

# Gravitational Wave Probes of Physics Beyond Standard Model 2

Contribution ID : 20

## Superconducting RF Cavities for Gravitational Waves Detection

Friday 02 Dec 2022 at 15:00 (00h30')

### Content :

I will discuss how specially designed SRF cavities can have enhanced sensitivity to axions and gravitational waves for frequencies below GHz. The projected sensitivity of a futuristic apparatus covers the QCD line over two decades of axion dark matter mass and new parameter space all the way down to the fuzzy dark matter limit. Additionally, the same concept with a different geometry has the potential to generate one of the most sensitive detectors of gravitational waves between 100 kHz and a GHz. Two prototypes for axion detection are being built at SLAC and at Fermilab.

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