In reducing it to 0° with the coefficient determined by Rodriguez and Watson 1), and comparing the result with those of other investigators, we find with a sufficient agreement:

- Arons 2) . . . . 0.01298 (0°)
- Quincke 3) . . . . 0.01418 (0°)
- Rodriguez and Watson 1) 0.01311 (0°)
- Siertsema . . . . 0.01303 (0°)

Dr. L. H. Siertsema. Measurements on the magnetic rotatory dispersion in gases.

In the former communications 1) the magnetic rotations, found for some gases, are expressed in minutes for unity of magnetic potential-difference, by means of a reducing factor, calculated from the dimensions of the apparatus, the number of windings of the coils, and the constant of the tangent galvanometer with which the galvanometer of d'Arsonval is calibrated. This latter constant was deduced from comparisons with a copper-voltameter.

The accuracy of this reducing factor is controlled by a determination of the rotatory constant of water, which, as may be seen in the preceding pages, has showed a sufficient agreement with the values found by others.

Meanwhile it appeared necessary to add another correction to the manometer-readings, in consequence of which the following formulae are obtained:

- Air (100 KG., 13°.2) \( n \times 10^6 = \frac{190.6}{\lambda} \left( 1 + \frac{0.242}{\lambda^2} \right) \).
- Oxygen (100 KG., 7°.0) \( n \times 10^6 = \frac{271.7}{\lambda} \left( 1 + \frac{0.0704}{\lambda^2} \right) \).
- Nitrogen (100 KG., 14°.0) \( n \times 10^6 = \frac{169.9}{\lambda} \left( 1 + \frac{0.341}{\lambda^2} \right) \).


1) Communications etc. N°. 24.
Carbonic acid (1 atm. 6°.5) \[ n \cdot 10^6 = \frac{269.5}{\lambda} \left(1 + \frac{0.307}{\lambda^2}\right). \]

Nitrogen monoxide (30.5 atm., 10°.9) \[ n \cdot 10^6 = \frac{75.50}{\lambda} \left(1 + \frac{0.306}{\lambda^2}\right). \]

Hydrogen (85.0 KG., 9°.5) \[ n \cdot 10^6 = \frac{138.0}{\lambda} \left(1 + \frac{0.325}{\lambda^2}\right). \]

In calculating the rotation of air at 13°.2 from that of 0 and N, we find:
\[ n \cdot 10^6 = \frac{190.0}{\lambda} \left(1 + \frac{0.241}{\lambda^2}\right), \]
in close agreement with the formula which is derived from the direct measurements.