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The Spectra of Neon, Krypton and Xenon

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VI. *The Spectra of Neon, Krypton and Xenon.*

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Soon after the discovery of the new gases, neon, krypton and xenon, by Sir William Ramsay and Dr. Travers, in 1898, measurements were made of the lines of their emission spectra by means of a large prism spectrograph in University College. In view of the fact that a large Rowland grating apparatus was at that time in process of erection, it did not appear worth while to publish this first series of measurements, as I was in hopes of being able to obtain with the help of the grating far more accurate results than was possible from measurements of the photographs taken with the prism apparatus. Since the commencement of this work three series of measurements have been published, one by Runge* of certain lines in the krypton spectra, and two by Liveing and Dewar of the lines in the spectra of the light † and heavy ‡ constituents of atmospheric air respectively. All these measurements contain only the principal lines and, moreover, extend only a short distance into the ultra-violet region. Liveing and Dewar's measurements also are only given to the nearest Ångström unit. The publication of these tables of wave-lengths emphasised still more strongly in my mind the necessity for making the measurements with as high a degree of accuracy as possible, for the chief value of tables of such constants beyond the purpose of simple qualitative work, is to be found in their reliability, especially at the present time when so much work is being done upon spectral series. It is difficult to assess the accuracy which may be claimed for the measurements given below, but, judging from the values obtained for certain lines common to the spectra, the probable error may be estimated to be less than ± 0·03 Ångström unit. The specimens of the gases used were not spectroscopically pure, the neon contained traces of helium, while the krypton and xenon contained very small traces of argon; the more important spectrum lines of these impurities were generally to be found upon the photographs and were measured in due course; the wave-lengths found

* 'Astrophys. Journ.,' vol. 10, p. 73, 1899.
† 'Roy. Soc. Proc.,' vol. 67, p. 467, 1900.
‡ 'Roy. Soc. Proc.,' vol. 68, p. 389, 1901.

showed an extremely satisfactory agreement with RUNGE and PASCHEN'S or KAYSER'S determinations.

In apology for the length of time taken over the work I must urge certain unavoidable delays, of which the chief ones were due to the long exposures necessary to obtain the weaker lines and the short lives of the vacuum tubes employed; as will be explained below, these tubes will not withstand the long continued action of the electric discharge and therefore they require to be frequently refilled. One of the greatest delays arose from the fact that at one time the whole supply of xenon was used up and it became necessary to prepare a further quantity to finish this work. I take this opportunity of thanking Sir WILLIAM RAMSAY for his great kindness in undertaking this for me.

The Rowland grating has a focal length of 10 feet and is ruled with 14,438 lines to the inch; all the measurements were made in the second and third orders, with the exception of certain lines in the red region which were measured in the first order. The spectra were photographed upon LUMIÈRE'S plates, the extra rapid and the A and B isochromatic series being used for the blue, green and red regions respectively. These plates possess a great advantage over other makes which were tried in that they give extremely well defined and fine grained images.

In every case the gases were illuminated by the passage of the electric discharge through them when under reduced pressure, and several forms of vacuum tubes were employed, in all of which a capillary portion was viewed "end on" through a quartz window, which was cemented on with sealing-wax or CHATTERTON'S compound, neither of which give off any vapour when cold. The most satisfactory results were obtained by sealing the electrodes into side tubes on account of the peculiar action of these monatomic gases when subjected, under reduced pressure, to an electric discharge between electrodes. The latter become very hot and, unless special care has been taken in their manufacture, they rapidly disintegrate; it is therefore preferable to have them hanging down in a vertical position to guard against any possibility of their melting and falling against the glass walls of the vacuum tube. This heating of the electrodes is very noticeable under ordinary circumstances when such metals as platinum are used, but in the case of the new gases the effect is much more pronounced, for even stout aluminium wire is readily melted by a moderately strong discharge. In making the electrodes it has been found necessary to use aluminium wire of at least No. 12 B.W.G., and to carefully guard against there being any soda glass sealed to the platinum. As usually made, an electrode possesses a sheath of ordinary glass in order to protect the junction between the platinum and the aluminium, this sheath being melted on to the platinum close to the aluminium. This, however, invariably breaks when used for any of the new gases. The best way to make an electrode is as follows: some very stout aluminium wire is taken and a small hole drilled in one end into which the platinum wire is fixed. A capillary tube is made of some blue enamel glass, having a bore just sufficiently large to admit the platinum wire; this capillary tube is then joined to a piece of ordinary glass tubing which is able to slip easily over the aluminium wire. In this way a covering is made into which the electrode is placed and then the blue enamel capillary is melted on to the platinum wire, but this must not be done within half-an-inch of the platinum aluminium junction. The glass sheathing over the aluminium is cut to a convenient length and the electrode is finished off and sealed into the vacuum tube in the usual way.

