Electrodynamics for neutron stars: generalized analytical solutions MICHAEL ROTONDO, VLADIMIR POPOV, REMO RUFFINI, SHE-SHENG XUE, ICRANet and Dipartimento di Fisica - Università di Roma "La Sapienza" — The relativistic Thomas-Fermi equation and energetic equation of beta equilibrium are used to describe degenerate neutrons, protons and electrons in neutron stars. The analytical approach is adopted to found equilibrium configurations which obey the global neutrality. Several generalized exact solutions are presented and discussed.

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