A hybrid procedure to study the characteristics of the circular loop antenna (CLA) placed coaxially relative to a conducting body of revolution (CBOR) is presented. The procedure uses the well known theory for the thin wire CLA analysis that is based on Fourier series expansion, with the analysis based on numerical computation of Green's functions for bodies of revolution. The procedure is general and can be applied to study the characteristics of CLA placed coaxially relative to any CBOR. The input admittance computed using this procedure for loop/sphere case is in good agreement with published results