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**GR 23: Main talk: Experimental Gravitation**

Time: Thursday 16:30–17:15

Location: SPA SR220

**Invited Talk**

GR 23.1 Thu 16:30 SPA SR220

**Schrödinger's Mirrors: confronting quantum physics with gravity** — ●MARKUS ASPELMEYER — University of Vienna, Faculty of Physics, Vienna Center for Quantum Science and Technology (VCQ), Vienna, Austria

Quantum optics provides a high-precision toolbox to enter and to con-

trol the quantum regime of the motion of massive mechanical objects. This opens the door to a hitherto untested parameter regime of macroscopic quantum physics. Due to the large available mass range – from picograms in nanomechanical waveguides to kilograms in mirrors for gravitational wave detection – it becomes possible to explore the fascinating interface between quantum physics and gravity in table-top quantum optics experiments.