SQUID-based Thermometers

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Abstract — This article reviews the application of SQUIDs in low-temperature thermometry. Special focus is given to state-of-the-art noise thermometers such as the current sensing noise thermometer (CSNT) and the magnetic field fluctuation thermometer (MFFT). Today, SQUID noise thermometers are no longer a domain of metrology institutes. Practical versions of the CSNT and the MFFT are powerful tools for relative primary thermometry in the low-temperature range down to sub-millikelvin temperature.

Keywords (Index Terms) — Low-temperature thermometry, SQUID, noise thermometer.