

New Research published in Scientific Reports!

Congratulation to [Eckart](#) , [Paola](#) and [Concetta](#) who just published a new paper in Scientific Reports!

Zimmermann, E., Morrone, M. C. & Binda, P. (2018). Perception during double-step saccades, Sci Rep, 1 (8), 320. [PDF](#)

How the visual system achieves perceptual stability across saccadic eye movements is a long-standing question in neuroscience. It has been proposed that an efference copy informs vision about upcoming saccades, and this might lead to shifting spatial coordinates and suppressing image motion. Here we ask whether these two aspects of visual stability are interdependent or may be dissociated under special conditions. We study a memory-guided double-step saccade task, where two saccades are executed in quick succession. Previous studies have led to the hypothesis that in this paradigm the two saccades are planned in parallel, with a single efference copy signal generated at the start of the double-step sequence, i.e. before the first saccade. In line with this hypothesis, we find that visual stability is impaired during the second saccade, which is consistent with (accurate) efference copy information being unavailable during the second saccade. However, we find that saccadic suppression is normal during the second saccade. Thus, the second saccade of a double-step sequence instantiates a dissociation between visual stability and saccadic suppression: stability is impaired even though suppression is strong.

