

武汉物数所理论交叉学术交流系列报告

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Electron correlation trends in Ca^+

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演讲人简历:

Dr. Sahoo got his PhD at Indian institute of Astrophysics in 2006. He was the guest scientist at GSI Germany, Post-Doc at Max-Planck Institute for the Physics of Complex Systems, Germany, Post-Doc and Project Leader at KVI, Netherland. The Awards and honors he got include *Young international Scientists Fellowship award* from the Chinese Academy of Sciences, Professor S. N. Ghosh Young Scientist Award from Indian Society of Atomic & Molecular Physics, INSA medal for Young Scientists award from the Indian National Science Academy. His research focuses on the high precision atomic many-body theory and PNC in atomic systems. He has over 90 publications in peer reviewed journals.



Abstract: Ca^+ is considered to be one of the most interesting systems to carry out high accuracy theoretical studies. This ion has been under taken for atomic clock and for quantum processing experiments for which many high precision measurements are being performed. On the other hand, comparisons of these measured data with the theoretical calculations are used to test the validity of the atomic many-body methods. In this talk, I shall discuss about relativistic many-body methods in the relativistic coupled-cluster (RCC) framework and demonstrate the trends in the correlation effects for evaluating the hyperfine structure constants, electric quadrupole moments and g_j factors of few low-lying states in Ca^+ .

主办单位: 武汉物数所理论与交叉研究部