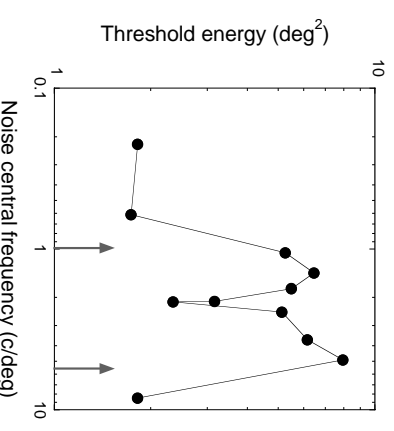
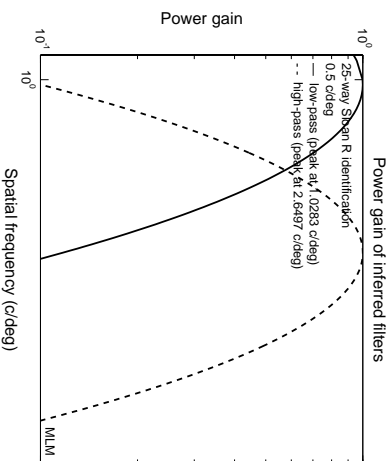
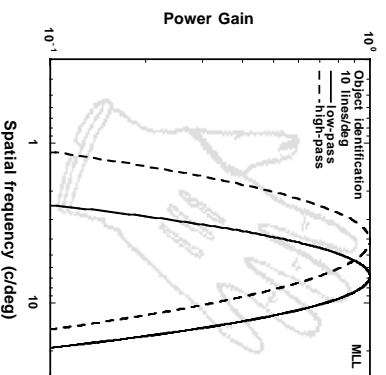
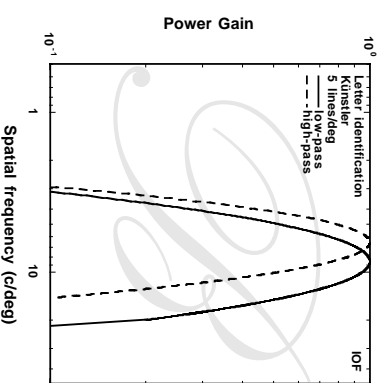
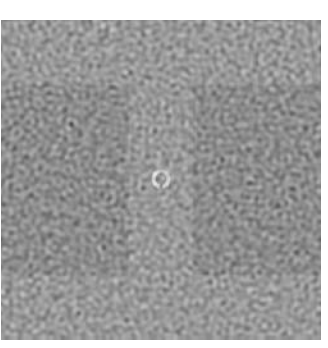
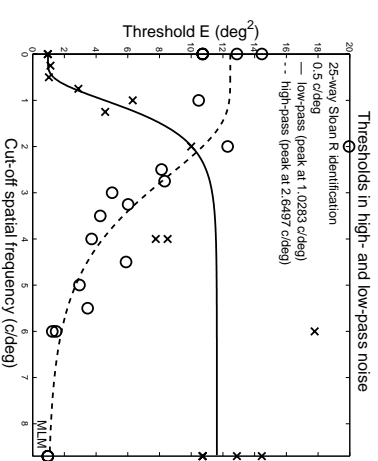
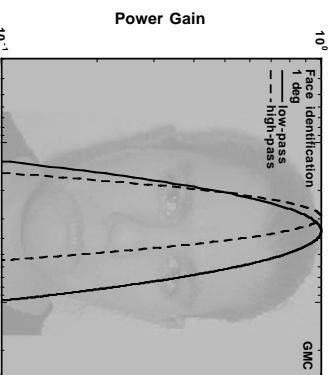
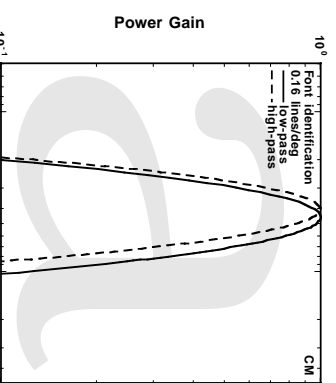


One channel per object. Two channels per location.

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We grew up thinking that all our channels are always available, waiting to be used, like the strings in a piano. Majaj et al. (2002 & this VSS) show that observers identifying letters or reading text use only one spatial frequency channel, determined by the stroke frequency of the letters. Observers also use only one channel for faces and line drawings of common objects. But is it really one channel per object or just one channel per location? When the



observer is required to identify two superimposed letters of very different sizes, critical band masking reveals two channels at the same location. High-, low-, and band-pass noise give consistent results. Thus, observers can use multiple channels per location, but only one channel per object.

Majaj, N.J., Pelli, D. G., Kurshan, P., and Palomares, M. (2002) The role of spatial frequency channels in letter identification. *Vision Res*, 42, 1165-84.