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# STUDY OF LOCAL STRUCTURE AND MAGNETISM IN HIGH-Tc COPPER OXIDE SUPERCONDUCTORS

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ABSTRACT

This talk will focus on the muon-spin rotation (μSR) study of local magnetism of Sr-doped $La_2CuO_4$. Emphasis will be placed on magnetic order as detected by local and bulk probes with local atomic environments studied by x-ray absorption fine structure (XAFS). Correlations between the μSR study of local magnetic ordering and the bulk magnetization study will be presented along with a discussion of the dependence upon oxygen stoichiometry. Results will be presented for both superconducting phases and magnetic phases. Recent data which reveals the existence of local magnetic ordering in the hydrogen-doped $YBa_2Cu_3O_7$ system will also be discussed.

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