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2D Larkin-Imry-Ma state of deformed ABM phase of superfluid ^{3}He in "ordered" aerogel VLADIMIR DMITRIEV, ANDREY SENIN, ALEXEY YUDIN, Kapitza Institute for Physical Problems of RAS — We report NMR studies of high temperature superfluid phase of ^{3}He in so called "ordered" aerogel[1] which strands are almost parallel to each other. Previously, it was found that the NMR properties of this phase depend on whether it is obtained on cooling from the normal phase or on warming from the low temperature phase[2]. These two types of high temperature phase (called as ESP1 and ESP2) correspond to Anderson-Brinkman-Morel (ABM) phase with large polar distortion and with orbital vector being in 2D Larkin-Imry-Ma (LIM) state. Here we present results which show that the observed difference in NMR signatures of the ESP1 and the ESP2 states is due to that the corresponding 2D LIM states can be anisotropic. In the ESP1 phase the anisotropy is absent or small, while in the ESP2 phase the anisotropy is large. NMR data have allowed us to estimate values of these anisotropies.

[1]The aerogel sample was produced by R.Sh. Askhadullin, P.N. Martynov and A.A. Osipov (Leypunsky Institute for Physics and Power Engineering, Obninsk, Russia)
[2]R.Sh. Askhadullin, V.V. Dmitriev, D.A. Krasnikhin, et al., *JETP Lett.* **95**, 326 (2012)

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