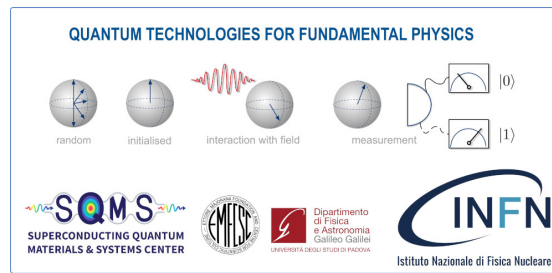


Quantum Technologies for Fundamental Physics



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Status of the MAGO cavity and the plan of high-f GW detection in Hamburg

Monday, 4 September 2023 11:30 (25 minutes)

We prepare to set up a new project to detect high frequency GW, starting with the existing cavity from the MAGO collaboration, which will be used for R&D studies and for a first measurement together with Fermilab. We will present the status of the first inspection of the cavity fabricated about 15years ago. In addition, we will show our current results of our theoretical analysis of the interaction of the GW with the cavity. This is necessary to further optimize a future cavity geometry and to better understand the boundary requirements for the experimental infrastructure. We also develop a new cavity control system for this experiment, with the aim to reach the fundamental limit in the sensitivity of this detection principle.

Presenters: PETERS, Krizstian (DESY); WENSKAT, Marc (Universität Hamburg)

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