region, that considerable divergence exists in their results. The first recorded investigations were somewhat cursory attempts by Snow and by Drew and it was not until 1903 that we have any results in which confidence can be placed.

These are due to Coblentz and Geer[1] who worked with a rock salt prism spectrometer and a radiometer and found three definite lines between $0 \cdot 97\mu$ and $1 \cdot 285\mu$. In addition to these they were able to identify six lines in the neighbourhood of $5 \cdot 0\mu$ and possibly one other near $3 \cdot 0\mu$. Coblentz[2] repeated this work a couple of years later and announced that there are no important lines beyond $1 \cdot 3\mu$ except those near $5 \cdot 0\mu$. W. J. H. Moll[3] somewhat later using a rock salt spectrometer and thermopile in connection with an automatic recording device identified five lines between $1 \cdot 0\mu$ and $1 \cdot 7\mu$. In direct opposition to the results of Coblentz and Geer, Moll states that there is no measurable emission above $1 \cdot 7\mu$. Probably the most accurate measurements on the infra-red spectrum of the mercury arc are those made by Paschen[4] with a concave grating and a Rubens thermopile. By means of the better definition and the higher dispersion afforded by the grating, Paschen was able to separate maxima which had previously been recorded as single lines. In all he identified fourteen lines between $1 \cdot 0\mu$ and $1 \cdot 7\mu$ and he confirmed the statement by Moll that there are no lines beyond $1 \cdot 7\mu$. He[5] subsequently repeated his measurements and found a maximum at $4 \cdot 0\mu$; but inasmuch as this maximum came out in the arc spectrum of a number of the elements he concluded that it was due to the presence of hydrogen. In these later measurements a bolometer was used in combination with a grating. More recently still H. Rubens and O. von Baeyer[6] have succeeded in showing that the mercury arc emits a radiation of wave-length about 313μ. They succeeded in isolating this radiation by the method of focal separation previously used by Rubens and Wood[7] and in measuring its wave-length by means of a Fabry and Perot interferometer of a special type in combination with a Rubens micro-radiometer. Subsequent measurements[8] by them on this radiation

[1]W. Coblentz and W. C. Geer, Phys. Rev., 16 pp. 279-286, 1903.

[2]Coblentz, Phys. Rev., 20 pp. 122-124, 1905.

[3]Moll. Kon. Akad. Wet. Amsterdam. Proc. 9 pp. 544-548, 1907.

[4]Paschen, Ann. der Phys. 27, 3, pp. 537-570, 1907.

[5]Paschen, Ann. der. Phys. 33, 4, pp 717-738, 1910.

[6]H. Rubens and O. von Baeyer, Phil. Mag., 21 pp. 689-695, 1911.

[7]H. Rubens and R. W. Wood, Preuss. Akad. Wiss. Berlin, Sitz. Ber. 52. pp. 1122-1137, 1910.

[8]H. Rubens and O. von Baeyer, Preuss. Akad. Wiss. Berlin, Sitz. Ber. 30 pp. 666-667, 1911.