

Abstract Submitted
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Hall coefficient in the ground state of the charge stripe-ordered $\text{La}_{2-x}\text{Ba}_x\text{CuO}_4$ single crystals TADASHI ADACHI, NOBUAKI KITAJIMA, YOJI KOIKE, Department of Applied Physics, Tohoku University — Temperature dependence of the Hall coefficient, R_{H} , has been investigated in charge-spin stripe-ordered La-214 high- T_{c} superconductors [1]. Using the simplest stripe-ordered system of $\text{La}_{2-x}\text{Ba}_x\text{CuO}_4$, it has been clarified for the first time, to our knowledge, that both the behavior of R_{H} and its sign exhibit significant dependences on the hole concentration. That is, R_{H} is zero in the ground state of the charge- spin stripe order at $x = 1/8$, while it is negative in the less- stabilized state of the charge stripe for $x < 1/8$. These are interpreted as being due to the delicate balance of the contributions of the hole-like Fermi surface and the possible electron pocket, suggested from the recent quantum- oscillation experiments [2], arising from the formation of the charge-spin stripe order.

[1] T. Adachi *et al.*, arXiv: 0909.3452.

[2] N. Doiron-Leyraud *et al.*, Nature (London) **447**, 565 (2007).

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