

Knight shift in superconducting vanadium

Garifullin I., Garif'Yanov N., Salikhov R., Tagirov L.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

The Knight shift in metallic vanadium in the normal and superconducting states has been measured. In contrast to the previously obtained results, this shift appears to change after the transition to the superconducting state. The behavior of the Knight shift in the superconducting state in vanadium samples doped with iron impurities has been found to be different from that in the "pure" samples. As a possible explanation of the effect, the broadening of the peak of the density of states near the Fermi level due to the scattering of conduction electrons on the iron impurities and the earlier predicted impurity polarization shift of the NMR line are discussed. © 2008 Pleiades Publishing, Ltd.

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