

Abstract Submitted
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A New Dirac Delta Function Formalism Shows that the Self Energy of a Classical Charged Point Particle is Zero KENNETH BRAND, Pratt & Whitney — A new formalism for the Dirac delta function is presented. An important feature of this formalism is that it enables coordination among different delta functions. Using this method to find acceptable forms for the standard, non-covariant and covariant scalar electromagnetic green functions leads to constraints on these representations. Applying appropriate representations of the green function to the problem of finding the classical electromagnetic self energy of a charged point particle shows that the self energy is not infinite but actually zero.

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