From Quantum Interference to Human Perception

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Abstract: Superconducting quantum interference devices (SQUID) have widely been used for state-of-the-art precision measurements in various scientific research areas in range of metrology to basic physics. Beyond the fundamental applications, magnetoencephalography (MEG) based on the SQUID technology is the most developed non-invasive brain research tool for studying neuronal dynamics. Measuring and exploring human perception with MEG could give us neurophysiologic guidelines in standardization and quantification of human sensory and cognitive functions. We introduce SQUID-based brain measurement technologies such as MEG and Ultra-low field MRI, and our trials for cognitive measurements.