Frequency and Amplitude Compensation in the Echolocation of Bats

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Echo Intensity in Echolocation in Bats (Pipistrellus abramus) during Flight Measured by Telemetry Microphone
- *Journal of Acoustical Society of America*
  - Impact factor: 1.587

On-board Telemetry of Emitted Sounds from Free-Flying Bats: Compensation for Velocity and Distance Stabilizes Echo Frequency and Amplitude
- *Journal of Comparative Physiology A*
  - Impact Factor: 2.0

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Echolocation Calls
- Frequency Modulated Pulses
- Constant Frequency Pulses

Species of Bats used in Studies

http://www.3.unipv.it/webcib/rhino1.au
http://www.bio.bris.ac.uk/research/bats/China_bats/rhinolophusferrumequinum.htm
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Typical Echolocation Pulse
- *Pipistrellus abramus*
Typical Echolocation Patterns

- *Rhinolophus ferrumequinum nippon*

Doppler Shift

Experiment Setup

- Telemike System
  - Telemetry microphone

Echo Delay
Frequency Compensation

The U-turn

Works Cited

- Information for authors found at Doshisa University, ReaD http://read.jst.go.jp/public/cs_ksh_008EventAction.do?action4=event&lang_act4=E&judge_act4=2&knkysh_name_code=60000105