19th Patras Workshop on Axions, WIMPs and WISPs



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Towards axion searches using superconducting qubits

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Several ideas are proposed utilizing superconducting qubits in dark photon searches such as the single photon counter, direct excitation, and cavity tuning with superconducting qubits. Here, we introduce activities to operate qubits in a strong magnetic field to expand these dark photon searches to axion searches. In particular, we discuss our strategy to tolerate a strong magnetic field from the point of view of superconducting thin layers and Josephson junctions.

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