The extraordinary heating of the electrodes forms a source of annoyance in working with these gases on account of the great quantity of hydrogen evolved from them. It is well known that in the process of filling a vacuum tube with any of the ordinary gases a considerable quantity of hydrogen is evolved from the electrodes, which very often masks the spectrum of the gas to be experimented with. This hydrogen can readily enough be removed by continued exhaustion while the electric discharge is passing, and, if necessary, by washing the tube out with a small quantity of the gas in question. When this has been efficiently carried out entire freedom from contamination by hydrogen is secured under ordinary circumstances. If now into a vacuum tube, which has been carefully treated in this way, a small amount of one of the new monatomic gases be introduced, a further great quantity of hydrogen will be given up by the electrodes, and it is absolutely necessary that this be removed, as otherwise the spectrum of the new gas will be entirely masked by the hydrogen spectrum. This hydrogen can only be removed by alternately exhausting and admitting small quantities of one of the monatomic gases, this being done until the spectrum lines of hydrogen begin to weaken; three or four repetitions of this with argon are generally sufficient, provided that the electrodes are not very stout. The first time a vacuum tube is filled, naturally the greatest trouble in removing the hydrogen is to be met with, although similar precautions must be taken whenever a tube is refilled.

A curious effect is to be noticed in the splashing or volatilization of the aluminium electrodes with these gases. This is common enough with platinum and similar electrodes and has been termed by Sir WILLIAM CROOKES electrical evaporation; as far as I am aware this has not been previously noticed with aluminium electrodes. It is this phenomenon which shortens the lives of the vacuum tubes containing these gases, both on account of the disintegration of the electrodes themselves and also on account of the slow absorption of the gas by the aluminium mirror deposited upon the walls of the tube immediately surrounding the electrode. This absorption of the gas when the tube is in continual use necessitates frequent refilling, especially because these gases must be illuminated under very reduced pressures, as will be presently explained.

As regards the spectra of the gases, they all consist of bright well-defined lines similar to those of argon and helium. The most striking is the spectrum of neon, which consists almost entirely of very bright lines in the orange and red regions; the colour of the electric discharge through the gas is a magnificent orange. When a

Leyden jar and a spark gap are placed in the circuit no decided change takes place in either the appearance or the spectrum of the discharge. Krypton and xenon, on the other hand, resemble argon in this respect that they both possess two spectra, one being obtained when the direct discharge is passed and the other when a Leyden jar and spark gap are placed in the circuit. The jar and spark-gap spectrum, or the second spectrum as I have called it in the tables below, is very much more complex than the first spectrum, wherein an analogy is to be found with the two spectra of argon. When the discharge is passed through krypton without the use of a jar the spectrum obtained consists of a few lines, by far the most important being the yellow and green lines and also a group in the blue. As these lines have about the same visual intensity, the colour of the discharge is rather nondescript and appears to be different to different observers. The jar and spark discharge, on the other hand, presents a fine sky-blue colour and its spectrum contains a considerable number of lines chiefly in the blue. The simple discharge through xenon is not very brilliant and is bluish in colour, being characterised by a group of blue lines less refrangible than the group in the first krypton spectrum. The second xenon spectrum is even more complex than the second krypton spectrum; it is characterised by certain bright green lines which determine the colour of the discharge.

