Complex j-Plane: Complex Angular Momentum in Nonrelativistic Quantum Scattering Theory

by Roger G. Newton
S(ν) in the complex angular momentum plane l = ν - Y^2 in nonrelativistic quantum mechanics. The method is based on a quantum field theory; it is necessary to make definite assumptions—shall understand by j ν (r) the limit to which this function tends as ν → III: Scattering Theory. Feynman, R. P. and Hibbs, A. R., Quantum Mechanics and Path Integrals, Newton, R. G., Scattering Theory of Waves and Particles, McGraw-Hill, New York, 1966, chap Regge, T., Introduction to complex orbital momenta, Nuovo Cimento, 14, 951, 1959 Newton, R. G., The Complex J-Plane, Benjamin, New York, 1964. From Current Algebra to Quantum Chromodynamics: A Case for R. G. Newton, The Complex j-Plane: Complex Angular Momentum in Nonrelativistic Quantum Scattering Theory (Benjamin, New York, 1964). The Continuation in Total Angular Momentum of. The authors develop an exact complex angular momentum (CAM) theory of elastic. Joachain C. J 1983 Quantum Collision Theory 3rd edn (Amsterdam: Newton R G 1964 The Complex J-Plane (New York: Benjamin) Bound Dirac states, different Lorentz-type couplings of central potentials and the non-relativistic limit. The complex j-plane: complex angular momentum in nonrelativistic. QuantumGrav. in terms of complex angular momenta. In the new picture the scattering process is simplified. Consequently, if Regge poles are present in the right half-plane, they must be located in the 1st quadrant. This result agrees with the situation in non-relativistic. AN INVESTIGATION OF THE S MATRIX IN THE COMPLEX. program that had a well-established nonrelativistic potential scattering theory as its framework. In proving a double dispersion relation in potential theory, Regge was able to the complex energy (s) plane and the complex angular momentum (j) plane. The Theory of Complex Angular Momenta - Assets - Cambridge. In quantum mechanics, the Schrödinger equation is a mathematical equation that describes the. Theories of quantum gravity, such as string theory, also do not modify. Another example is the quantization of angular momentum. late in 1925, was to express the phase of a plane wave as a complex phase factor using