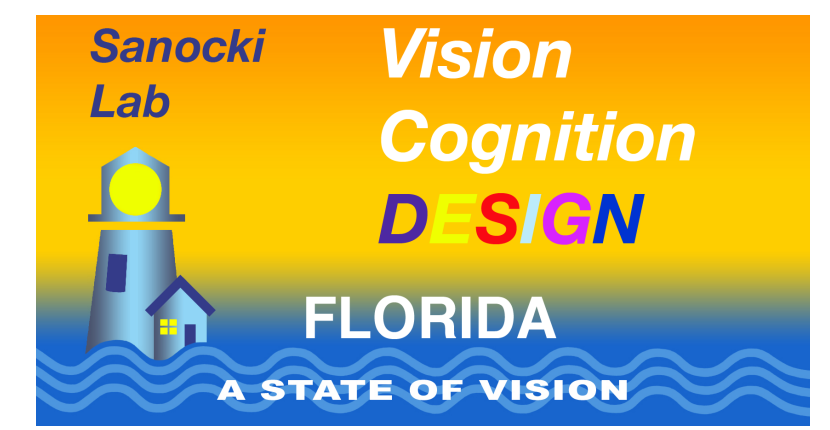


Long Blinks and Optimal Attentional Set

in Detecting Dynamic Events in Complex Scenes

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A new dynamic scene perception task yields a new, longer blink, as well as levels of "optimal set."

New Dynamic Scene Perception Task

A search task with dynamic object tokens, of four types. Tokens last 4 sec. Target tokens vary more than distractors on a critical dimension (location, motion type, color, or shape).

Over 60 sec trial, 144 tokens appear and change; 8 become targets (e.g., enter goal box). Subjects respond to targets.

Task Condition: Single (one token type) Multiple-Grouped (4 types, 1 per display cell) Multiple-Distributed (4 types, distributed throughout)

Response to targets: Complex (indicate display cell) or Simple (press button); (a between subjects factor)

Inter-Target Interval: Targets appeared at random times *and* could be close in time; intervals ranged from 1 to 10 sec

Results

Mean Hit Rates (big differences)

Condition	Mean Hit Rate
Single	81%
Multiple-Grouped	64%
Multiple-Distributed	48%

Inter-Target Interval Effects: For targets very close in time, there was a large deficit ("blink"), probably due to resources (fovea, attention) being concentrated on the first target. Performance then recovered to an optimal level over the next 3 - 6 sec, in most conditions. Differences in recovery are especially interesting.

