

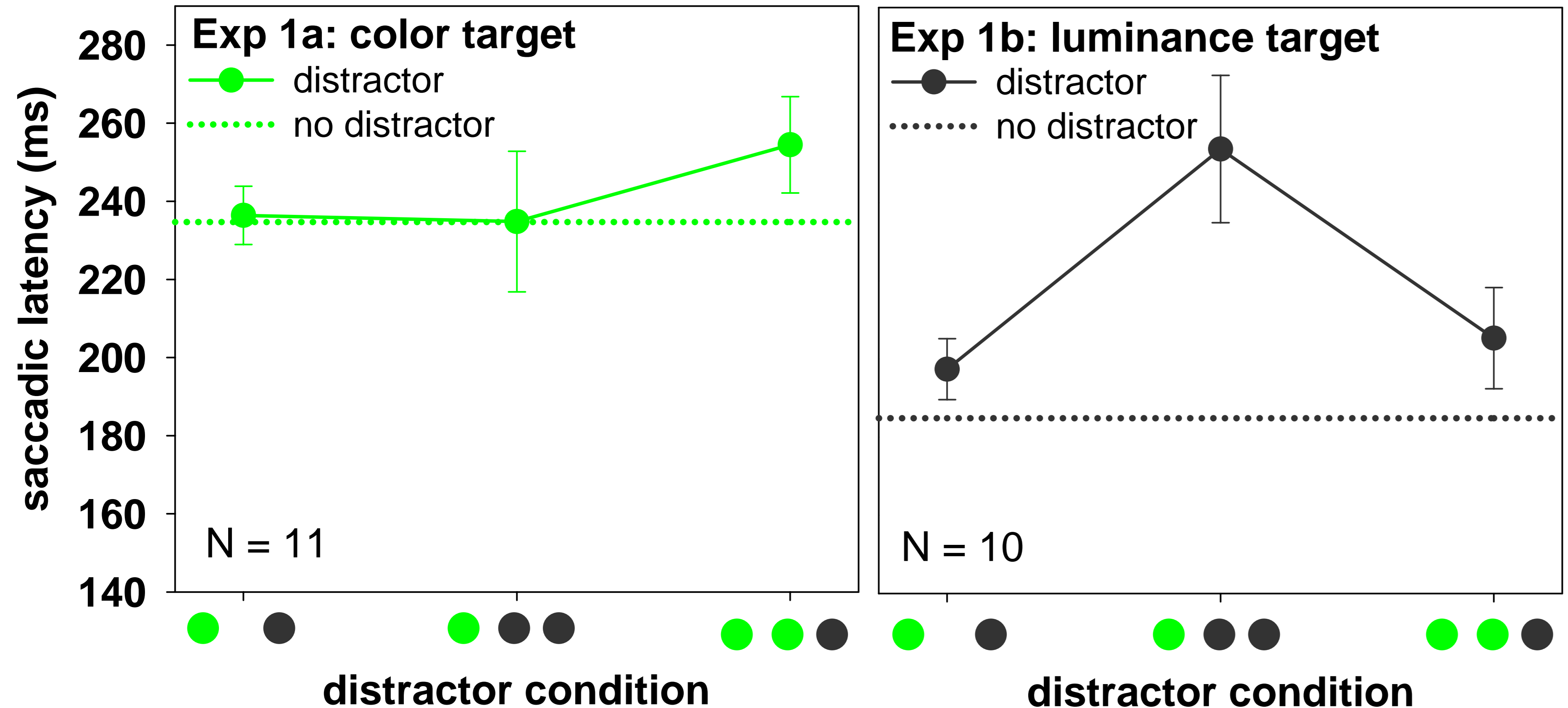
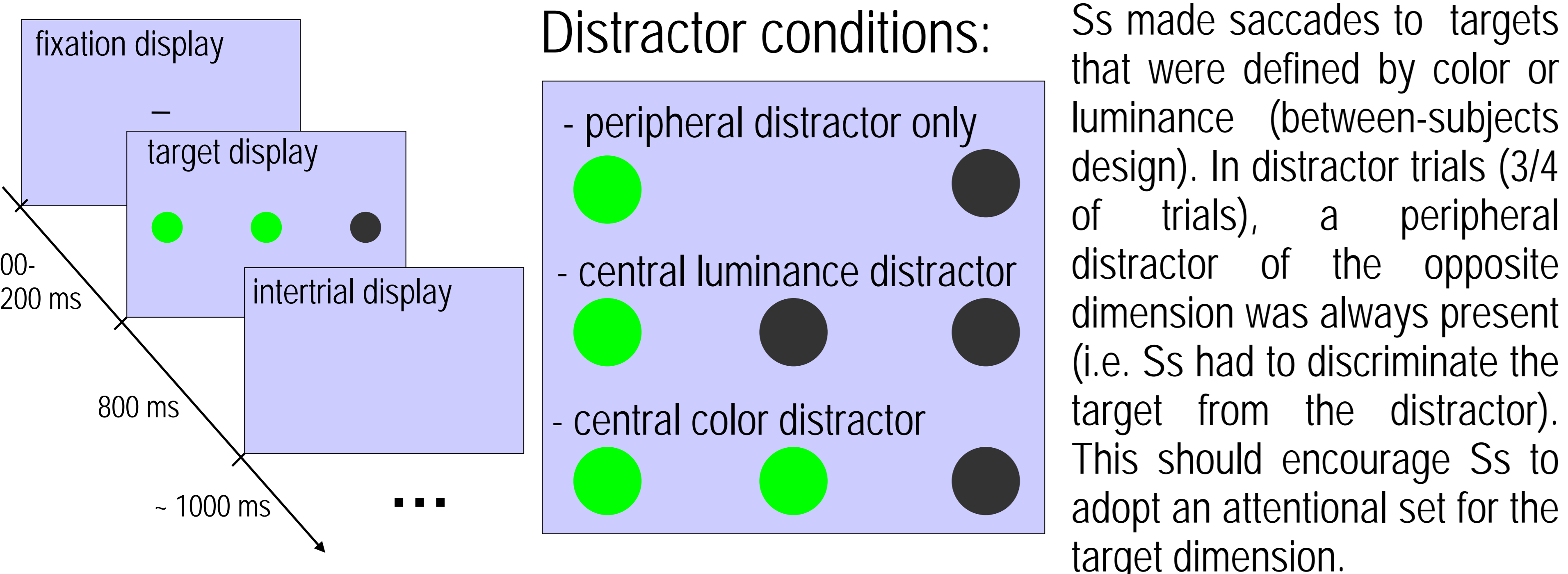
Distractors presented at the same time as the saccade target prolong saccadic latency (remote distractor effect, RDE; e.g. [1]).