The time of exposure necessary for photographing the spectra depended of course upon the brightness of the discharge; while in the case of the second xenon spectrum an exposure of two to three hours was sufficient, the lines of the first spectrum were so weak that an exposure of twenty-four hours was often required. The wave-lengths of the lines were all determined by interpolation between the lines of the arc spectrum of iron, and the wave-lengths of the principal lines in this spectrum as determined by KAYSER were adopted as standards. Many photographs were taken of the two spectra superposed upon one another, care being taken that they were both correctly placed in relation to each other. The wave-lengths of as many lines as possible were determined in this way from several plates, and the mean values of these were employed as standards in the measurements of several series of photographs taken of the new spectrum alone. In this way the wave-lengths of the fainter lines were obtained and also a certain amount of check was applied to the measurements of the standards themselves. Excepting a few lines in the red region and the fainter lines, nearly every line was measured in two orders, which ensures a correct relation between the different regions of the spectrum.

It was stated above that the spectra of the new gases are composed of bright and well defined lines; it will be seen, however, from the tables, that certain lines are marked as being diffused, which may appear at first sight to be rather contradictory. The explanation is to be found in the fact that the distinctness of the spectrum and the definition of the lines depend to a great extent upon the pressure of the gas in the vacuum tube. If this pressure exceeds a certain small amount, the whole appearance of the spectrum is altered, for it tends to become confused, and at times indeed almost continuous. If the pressure is slowly reduced, the lines begin to appear upon a more or less continuous background, and, gradually increasing in brightness, they finally become quite sharply defined upon a black background. This effect is especially noticeable in the spectra of krypton and xenon, and in filling vacuum tubes with these gases, great care must be taken to reduce the pressure sufficiently in order to obtain good definition. When a tube has been completely exhausted according to the method described above, the connection to the exhaust pump is closed and a quantity of the gas in question, known to be in excess of that required, is admitted. The electric current is then made to pass through the gas, and the spectrum is examined through a small spectroscope; the stop-cock connecting the vacuum tube to the exhaust pump is then opened and the pressure of the gas slowly reduced until the spectrum lines appear perfectly sharp, when the tube is sealed off. All the spectrum lines do not become equally well defined at once, and the lines given in the tables as diffused are those which still remain somewhat nebulous at the pressures dealt with; these outstanding hazy lines, however, if the pressure is sufficiently reduced, tend to improve in definition, although some of them only become sharp when the pressure has been so far reduced as to very materially lessen the illumination. Since the absorption of the gases by the electrodes themselves and by the volatilized aluminium appears to be more rapid at low pressures, the necessarily low initial pressure renders imperative the frequent filling of the tubes.

In the tables given below there is a column containing the wave-lengths which have already been published by RUNGE for krypton, and by LIVEING and DEWAR for all the gases. RUNGE was unaware of the existence of xenon, and therefore certain lines belonging to the spectrum of this gas are to be found in his list of krypton lines. Another column headed "Remarks" includes memoranda concerning the individual lines, and certain points in connection with these merit some attention.

In the first place, under the second krypton spectrum, there will be found certain lines which are visible in the second or blue argon spectrum; it is interesting to note further that these lines disappear from the spectrum of argon after that gas has been fractionated by means of liquid air. In view of the discovery of these new gases in the atmosphere I made a comparison, with a glass prism spectroscope of considerable dispersion, between the blue spectra of ordinary atmospheric argon and of the same gas after fractionation by means of liquid air.* Both the spectra were completely measured, but the list of wave-lengths is not worth publishing in its entirety on account of the very slightly different values found from those already given by KAYSER and by EDER and VALENTA; certain lines however were measured which do not appear in these lists, and they are given in Table I. In Table II. are given the wave-lengths of the lines which are removed from the spectrum of argon by the process of fractionation. Three of these lines at $\lambda = 4488{\cdot}14$, $4199{\cdot}97$ and $4047{\cdot}38$

* I take this opportunity of expressing my thanks to Messrs. W. L. ST. J. ALTON and A. C. CARTER for their valuable help in this investigation.

have not been measured before; the remainder must be deleted from KAYSER's and EDER and VALENTA's lists.

Out of the 16 lines in Table II., three apparently belong to the second krypton spectrum, but the origin of the others could not be traced; they undoubtedly are present in unfractionated argon, and are removed by fractionation. It is curious that only three of the weakest krypton lines should be visible in the argon spectra; a careful search was made for the stronger lines, but no trace of them could be detected.

The first or red spectra of the two samples of argon were similarly investigated, but no difference whatever could be found, nor were any new lines observed beyond those already known.

TABLE I.—Additional Lines Measured in the Blue Spectrum of Argon.

