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## The strong force doesn't exist

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After one century of phenomenological formalism, the calculation of the binding energy of the simplest bound nucleus, the deuteron, remains a puzzle because of misconceptions (nucleons orbiting around nothing, charge independence, centrifugal barrier, strong force & Co, magic numbers, unobservable observables, virtual particles...). Nuclear Physics A considers that electromagnetism “does not match the state of the art in nuclear physics studies”, ignoring the magnetic moments of the nucleons, discovered 70 years ago. In fact, the magnetic repulsion between nucleons is equilibrated STATICALLY by the not so weak electric attraction induced by a proton on a not so neutral neutron. Applying only fundamental laws and constants, WITHOUT FIT, the binding energies of nuclei have been obtained from the STATIC equilibrium between the attractive  $1/r$  electric Coulomb potential and the repulsive  $1/r^3$  magnetic Poisson potential, essentially between a proton and a neutron. On the graph below, the saddle points, unique for a given nucleus, coincide with the  $2H$  and  $4He$  experimental nuclear binding energies. This is not by chance, it proves the electromagnetic nature of the nuclear energy. The great discoveries in physics are condensed into simple formulas:  $E = h\nu$ ,  $E_e \sim 1/r$ ,  $E_m \sim 1/r^3$ ,  $E = mc^2$ ,  $E = \alpha^2 mc^2$  and, now,  $E = \alpha mc^2$  for the nuclear energy, the missing link between mass and chemical energies. The make-believe conventional nuclear theories will disappear as geocentrism, phlogiston, caloric, aether, plum-pudding model....

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