Bethe-Salpeter equation applied to Energy Levels of Kaonic Hydrogen DAVID OWEN, Physics Department, Ben Gurion University, ROGER BARRETT, Retired — We apply, for the first time, the spin-1/2 - scalar formalism derived by Owen (Phys. Rev. D42, 3534(1990);Found. of Phys. 24, 273(1994)) to the kaonic hydrogen. We generalized the previously derived formalism to include both the finite size of the kaon and proton and calculate the energy level including all recoil corrections. The developed formalism can be extended to all orders in α and to the case in which renormalization is required.

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