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NMR in New BiS₂-Layered Superconductor LaO_{0.5} $\mathbf{F}_{0.5}$ BiS₂¹ SHRISHTI YADAV, OSCAR BERNAL, California State University, Los Angeles, LEI SHU, JIAN ZHANG, Fudan University Shanghai — A new BiS₂-layered compound, LaO_{0.5} $\mathbf{F}_{0.5}$ BiS₂, was recently discovered to be a superconducting material $(T_c \sim 3 \text{ K}, \text{ ambient pressure and } \sim 10 \text{ K}, 2 \text{ GPa})$. We are conducting a Nuclear Magnetic Resonance study of LaO_{0.5} $\mathbf{F}_{0.5}$ BiS₂ to shed light on its superconducting properties as functions of temperature and magnetic field. Our study emphasizes the NMR of ¹⁹F nuclei between the temperatures of 15 K to 2 K. We present spectral parameters and spin-spin T_2 relaxation time data which occur above and below the superconducting state. Our data indicate changes of behavior below T = 10 K in a sample for which $T_c \sim 3$ K.

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