Wave-length.	Intensity.	Wave-length.	Intensity.
4537·82	3	4198·40	2
4510·07	1	4169·08	1
4445·92	1	4130·68	1
4440·40	1	4127·56	1
4405·06	1	4127·22	1
4385·16	2	4116·50	3
4338·40	1	4031·50	1
4217·50	1		

TABLE II.—Lines to be Omitted from the Blue Spectrum of Argon.

Wave-length.	Intensity.	Wave-length.	Intensity.
4488·14	2	4098·33	1
4443·545	1	4089·041	1
4408·095	1	4065·171	1
4343·904	1	4047·38	1
4229·015	1	4023·730	3
4199·97	1	4017·986	1
4183·106	2	4010·052	1
4146·761	1	3960·591	2

A further interesting fact in connection with the second spectra of krypton and xenon, is to be found in the existence of a number of lines of weak intensity common to the two spectra. Since these lines are equally weak in both spectra, it is impossible to say whether they in reality belong to krypton or xenon, and I have therefore credited them to both. On the other hand it may be that they are due to some common impurity, possibly a still heavier element of the same family; the evidence of the periodic table of elements is against this, but of course such evidence cannot be considered to be conclusive, and we may perhaps look forward to the discovery of such an element at a not very distant date. Experiments are at present being carried out in this direction.

The wave-lengths of these lines are given in Table III., the values obtained in both gases being given.

TABLE III.—Lines Common to the Second Spectra of Krypton and Xenon.

Wave-lengths.		Intensity.	Wave-lengths.		Intensity.
In krypton.	In xenon.		In krypton.	In xenon.	
5562·45	5562·46	2	2844·59	2844·60	3
5143·25	5143·24	1	2941·10	2941·10	1
4857·36	4857·37	1	2811·81	2811·81	3
3942·28	3942·29	1	2756·66	2756·64	1
3768·10	3768·08	1	2733·38	2733·36	4
3765·98	3765·99	4 (much weaker in krypton)	2732·46	2732·48	1
			2696·71	2696·73	4
			2691·94	2691·92	1
3751·81	3751·80	1	2690·35	2690·33	1
3564·38	3564·40	4	2670·78	2670·80	2
3428·95	3428·95	1	2648·80	2648·79	1
3396·72	3396·72	2	2624·63	2624·65	1
3387·26	3387·26	1	2616·80	2616·79	1
3379·18	3379·20	2	2581·84	2581·84	1
3360·22	3360·20	2	2572·44	2572·46	2
3315·80	3315·80	1	2513·50	2513·52	1
3222·40	3222·40	1	2494·10	2494·11	3
3175·78	3175·80	3	2468·56	2468·54	2
3044·93	3044·91	2	2425·15	2425·18	2
2960·92	2960·93	2			

In addition to the above, there remains what is probably only a chance coincidence at $\lambda = 4577·36$ and $\lambda = 4577·40$ in the xenon and krypton spectra respectively; mention should also be made of the bright lines at $\lambda = 3330·90$ and $\lambda = 3330·88$ in the two spectra.

As regards LIVEING and DEWAR'S values for the wave-lengths of these gases, it will be seen from the tables that there is in general a complete agreement in the fourth significant figure between the two sets of measurements. A great number of lines which do not appear in LIVEING and DEWAR'S lists have been measured; this is only to be expected from the fact that these observers in all probability were not dealing with perfectly pure gases. The relative intensities of the lines are about the same in the two series of measurements, but of course the general average of intensity in LIVEING and DEWAR'S measurements is the weaker. These observers give in their tables of the krypton and xenon spectra a few lines which do not appear on any of my plates, and which therefore it is probable do not belong to these spectra. LIVEING and DEWAR's list of the wave-lengths of the lines in the spectra of the most volatile constituents of the atmosphere contains 162 lines, which, as far as I can judge, do not belong to neon. The neon used for this work was undoubtedly perfectly pure, and as the lines measured both by LIVEING and DEWAR and by myself are generally very much brighter on my plates, and as further I have observed a number of lines not observed by LIVEING and DEWAR, the only conclusion to be drawn is that the outstanding lines in the latter case are not due to neon.

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TABLE IV.—Neon Spectrum.

