

Refutation of the Hall effect © Copyright 2018 by Colin James III All rights reserved.

We assume the apparatus and method of Meth8/VL4. The designated *proof* value is τ tautology. The 16-valued truth table is row-major and horizontal.

We evaluate the Hall effect as animated at en.wikipedia.org/wiki/File:Hall_Sensor.webm.

Figure 1: (1.1);

Figure 2: (2.1)



LET p q r s: green bar -; red bar +; top source -; bottom target +.
 Fig. 1 is green top to red bottom; Fig. 2 is red top to green bottom.

$$(p>q) > (s>r) \quad (1.2); \quad (q>p) < (s>r) \quad (2.2)$$

The two states of the Hall effect are either Eq. 1.2 or Eq. 2.2. (3.1)

$$((p>q)>(s>r)) + ((q>p)<(s>r)); \quad \text{TTTT TTTT TTFT TTTT} \quad (3.2)$$

Eq. 3.2 as rendered is *not* tautologous due to the single contradiction F value. This means the Hall effect is refuted and not confirmed as a theorem.

What follows is that application of the Hall effect to quantum models, skewed lattices, and brain dimensions is likewise *not* tautologous.