

Dr. P. ZEEMAN. *On the determination of the optical constants of magnetite.*

With a view to further magneto-optic measurements I wanted the optical constants, principal angle of incidence and principal azimuth of magnetite. As these seem never to have been measured until now, I communicate them below. The heads sufficiently explain the table.

Nr.	J.	H.	colour	wave-length	originating from
1.	68°35'	9°0'	D-light	0.589 μ	Fort-Henry. N.-York.
2.	68°25'	8°38'	D- »	»	Pfitsch Tirol.
3.	68°33'	7°55'	H-line α	0.656 μ	» »
	68°27'	8°48'	D-light	0.589 μ	
	68°27'	10°10'	H-line γ	0.434 μ	

Dr. L. H. SIERTSEMA. *On the dispersion of the magnetic rotation in oxygen.*

The apparatus described in the former communication ¹⁾ with which measurements now have been made with oxygen and with air, has in some important respects been improved and completed.

In the first place it appeared that better precautions were necessary to keep the temperature of the experimental tube constant and so to prevent currents in the gas. Between the tube and the coil concentric brass tubes, connected with the water-conduct have been inserted, so that the water is obliged to flow from one end of the tube to the other and back. From thermometer-readings at the beginning and at the end of this circulation also the temperature of the gas was deduced. Between the experimental tube and the interior water-tube we find still a layer of india-ruber for equalizing the temperature. By this arrangement the just mentioned convection-currents are almost completely avoided in summer, even if by a long continuation of the observations the coils have become sensibly

¹⁾ Zittingsverslag Kon. Ak. Amsterdam Afd. Natuurk. Juni 1893. Comm. Lab. of Physics. Leiden N°. 7.