Wave-length.	Intensity.	Remarks.	Other observers.	Wave-length.	Intensity.	Remarks.	Other observers.
6717 ·20	1		6716, L. & D.	6189 ·30	1		
6599 ·16	4		6601, L. & D.	6182 ·37	10		6183, L. & D.
6533 ·10	4		6535, L. & D.	6179 ·90	1		
6506 ·72	6		6508, L. & D.	6175 ·15	2		6176, L. & D.
6444 ·90	1		6446, L. & D.	6173 ·02	1		
6409 ·90	1			6166 ·81	1		
6402 ·40	10		6404, L. & D.	6163 ·79	10		6163, L. & D.
6401 ·26	1			6157 ·12	1		
6383 ·15	8		6382, L. & D.	6150 ·49	1		
6352 ·04	1			6143 ·28	10		6144, L. & D.
6331 ·13	1			6128 ·63	8		6128, L. & D.
6328 ·38	6		6334, L. & D.	6118 ·22	2		
6313 ·94	1			6096 ·37	10		6097, L. & D.
6304 ·99	8		6304, L. & D.	6074 ·52	10		6075, L. & D.
6294 ·04	1			6064 ·36	1		
6273 ·26	1			6046 ·06	1		
6266 ·66	10		6266, L. & D.	6043 ·24	1		
6259 ·06	1			6032 ·32	2		
6247 ·00	1		? 6244, L. & D.	6030 ·20	10		6031, L. & D.
6217 ·50	8		6217, L. & D.	6026 ·03	1		
6214 ·13	2			6024 ·40	1		
6206 ·01	1			6001 ·00	1		6001, L. & D.
6199 ·34	1			5991 ·72	2		5991, L. & D.

TABLE IV.—Neon Spectrum—continued.

Wave-length.	Intensity.	Remarks.	Other observers.	Wave-length.	Intensity.	Remarks.	Other observers.
5988 ·00	4		5987, L. & D.	4710 ·21	2		
5984 ·94	1			4709 ·00	4		4710, L. & D.
5975 ·78	8		5976, L. & D. (for 5975 ·78 and 5974 ·73)	4704 ·56	4		4704, L. & D.
5974 ·73	6			4540 ·48	1		4540, L. & D.
5965 ·50	4		5964, L. & D.	4537 ·39	1		4538, L. & D.
5961 ·64	1			4510 ·86	1		
5949 ·51	1			4459 ·68	1		4460, L. & D.
5944 ·91	10		5945, L. & D.	4431 ·14	1		4431, L. & D.
5939 ·44	1			4430 ·33	1		4429, L. & D.
5919 ·08	1		5919, L. & D.	4426 ·15	2		
5913 ·82	1		5914, L. & D.	4425 ·57	1		
5906 ·54	2		5905, L. & D.	4424 ·98	2		4424, L. & D.
5902 ·57	4			4422 ·69	2		4422, L. & D.
5882 ·04	8		5882, L. & D.	4414 ·44	1		4413, L. & D.
5873 ·04	1			4259 ·53	6		4258, L. & D.
5852 ·65	20	Extraordinarily brilliant	5852 ·7, L. & D.	4201 ·03	4		
5820 ·29	4		5820, L. & D.	4198 ·71	4		4198, L. & D.
5804 ·57	1		5804, L. & D.	4191 ·44	2		
5764 ·54	8		5763, L. & D. (for 5764 ·54 and 5764 ·20)	4190 ·86	2		
5764 ·20	1			4182 ·00	2		
5760 ·72	1			4158 ·68	4		
5748 ·44	4		5747, L. & D.	3899 ·21	1		3900, L. & D.
5719 ·42	1		5718, L. & D.	3886 ·26	1		

5689·96	2	5689, L. & D.	
5662·76	1	5662, L. & D.	
5656·80	4	5656, L. & D.	
5652·67	1		
5562·96	2	5561, L. & D.	
5433·86	1	5432, L. & D.	
5400·77	4	5400, L. & D.	A pair.
5400·50	4		
5343·41	1	5341, L. & D.	A pair.
5341·25	4		
5332·33	4	5330, L. & D.	
5278·50	1		
5271·50	1		
5218·30	1		
5204·12	1	5204, L. & D.	
5188·79	1	5188, L. & D.	
5145·15	1	5145, L. & D.	
5116·72	1	5116, L. & D.	
5080·54	1	5080, L. & D.	
5037·95	1	5038, L. & D.	Strong line.
4837·54	1	4838, L. & D.	
4806·24	1		
4789·07	1	4791, L. & D.	
4752·88	1	4754, L. & D.	
4715·49	4	4715, L. & D.	
4713·51	2		
4712·23	2		

