

Abstract Submitted
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Bohr Weisskopf effect measurements using NMR-ON TAKASHI OHTSUBO, SUSUMU OHYA, Dept. of Phys., Niigata Univ., JAPAN, KATSUHIKO NISHIMURA, Faculty of Engineering, Toyama Univ., JAPAN, TAKUJI IZUMIKAWA, JUN GOTO, RI center, Niigata Univ., JAPAN, MINORU TANIGAKI, AKIHIRO TANIGUCHI, YOSHITAKA OHKUBO, YOICHI KAWASE, KUR, Kyoto Univ., JAPAN, SUGURU MUTO, Neutron Science Laboratory, KEK, JAPAN — The difference between the point nuclear magnetic structure and the finite magnetic structure is referred as Bohr-Weisskopf (BW) effect (hyperfine anomaly), which depends on the nuclear structure. If the spin and orbital contributions to the magnetic moment have opposite sign, the large BW effect is expected. Recently, we have measured BW effects using NMR-ON and Brute force (12T) NMR-ON method. For Sc isotopes ($A = 44, 44m, 46$ and 47) we determined the BW effects comparing the magnetic resonance frequencies in Fe and the magnetic moments from atomic beam method. We also deduced the large BW effect of -4.2% between ^{91}Y and $^{91}\text{Y}^m$ in Fe from the precise measurement of the field shift of resonant frequency. Furthermore, we determined the BW effects between ^{95}Tc and ^{96}Tc , and ^{106}Ag and $^{110}\text{Ag}^m$ comparing resonance frequencies of Brute force NMR-ON and those of the known NMR-ON results in Fe. These results will be discussed in terms of the shell model including core polarization and exchange current effects.

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