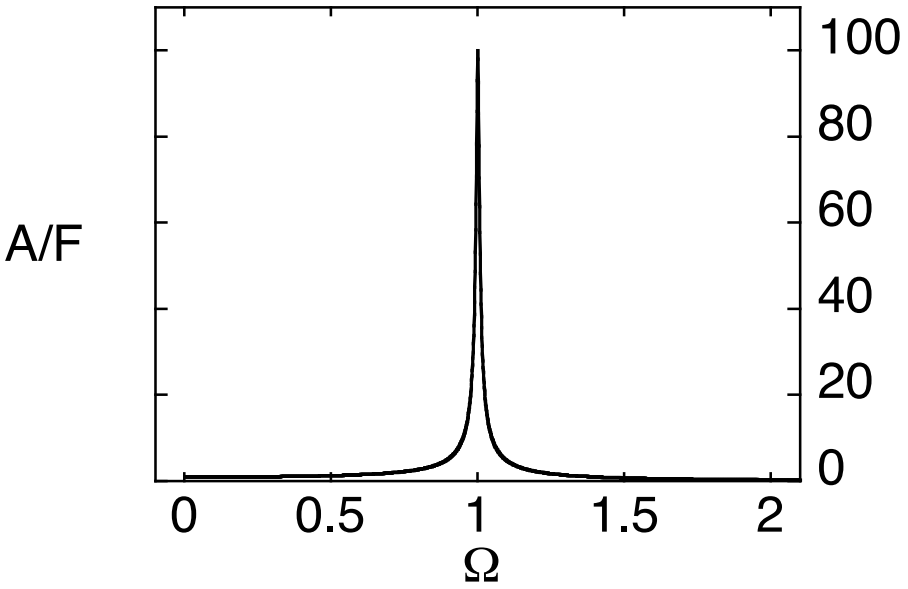
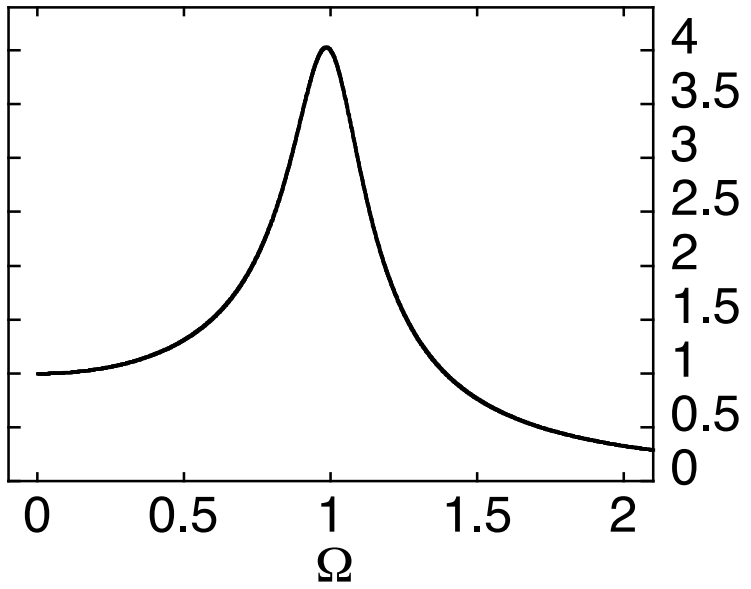
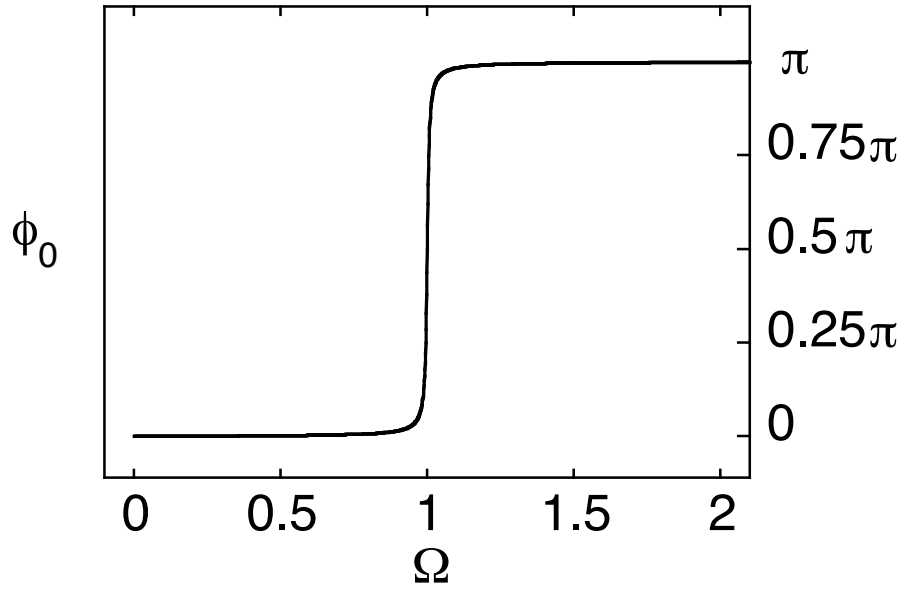
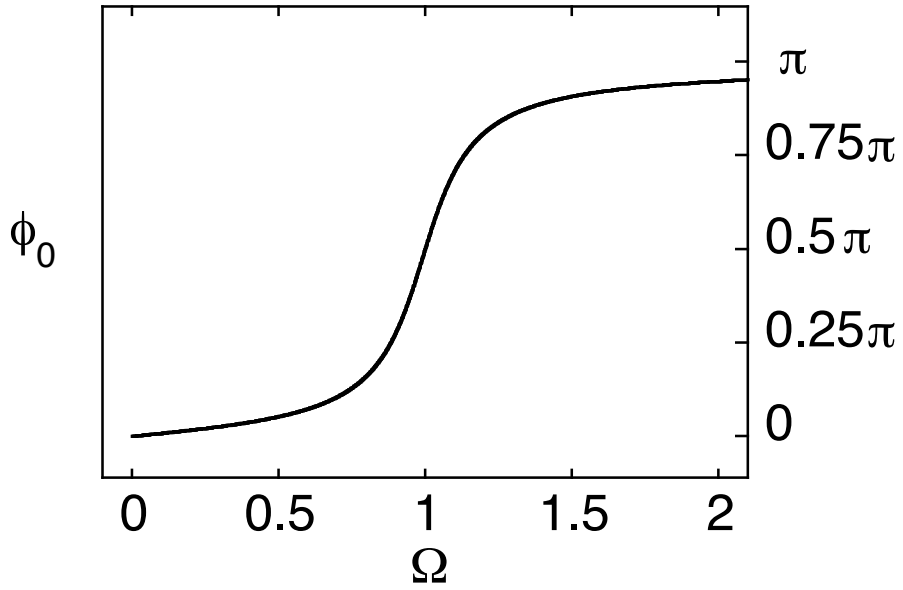


—β = 0.01; p = 0.005 << ω_0= 1



—β = 0.25; p = 0.125 < ω_0= 1