3879·49	1	
3754·31	2	3754, L. & D.
3701·30	6	3701, L. & D.
3685·84	4	3686, L. & D.
3682·33	4	3683, L. & D.
3633·78	6	3634, L. & D.
3609·27	2	3609, L. & D.
3606·61	1	
3600·24	4	3600, L. & D.
3593·67	10	3593, L. & D.
3588·60	1	
3587·52	1	3587·5, a pair, L. & D.
3587·24	1	
3586·62	1	
3567·73	1	
3554·39	1	
3532·30	1	
3529·95	1	
3522·92	1	
3520·57	8	3521, L. & D.
3515·30	6	3515, L. & D.
3510·87	2	3510, L. & D.
3501·34	6	3500, L. & D.
3498·19	6	3498, L. & D.
3481·94	1	3481, L. & D.
3472·70	8	3473, L. & D.
3466·72	6	3467, L. & D.

TABLE IV.—Neon Spectrum—*continued*.

Wave-length.	Intensity.	Remarks.	Other observers.	Wave-length.	Intensity.	Remarks.	Other observers.
3464·48	6	. . . .	3464, L. & D.	3375·72	1	. . . .	3374? L. & D.
3460·67	6	. . . .	3460, L. & D.	3370·01	6	. . . .	3370, L. & D.
3454·30	6	. . . .	3454, L. & D.	3148·76	1		
3450·87	4	. . . .	3451, L. & D.	3126·33	1		
3447·83	8	. . . .	3447·7,? He, L. & D.	3092·84	1		
3438·66	1			3080·05	1		
3424·05	2	. . . .	3424, L. & D.	3077·08	1		
3418·05	8	. . . .	3418, L. & D.	3057·50	1		

TABLE V.—First Krypton Spectrum, without Leyden Jar and Spark Gap.

Wave-length.	Intensity.	Remarks.	Other observers.	Wave-length.	Intensity.	Remarks.	Other observers.
6456·65	1	. . . .	6458, L. & D. Intensity 1.	4792·80	1		
6421·32	1	. . . .	6420, L. & D. Intensity 4.	4734·32	4		
6236·61	1			4697·17	4		
6223·00	1			4691·12	2		
6083·08	1	. . . .	6082, L. & D. Intensity 1.	4671·40	10	. . . .	4671·42, RUNGE. Intensity 2.
6075·50	1			4624·48	10	. . . .	4624·46, RUNGE. Intensity 1.
6056·32	2	. . . .	6056, L. & D. Intensity 2.				
6012·34	1	. . . .	6011, L. & D. Intensity 2.	4612·07	1		

5994·02	2	. . . .	5992, L. & D. Intensity 3.
5880·06	1		
5871·12	10	Visible in second krypton spectrum . .	5871·071, RUNGE. Intensity 8. 5871, L. & D. Intensity 10.
5866·94	1		
5832·94	1		
5827·28	1		
5756·96	1		
5718·59	1		
5701·06	2		
5695·58	1		
5660·37	3		
5649·85	1		
5580·64	1	Equal intensity in second krypton spectrum.	
5570·50	10	Visible in second krypton spectrum, probably the green aurora line.	5570·417, RUNGE. Intensity 8. 5571, L. & D. Intensity 10.
5562·45	6	Visible in second krypton spectrum . .	5562·363, RUNGE. 5563, L. & D. Intensity 3.
5520·74	1	Equal intensity in second krypton spectrum.	
5519·61	4		
5500·90	1		
5498·24	3		
5491·11	1		
5475·49	2		
5423·44	1	. . . .	? 5424, L. & D. Intensity 1.
4829·90	3		
4807·22	4		

