

ABSTRACT OF A CONTRIBUTED TALK TO THE
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Magnetic properties of $\text{Pr}_{55}(\text{La}_{1-y}\text{Sr}_y)_{45}\text{MnO}_3$ near the metal-insulator boundary

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It has been reported that the bandwidth-controlled manganite $\text{Pr}_{55}(\text{La}_{1-y}\text{Sr}_y)_{45}\text{MnO}_3$ exhibits bicritical features near the insulator-metal boundary at $y = 0.25$ ¹. We have performed an elastic neutron scattering experiment on a high-quality single crystal specimen of this system for $y = 0.20$ in order to study the interplay between the orbital, lattice and magnetic degrees of freedom near this boundary. At low temperatures this system exhibits charge/orbital and antiferromagnetic ordering of the CE-type (characteristic wavevector $\mathbf{Q} = (1/4, 1/4, 0)$ in cubic notation). The evolution of this ordering with temperature will be discussed in this talk.

¹ Y. Tomioka and Y. Tokura, Phys. Rev. B 66, 104416 (2002).

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