Sumner, Adamjee, & Mollon (2002) [2]

found a robust RDE when both the target and the distractor were defined by luminance. They failed to find a RDE for color distractors. However, they did not include a condition where the target was defined by color.

- Would there be a RDE for color distractors when the target was likewise defined by color?
- Can differential effects of color and luminance distractors be explained by subjects having adopted an attentional set for color or luminance [3] ?

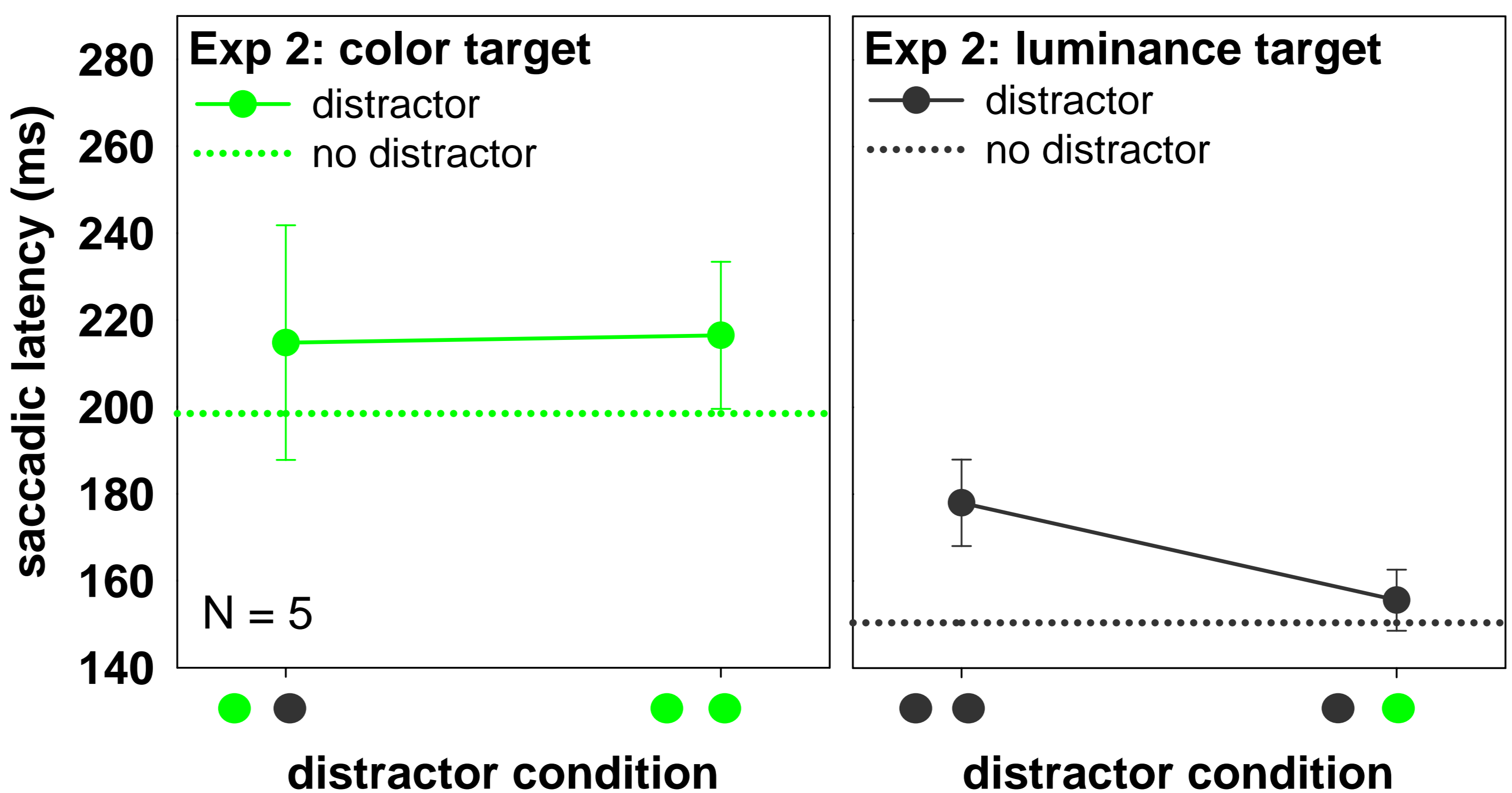
Exp 1: encouraging attentional set



- color targets: only the central color distractors produced a RDE
- luminance targets: central luminance distractors produce a larger RDE