4582·90	4	. . . .	4583, L. & D. Intensity 4.
4524·82	4		
4502·56	9	Visible in second krypton spectrum . .	4502·43, RUNGE. Intensity 4. ? 4505, L. & D. Intensity 2.
4501·13	7		
4463·88	10	Visible in second krypton spectrum . .	4463·82, RUNGE. Intensity 5. 4464, L. & D. Intensity 3.
4454·12	10	Visible in second krypton spectrum. .	4454·07, RUNGE. Intensity 4. 4454, L. & D. Intensity 1.
4425·32	1		
4418·89	1		
4410·49	1		
4400·11	6	. . . .	4400·05, RUNGE. Intensity 1. 4400, L. & D. Intensity 1.
4385·87	1		
4384·01	1		
4376·33	10	Visible in second krypton spectrum . .	4376·24, RUNGE. Intensity 3. 4376, L. & D. Intensity 3.
4364·58	1		
4362·83	9	Visible in second krypton spectrum. .	4362·76, RUNGE. Intensity 2. 4363, L. & D. Intensity 2.
4358·43	1		
4355·67	1	Second krypton spectrum	4355·62, RUNGE. Intensity 5. 4356, L. & D. Intensity 12.
4351·48	3		
4319·76	10	Visible in second krypton spectrum. .	4319·760, RUNGE. Intensity 4. 4320, L. & D. Intensity 8.

TABLE V.—First Krypton Spectrum, without Leyden Jar and Spark Gap—(continued).

Wave-length.	Intensity.	Remarks.	Other observers.	Wave-length.	Intensity.	Remarks.	Other observers.
4318 ·74	8	Visible in second krypton spectrum. .	4318·70, RUNGE. Intensity 2. 4319, L. & D. Intensity 3.	3797 ·05	1		
				3773 ·59	3		
4300 ·67	1	Second krypton spectrum	4301, L. & D. Intensity 7.	3679 ·58	4		
4286 ·64	1			3668 ·74	2	Equal intensity in second krypton spectrum	
4283 ·17	4	Visible in second krypton spectrum. .	4283, L. & D. Intensity 3.	3665 ·43	3		
4274 ·15	10	Visible in second krypton spectrum. .	4274·09, RUNGE. Intensity 4. 4274, L. & D. Intensity 4.	3650 ·21	2		
				3615 ·57	2		
4046 ·60	1			3522 ·79	1		
3300 ·71	2			3502 ·69	2		

TABLE VI.—Second Krypton Spectrum, with Leyden Jar and Spark Gap.

Wave-length.	Intensity.	Remarks.	Other observers.	Wave-length.	Intensity.	Remarks.	Other observers.
5871 ·12	1	First krypton spectrum	5871, L. & D. Intensity 10.	5229 ·67	1	. . . .	5229, L. & D. Intensity 1.
5771 ·60	1	. . . .	5771, L. & D. Intensity 2.	5224 ·72	1		
5753 ·19	1	. . . .	5753, L. & D. Intensity 2.	5217 ·59	1	. . . .	5218, L. & D. Intensity 1. 5215, L. & D. Not seen.
5690 ·56	3	. . . .	5690, L. & D. Intensity 5.	5208 ·50	3	. . . .	5208 ·57, RUNGE. 5209, L. & D. Intensity 5.
5682 ·15	5	. . . .	5682, L. & D. Intensity 5.				
5674 ·70	1			5200 ·36	1	. . . .	5203, L. & D. Intensity 1.
5672 ·94	1			5187 ·17	1	. . . .	5186, L. & D. Intensity 1.

5650 ·56	1	. . . .	5650, L. & D. Intensity 1.
5649 ·76	1	. . . .	
5633 ·17	6	. . . .	5632, L. & D. Intensity 2.
5597 ·47	1		
5580 ·64	1	Equal intensity in first krypton spectrum.	
5570 ·50	3	First krypton spectrum	5570 ·417, RUNGE. 5571, L. & D. Intensity 10.
5568 ·84	2		
5562 ·45	2	First krypton spectrum	5562 ·363, RUNGE. 5563, L. & D. Intensity 3.
5553 ·15	1	Diffused	5553, L. & D. Intensity 1. 5544, L. & D. Not seen.
5523 ·75	1	. . . .	5523, L. & D. Intensity 2.
5523 ·13	2	. . . .	
5520 ·74	1	Equal intensity in first krypton spectrum.	
			5506, L. & D. Not seen.
5499 ·73	1	. . . .	5500, L. & D. Intensity 2.
			5483, L. & D. Not seen.
5468 ·31	2	Diffused.	
5446 ·51	2	. . . .	5446, L. & D. Intensity 2.
5438 ·84	1		
5418 ·55	1	. . . .	5429, 5424 L. & D. Not seen.
5333 ·55	2	. . . .	5403, L. & D. Not seen.
5323 ·15	1		
5317 ·56	1	. . . .	5319, L. & D. Intensity 1.
5308 ·84	1	. . . .	5208·57, RUNGE. Intensity 1. 5305, L. & D. Not seen.
5276 ·69	1	. . . .	5278, L. & D. Intensity 1.

