intensity calculated from the geometry of the apparatus. The chopping frequency was 30 cps. Operation at 4.2 °K and 2.3 °K showed that the minimum detectable signal corresponds to a beam intensity of $4 \cdot 10^8$ and $2 \cdot 10^8$ molecules sec^{-1} respectively. In both cases the RC of the lock-in was 1 sec.

The noise equivalent power declared by the manufacturer for our bolometer operating at 2 °K is $5 \cdot 10^{-13}$ watt [5]. The order of magnitude of the energy brought to the bolometer surface in one second by the beam molecules corresponding to our minimum detectable signal being the same, we have not endeavoured to study the origin of small discrepancies between the two quantities.

To check the stability we have applied the same beam intensity at different times of the same run. The measurements agreed within 2%. Between two of these measurements the bolometer was exposed for two hours to an average flux of 10^{10} molecules per second. This means that the accomodation coefficient of the surface was virtually not changed by the deposition of a few layers of gas molecules. This is not surprising because the detector surface cannot be considered clean, being covered by a black paint to reduce its reflectivity.

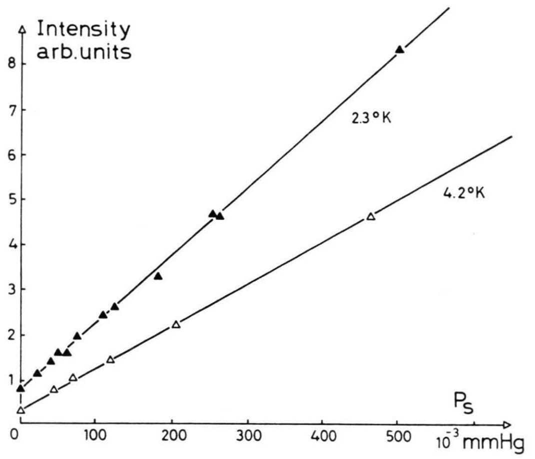

Fig. 2. Linearity of the detector output as a function of the pressure in the source.

Fig. 2 shows the linearity of the bolometer output as a function of pressure in the source. The flow being molecular, this pressure is proportional to the intensity of the beam. A signal is present also at zero beam intensity due to chopped background radiation. No special effort has been taken to reduce this signal although this can be accomplished improving the homogeneity in emissivity of the surfaces in the region of the chopper. We should like to conclude this note by pointing out some special features that make the bolometer particularly useful in scattering experiments. First its smallness greatly reduces the demands on the volume to be evacuated and on the mechanism used to move the detector. In the second place, the use of liquid He and the absence of hot elements in the detector volume makes it comparably easy to reach and maintain very low pressures. The background is thus strongly reduced without use of mass spectrometry. Finally we must remember that the sensitivity of the electron bombardment detector decreases with increasing velocity of the beam particles while the contrary is true for the bolometer. This is of some importance since several interesting scattering experiments can be done in the energy range from 0.1 eV to 10 eV.

[5] It is perhaps worthwhile noting that, recently, a Ge bolometer was reported in the literature, F. J. Low, Proc. IEEE **54**, 477 [1966], which reached a sensitivity of a few 10^{-14} watt.

BERICHTIGUNG

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Auf Seite 2001, rechte Spalte, 9. Zeile von unten muß es heißen Z_K (statt Z_A).

Auf Seite 2003, rechte Spalte, Fußnote [8] muß lauten:

[8] G. Geiseler, Naturwiss. **39,** 569 [1952]; eine ausführliche Arbeit erschien in Z. Phys. Chem. Leipzig **202,** 424 [1954].

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