

The **Vienna Center for Quantum Science and Technology VCQ**

invites you to a

COLLOQUIUM TALK

by

Peter Hore

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QuantumBirds: a magnetic compass mechanism

Small migratory songbirds are extraordinary navigators: weighing less than 30 g, they fly thousands of kilometres between their breeding and wintering grounds, alone and at night, ultimately with centimetre precision. To do this they use the sun and the stars, olfaction and landmarks, but it is clear that they can also perceive the direction of the Earth's magnetic field. Despite more than 50 years of research, the biophysical mechanism of this remarkable magnetic sense remains obscure. In this lecture, I will discuss the proposal that the birds' magnetic compass relies on a quantum mechanism in their eyes. Specifically, the unique properties of light-induced radical pairs in cryptochrome proteins in photoreceptor cells could allow chemical sensing of magnetic interactions orders of magnitude weaker than previously thought possible.

Monday, 18 November 2024

at Lise Meitner Lecture Hall at Universität Wien
Boltzmannngasse 5, 1090 Vienna, 1st floor

17:00 Get-together with snacks

17:30 VCQ Student Talk Ilia Zykov

17:45 VCQ Colloquium Talk

Host: Thomas Juffmann

For further information and a Zoom link please visit <https://vcq.quantum.at/colloquium-ws-24-25/>