

Presentation Preference

Please check one:

- (PA) Paper only or Withdraw
- (PO) Poster only or Withdraw
- (NP) Paper or Poster (no preference)
- (PA1) Paper #1, Poster #2
- (P01) Poster #1, Paper #2

Scientific Section Preference

See Section descriptions starting on page 5. Check the Section best suited to your presentation:

- (AN) Anatomy & Pathology
- (BI) Biochemistry
- (CL) Clinical Research
- (CO) Cornea
- (EL) Electrophysiology
- (EY) Eye Movements, Strabismus & Amblyopia
- (GL) Glaucoma
- (IM) Immunology & Microbiology
- (LE) Lens
- (PH) Physiology & Pharmacology
- (RE) Retina
- (RC) Retinal Cell Biology
- (VI) Visual Psychophysics

Key Words

See instructions on page 4. Write the number of no more than 3 key words. Do not write the word.

1.

8	4	9
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2.

5	6	9
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3.

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Suggested Key Words

See instructions on page 4. Print words that were not on this year's list, but should be included in 1989.

1. _____
2. _____

A/V Requirements

See information on page 13.

- (OH) Overhead
- (MP) 16 mm movie projector
- (VE) Video equipment (contact AVA Tech directly)
- (OT) Other (specify)

Travel Grant

Check here if you are applying for a Travel Grant.

COMPLETE FORM ON REVERSE SIDE.

First (presenting) Author

- Member
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Provide full name, address and phone numbers of 1st author on abstract. This should be the address used by ARVO for Journal mailings etc.

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DETECTING THE ABSENCE OF MOTION, Preeti Verghese, Denis G. Pe
 Institute for Sensory Research, Syracuse University Syracuse, NY 13244,
 and H.B. Barlow, Physiological Lab., Cambridge University, U.K.

Consider a static display of n randomly placed dots. If one dot moves, it "pops out" and the observer detects it, as shown by the fact that he can identify which quadrant the dot is in. However, what if all but one of the dots move, does the stationary dot still "pop out"?

If there are up to 12 dots the stationary dot is detected reliably. If there are n dots ($n > 12$) then the stationary dot is detected with probability $12/n$, after correction for guessing. These results show that while detection of motion is a parallel process (independent of n), detection of absence of motion is a serial process.

