

These considerations lead one to the conclusion that the increase in the secondary emission observed by Hakayawa at the Curie point (at potentials above the critical value) should be due to an increase in the number of electrons returning with the same velocity as the primaries or with a slightly decreased velocity. This would mean that the energy of the structure electrons responsible for the conservation of spin in the micro-crystals of Heisenberg shows a sudden decrease at the Curie point and that these electrons are more easily driven out of the metal, thus enhancing the secondary electron current.

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¹ *Zeits. f. Phys.*, 1932, 75, 137.

² *Sc. Rep. Tohoku Imp. Univ.*, 1933, 22, 934.

³ *Proc. Roy. Soc.*, 1930, 128, 63.

⁴ See innumerable papers in the *Proc. Roy. Soc.*

⁵ *Proc. Roy. Soc.*, 1930, 128, 16.

⁶ Allen, *Photoelectricity* (Longmans).

⁷ *Proc. Roy. Soc.*, 1929, 124, 616.

⁸ Elam, *Distortion of Metal Crystals*, 1935.

Oberbeck's Vortices in Air.

OBERBECK'S vortices in water were studied by one of the authors.¹

A study of these in air was made on similar lines by using smoke as the tracing fluid. A beam of sunlight was incident in the direction of travel of the vortex. The beam was periodically interrupted by a rotating shutter and the smoke streaks were photographed by a powerful camera by means of the light scattered by them. By suitably controlling the interval between successive exposures overlapping of the several stages on the photographic plate was avoided. Fig. 1 shows a typical record.



Fig. 1.



Fig. 2.

