Ground states for an Hartree-Fock type system

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We introduce an Hartree-Fock type system made by two Schrödinger equations in presence of a Coulomb interacting term and a *cooperative* pure power and subcritical nonlinearity depending on a parameter $\beta \geq 0$.

We present some results about the existence of radial ground states solutions and their *semitriviality* or *vectoriality* covering the whole range $\beta \geq 0$.