



Contribution ID: 107

Type: **not specified**

Thermodynamic Properties of Duffin Kemmer Petiau oscillator in a magnetic field with EUP

Wednesday, 15 November 2023 10:00 (15 minutes)

In this paper, we study analytically 2D bosonic oscillator under the influence of an external magnetic field in Anti de Sitter space, we expressed the energy eigenvalues and the corresponding wave function of the scalar case by Jacobi polynomials and we noticed that the energy remains discrete even for large values of the principal quantum number. For the vector case, since the problem is almost impossible to solve so we used the non relativistic limit to obtain the spectrum which shows that there is an additional term coming from the spin orbit with the interaction of the deformation.

At last, we analysed the thermodynamic properties of the system and obviously it showed that the results affected by the deformation of the space.

Primary author: Dr SEK, Lakhdar (University of Eloued)

Presenter: Dr SEK, Lakhdar (University of Eloued)

Session Classification: Partner

Track Classification: Partner