Area MT (V5) and the perception of motion

Salzman, C.D., Britten, K. H., Newsome, W. T. (1990) Cortical microstimulation influences perceptual judgements of motion direction. *Nature* **346,** 174 – 177.

http://www.nature.com/nature/journal/v346/n6280/pdf/346174a0.pdf

1. Describe how the authors trained the animals and how the animal was able to tell the experimenter what direction it believed the stimulus was moving?

2. Describe, in detail, the stimulus used? How was the direction and strength of the motion signal manipulated?

3. Describe how the authors isolated a small group of cells with the same preferred direction and how they then attempted to manipulate the response of these cells during the trial.

4. How did microstimulation change the behaviour of the monkey? What controls did they use to help to interpret their main finding?

5. Using this microstimulation paradigm, can you devise a test of whether these (or other) neurons encode the speed of the movement?