any switching device at the input of the amplifier. The requirements of this method are that for good absolute accuracy of the thermometer the amplifiers, the multiplier, and the integrator must be linear and that $T_1 > (T_0 + T_2)$. At present the main limitation of the absolute accuracy at low temperatures is shot noise generated at the grids of the first stages of the amplifiers. In principle, this method can also be used to measure high temperatures. R_1 could be a fixed resistor at the unknown temperature, and R_0 and R_2 could be kept at room temperature and one or preferably both of them be variable. At high temperatures errors due to shot noise can be neglected. When Z_1 is made infinite and R_0 and R_2 are replaced by two antennas which are located apart from each other, then one has in principle a radio interferometer of the kind developed by Brown and Twiss (1954).

In this experiment it was demonstrated that it is possible and feasible to measure low temperatures absolutely by making use of the thermal fluctuations of voltage across an impedance. Work will continue at this university to improve the accuracy of the noise thermometer, and to derive an absolute temperature scale in the liquid helium region.

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