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Color Contrast Induction

Benjamin Singer, Michael D'Zmura

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We report the results of psychophysical experiments on the intensive, spatial, temporal and chromatic properties of color contrast induction. Modulating the contrast of an annulus induces an apparent modulation of the contrast of a central disk, at isoluminance. Results of varying the size of the annulus suggest that mechanisms which control contrast gain are spatially localized, while results of varying the orientations of disk and annulus patterns suggest that the mechanisms are spatially isotropic. Results of varying the rate at which annulus contrast is modulated shows that mechanisms which mediate contrast induction have a lowpass temporal sensitivity that cuts off at about eight hertz. Results of an experiment on the interocular transfer of color contrast induction suggest that the induction has a cortical locus. finally, the results of varying the chromatic properties of disk and annulus suggest that the underlying mechanisms are partially, but not fully, chromatically selective.