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The effective field induced by Rashba interaction in ferromagnetic systems NORIYUKI NAKABAYASHI, GEN TATARA, Tokyo Metropolitan University — The spin motive force is widely used in spintronics. For example, it is demonstrated that domain wall motion is discussed by the spin motive force[1]. The spin motive force should be divided into the two effective fields: the effective electric and magnetic field. The electric field induced by Rashba interaction is estimated from equation of motion of conduction electron[1,2], while estimating the effective magnetic field in the same way are somewhat difficult. We estimate the effective magnetic field which is estimated by calculating the electric current[3]. The electric current is calculated in ferromagnetic metals in the presence of Rashba interaction.

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[3] A. Takeuchi and G. Tatara, J. Phys. Soc. Jpn. 81, 033705 (2012).

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