

JETP Letters 2016 vol.104 N5, pages 315-318

---

## Anomalous nuclear spin-lattice relaxation of $^3\text{He}$ in contact with ordered $\text{Al}_2\text{O}_3$ aerogel

Alakshin E., Zakharov M., Klochkov A., Kuzmin V., Safiullin K., Stanislavovas A., Tagirov M.  
*Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia*

---

### Abstract

© 2016, Pleiades Publishing, Inc. Spin-lattice relaxation of  $^3\text{He}$  in contact with the ordered  $\text{Al}_2\text{O}_3$  fiber aerogel has been studied at the temperature of 1.6 K in fields of 0.1–0.5 T by the pulsed nuclear magnetic resonance (NMR) method. An additional mechanism of the relaxation of  $^3\text{He}$  in aerogels is found and it is shown that this relaxation mechanism is not associated with the adsorbed layer. A hypothesis about the influence of intrinsic paramagnetic centers on the relaxation of gaseous  $^3\text{He}$  is proposed.

<http://dx.doi.org/10.1134/S0021364016170033>

---