Masked or Not, Covert Attention Enhances Spatial Resolution:
Support for Signal Enhancement
Patrick Williams1, Yaffa Yeshurun2 & Marisa Carrasco1, 1New York University and 2Haifa University

Attention improves performance

Experiment 1

• Background
  - Attention improves performance in detection and discrimination tasks.
  - With a neutral cue designed to spread attention more broadly, will peripheral-cue performance still be better?
  - Attention can also directly increase the strength of a target in the absence of external noise.
  - With no mask and no other sources of external noise, attention improves contrast sensitivity.

• So does the mask matter?
  - Peripheral cue improves performance
  - Attention produces the greatest benefit at farthest eccentricities.
  - Overall performance degrades more dramatically along the vertical meridian than along the horizontal in both cases.

• Conclusions
  - Signal enhancement
  - Attention increases performance whether or not a local post-mask is used and whether a central or spread neutral cue is used.
  - Higher spatial resolution
  - Attention produces the general benefit as far as exogenous cues.