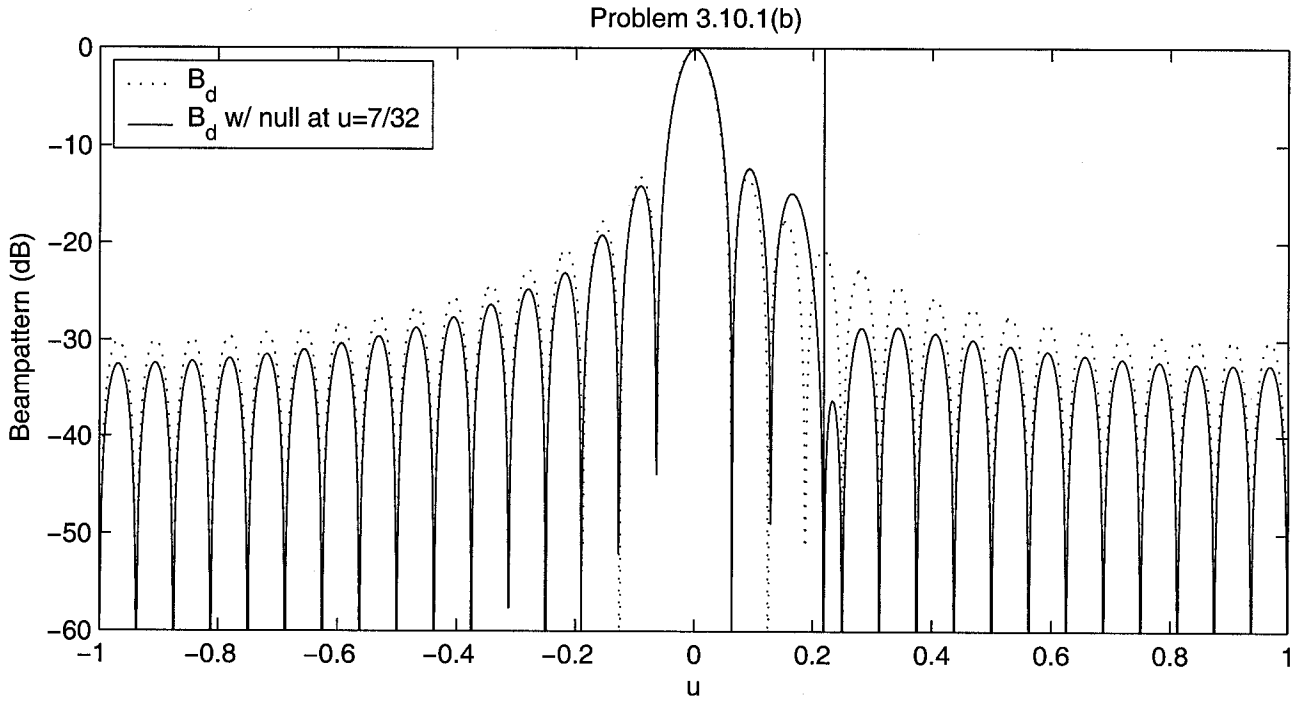
Null constraint $C = v_{bs}(u=3/32)$, $P_c^{\perp} = I - C(C^{\#}C)^{-1}C^{\#}$

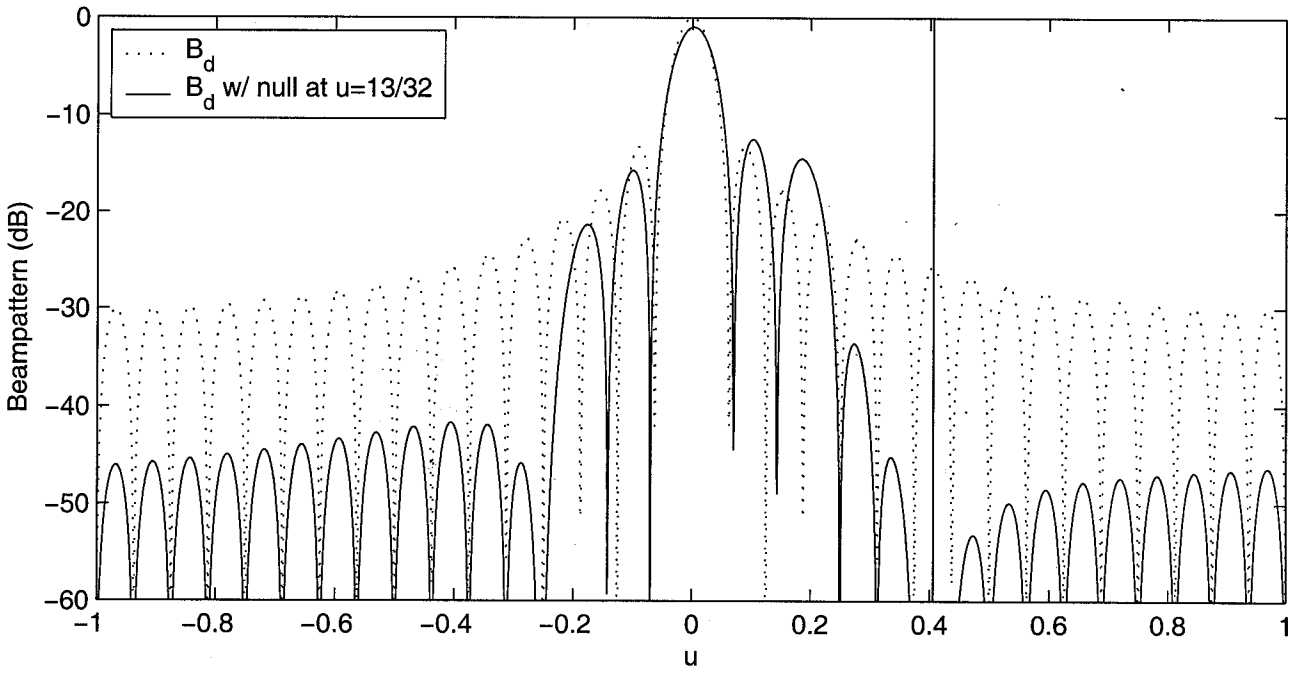
$w_n = P_c^{\perp} w_d$

- Null within beamspace region causes little deviation from B_d.



b) Nulls outside Beamspace region are harder to form, causing large deviations from desired pattern - have to suppress beam pattern over a large region to get the null.





c) Steering causes large drop-off in sidelobes.
Null is formed with little degradation to B_d.