

Abstract Submitted
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Superconductivity Study of $\text{LaO}_{0.5}\text{F}_{0.5}\text{BiS}_2$ using Nuclear Magnetic Resonance¹ SHRISHTI YADAV, OSCAR BERNAL, California State University, Los Angeles, LEI SHU, JIAN ZHANG, Fudan University, Shanghai, DUYGU YAZICI, KEVIN HUANG, M. B. MAPLE, University of California, San Diego, La Jolla, CA, CALIFORNIA STATE UNIVERSITY TEAM, FUDAN UNIVERSITY TEAM — $\text{LaO}_{0.5}\text{F}_{0.5}\text{BiS}_2$ is a member of the recently discovered class of BiS_2 -layered superconductors. It has a superconducting temperature T_c close to 3 K when prepared under normal conditions. Pressure makes T_c as high as 10 K. T_c is also close to 10 K at ambient pressure for samples synthesized under pressure (2 GPa). We are conducting a ^{19}F -NMR study in a polycrystalline powder of $\text{LaO}_{0.5}\text{F}_{0.5}\text{BiS}_2$ ($T_c \sim 3$ K). We report static and dynamic NMR parameters as functions of temperature, between 1.8 and 300 K. Our data show changes of sample behavior on cooling below both 10 and 3 K, and a modulation on the spin-echo-amplitude decay, which we discuss in some detail.

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