Exp 2: discouraging attentional set

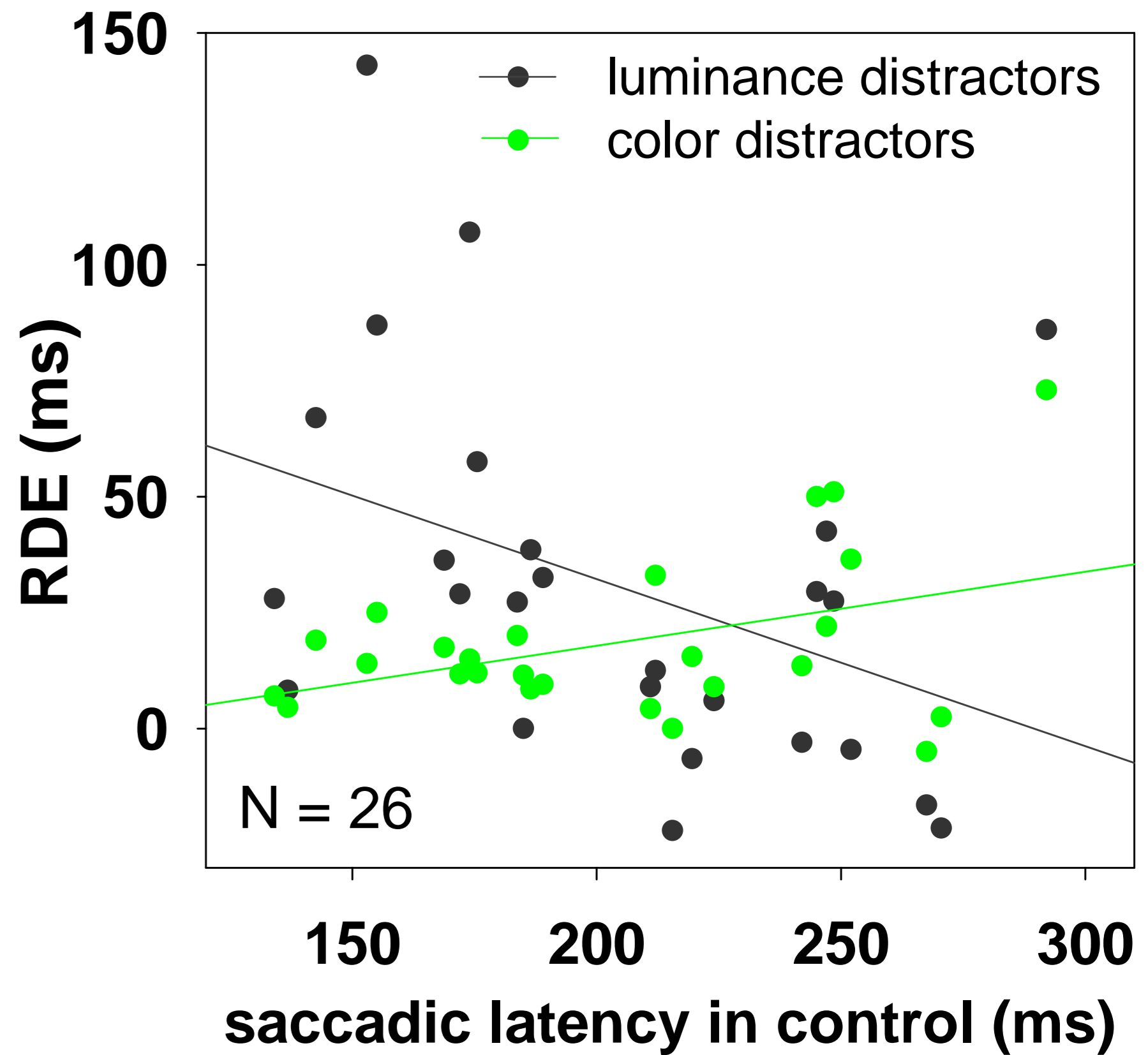
Target dimension was randomized across trials. Hence, on any given trial subjects did not know the target dimension in advance. Distractors were only presented centrally (i.e. the target was unequivocally the peripheral stimulus).



- color targets: RDE for color and luminance distractors
- luminance targets: RDE only for luminance distractors

The role of baseline saccadic latencies

Overall, latencies are longer for color than for luminance targets and longer in Exp 1 than in Exp 2. Might this affect the results?



Conclusions:

- Exp 1: RDE is larger when target and distractor share the same dimension
- Exp 2: RDE differences between same-dimension and different-dimension distractors are reduced → attentional set for the target dimension might play a role
- The RDE for color distractors increases with baseline saccadic latency, whereas the RDE for luminance distractors decreases. The differences in baseline latencies in the various conditions of Exp 1 and Exp 2 might have contributed to the changes in the RDE

[1] Walker, R., Kentridge, R. W., & Findlay, J. M. (1995). Independent contributions of the orienting of attention, fixation offset and lateral stimulation on human saccadic latencies. *Exp Brain Res*, 103(2), 294-310.
 [2] Sumner, P., Adamjee, T., & Mollon, J. D. (2002). Signals invisible to the collicular and magnocellular pathways can capture visual attention. *Current Biology*, 12(15), 1312-1316.
 [3] Folk, C. L., Remington, R. W., & Johnston, J. C. (1992). Involuntary covert orienting is contingent on attentional control settings. *J Exp Psychol Hum Percept Perform*, 18(4), 1030-1044.