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**Relativistic Treatment of Spin-zero Particles Subjected to the Shifted**
**Tietz-Wei Potential Model**
C. A. Onate
*Physics Programme, Department of Physical Sciences, Landmark University, Omu-Aran, Nigeria and*
*Department of Physics, University of Benin, Nigeria*
A. N. Ikot*∗* and M. C. Onyeaju
*Theoretical Physics group, Department of Physics,*
*University of Port Harcourt, P.M.B. 5323 Choba Port Harcourt, Nigeria*
E. E. Ituen
*Theoretical Physics group, Department of Physics, University of Uyo, Nigeria*
E. Aghemenloh and O. Ebomwonyi
*Department of Physics, University of Benin, Nigeria*

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Abstract
The approximate solutions of the Klein-Gordon equation with the shifted Tietz-Wei potential
function are thoroughly studied for Klein-Gordon equation with both 2*V* and *V* potentials by usinga suitable approximation scheme for the centrifugal term in the framework of the supersymmetric approach. The non-relativistic limits in both cases are obtained, and the numerical results are computed. We have equally investigated the Fisher information on the shifted Tietz-Wei potential function in the case of the non-relativistic limit of the Klein-Gordon equation with potential *V* because this is only possible in the non-relativistic regime. The Fisher information is observed to be inversely proportional to both *Ch* and *bh*, where *Ch* is the optimization parameter and *bh* = *β*(1 *− Ch*), with *β* being the Morse constant.

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