

THE EFFECT OF AUDITORY SPATIAL LAYOUT IN A DIVIDED ATTENTION TASK

Virginia Best, Antje Ihlefeld and Barbara Shinn-Cunningham

Boston University Hearing Research Center
Department of Cognitive & Neural Systems
677 Beacon St, Boston, MA, 02215, USA
<ginbest, ihlefeld, shinn>@bu.edu

ABSTRACT

energy variations at the two ears. For sources around the $\pm 45^\circ$ reference azimuths, there was an advantage to separating the two sources in both HRTF and ITD conditions, suggesting that perceived spatial separation is advantageous in a divided attention task, at least for lateral sources.

1. INTRODUCTION

Many studies have examined the role of auditory spatial layout in selective attention situations, where a listener must extract the content of one source (a 'target') in the presence of competing sources ('mas

This study was designed to examine systematically the effect of spatial configuration on the ability of listeners to report keywords from two simultaneous talkers. In order to emphasise the influence of spatial attention on performance, an effort was made to minimise the contribution of energetic masking. Energetic interference between the two sources was minimised by

function of spatial separation (a

7. REFERENCES

- [1] A. W. Bronkhorst, "The cocktail party phenomenon: A review of research on speech intelligibility in multiple-talker conditions," *Acustica*, vol. 86, pp. 117-128, 2000.
- [2] P. M. Zurek, "Binaural advantages and directional effects in speech intelligibility," in *Acoustical Factors Affecting*