

- **PSY-01-004-IP**

The relevance of binaural physiology for monaural psychophysics

Philip X. Joris

*Laboratory of Auditory Neurophysiology, Medical School, Campus Gasthuisberg O&N,
Leuven, B-300 Belgium*

Phone: 32 16 34 57 41

Fax: 32 16 34 59 93

The importance of temporal versus spectral or place mechanisms in auditory perception has been an issue for more than a century. It is common, in both the physiological and psychophysical literature, to encounter the assumption that the temporal limit found in the cat auditory nerve (pure tone phase-locking up to 4-5 kHz) also applies to humans, or that the human limit may be even higher. However, existing physiological, anatomical and behavioral data in cat, combined with behavioral data in humans, suggest that the phase-locking limit is actually lower in humans than in cats. I will review the relevant physiological and behavioral data.