

Status of the Quantum Sensors for the Hidden Sector (QSHS) Experiment

Monday, 8 July 2024 16:30 (17 minutes)

Quantum Sensors for the Hidden Sector is a UK collaboration developing ultra-low-noise readout and resonant detector technology, aiming initially to search for halo axions in the 25-40 micro-eV mass window. The collaboration has continued to develop a range of devices and has now installed a high-field, low-temperature facility at the University of Sheffield, centring around a dry dilution refrigerator supplied by Oxford Instruments having a target physical temperature of 10mK and a clear bore of 18cm, in which we intend to characterise and test the ultra-low-noise devices in a haloscope geometry, alongside developing haloscope and resonant detector technologies. Here, I update on the QSHS collaboration aims, current progress and characterisation of the hardware.

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Session Classification: Parallel 3

Track Classification: Parallel session: Axion/Sterile