Low Noise in Quantum Communication Micro-Module Room

Quantum Technologies for Advanced Readout Silent Waves develops and manufactures high-performance Traveling-Wave Parametric Amplifiers (TWPAs) ...

Spin-Based Ultra-Low Noise Amplifier for Microwave Quantum Technologies Yuimaru Kubo n Kostylev, Morihiro What is the problem? ones, require amplification of microwave signals without adding noise. ...

The onboard compute module provides a system by which control logic can be distributed to the peripherals in the control stack, mitigating the need for time consuming communication back to ...

Our work extends the quantum control of solid-state macroscopic oscillators to room temperature.

Using an ultralow noise cavity in conjunction with a PNC density-modulated membrane, we have been able to operate in the quantum regime of cavity optomechanics at room temperature.

Quantum Technologies for Advanced Readout Silent Waves develops and manufactures high-performance Traveling-Wave Parametric Amplifiers (TWPAs) designed for scalable quantum ...

Comparison of the measured flux noise spectral densities for the 20-, 200- and 1000-cell arrays. It is evident that noise is getting reduced for 1000-cell array compared to 20-cell array as ~ N1/2 or ~7 ...

Ultimately, by merging quantum theory with engineering approaches, this study successfully designs a highly efficient circuit that significantly minimizes the noise figure in a quantum ...

This work presents a highly efficient, low-noise quantum frequency conversion device for photons emitted by a silicon-vacancy (SiV) center in diamond to the telecom C-band.

The technology for amplification and detection of microwave (MW) signals with minimal addition of noise is critical to a variety of applications, such as deep-space communications, radio ...

Quantum communication, like classical communication, is prone to noise, which is known as quantum decoherence. Quantum decoherence is a significant barrier to the implementation of a ...

In this Article, we report a radiatively cooled microwave quantum network that dynamically modulates channel thermalization.

In the limitations of no thermal noise, the noise caused by the uncertainty principle in quantum mechanics,

so-called quantum noise, becomes dominant. The amplifier ...

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