

Abstract Submitted
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A Diffusion Monte Carlo study of spin polarized Fermi gases

SUMITA DATTA, S. N. Bose National Centre for Basic Sciences, India — S-wave BCS super-fluid with unequal spin population and short-range interaction, phase separates into a BEC super-fluid and a fully polarized Fermi gas. In addition to these two states it has been suggested that there are some exotic states called FFLO states (Parish et al, Nature Physics, Vol. 3, Feb 2007). We apply Feynman Kac method to Li-6 to search for the signatures of the above states both at zero and finite temperature and to study the effect of non-perturbative treatment on its phase diagram.

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