

Magnon BEC in antiferromagnets with Suhl-Nakamura interaction

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The Bose-Einstein condensation (BEC) of magnons and Spin Superfluidity were discovered in 1984 in superfluid $^3\text{He-B}$ ¹. It manifests itself by coherent precession of magnetization, even in presence of the inhomogeneous static magnetic field. For the last 25 years 5 different magnon BEC states in superfluid ^3He have been found ². The possibility of Spin Superfluidity in antiferromagnets with coupled nuclear-electron precession was predicted by Yu.M. Bunkov ³. It can take place in the antiferromagnets with so-called Suhl-Nakamura interaction. The predictions were successfully confirmed. It was found that the coupled nuclear-electron precession shows all properties of coherent spin precession and magnon BEC ⁴. This study was partly supported by the Siberian Branch of the Russian Academy of Sciences (Grant N28).

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