NMR on Texture of Rotating Superfluid ^{3}He-A phase in a narrow cylinder

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Textures of the rotating superfluid ^{3}He-A in a single narrow cylinder have been studied by NMR measurement. Textures are determined by the effects of the wall, the magnetic field, the dipole interaction, the flow of the superfluid and so on. In a narrow cylinder, the characteristic textures such as Mermin-Ho texture[1] can be formed because of the large effect of the wall. A texture shows a characteristic NMR spectrum and we can determine the texture of the observed spectrum by comparing the resonance frequency of NMR spectrum with the calculated one of the spin wave mode[2]. We present the nucleation and the transformation of texture of superfluid ^{3}He-A phase in a single narrow cylinder at various temperature, magnetic field and rotational speed.

1. N. D. Mermin and Tin-Lun Ho, Phys. Rev. Lett. **36**, 594 (1976)
2. T. Kunimatsu *et al*, J. Low Temp. Phys. **171**, 280 (2013)

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