5168 ·33	1	. . . .	5172, L. & D. Not seen.
5166 ·95	1	. . . .	5166, L. & D. Intensity 5.
5143 ·25	1	*Cf.* Xenon II., 5143 ·24. Intensity 1.	5143, L. & D. Intensity 4.
5125 ·88	2	. . . .	5126, L. & D. Intensity 6.
5123 ·35	1		
5086 ·67	1	. . . .	5087, L. & D. Intensity 3.
5077 ·37	1	. . . .	5078, L. & D. Intensity 1.
5072 ·71	1	. . . .	5073, L. & D. Intensity 2.
5065 ·74	1		
5054 ·61	1	. . . .	5057, L. & D. Not seen.
5046 ·51	1		
5033 ·95	1	. . . .	5034, L. & D. Intensity 1.
5028 ·48	1		
5022 ·57	2	. . . .	5023, L. & D. Intensity 4.
5022 ·01	1		
5016 ·58	1		
5013 ·42	3	. . . .	5014, L. & D. Intensity 2.
5009 ·49	1		
4982 ·95	1		
4979 ·00	3	. . . .	4980, L. & D. Intensity 1.
4960 ·44	1	. . . .	4960, L. & D. Intensity 1.
4948 ·67	1		
4945 ·75	2	. . . .	4946, L. & D. Intensity 1.
4933 ·32	1		
4916 ·11	1		4903, L. & D. Not seen.
4889 ·16	1		
4870 ·23	1		

Table VI.—Second Krypton Spectrum, with Leyden Jar and Spark Gap—continued.

Wave-length.	Intensity.	Remarks.	Other observers.
4857·36	1	*Cf.* Xenon II., 4857·37. Intensity 1.	
4846·76	4	Diffused	4847, L. & D. Intensity 2.
4845·79	1	. . . .	4845, L. & D. Intensity 2.
4836·75	2		
4833·89	1		
4832·26	4	Diffused	4832·22, Runge. Intensity 2. 4833, L. & D. Intensity 5.
4826·21	1		
4825·37	3	Diffused	4825·38, Runge. Intensity 1. 4826, L. & D. Intensity 3.
4811·91	4	. . . .	4812, L. & D. Intensity 3.
4803·16	<1		
4796·48	2	Diffused.	
4789·89	1		
4788·93	<1		
4778·57	1	Diffused.	
4773·16	2		
4765·90	6	. . . .	4766, L. & D. Intensity 10.
4762·60	5	. . . .	4762·66, Runge. Intensity 2. 4763, L. & D. Intensity 3.
4754·63	2		
4752·14	3	Diffused.	
4739·16	7	. . . .	4739·13, Runge. Intensity 5. 4739, L. & D. Intensity 10.
4729·88	1		

Wave-length.	Intensity.	Remarks.	Other observers.
4614·67	2		
4613·93	1		
4610·79	3	. . . .	4610, L. & D. Intensity 3.
4607·03	<1		
4604·16	2		
4598·64	2	. . . .	4598, L. & D. Intensity 1.
4592·94	3	Diffused	4593, L. & D. Intensity 2.
4583·03	4	. . . .	4583, L. & D. Intensity 4.
4577·40	6	A line occurs in Xenon II. at 4577·36. Intensity 6.	4577·31, Runge. Intensity 4. 4577, L. & D. Intensity 8.
4575·87	1		
4573·52	2		
4556·77	4		
4537·45	1		
4536·67	1	Diffused.	
4523·32	5	. . . .	4525, L. & D. Intensity 3.
4518·82	1		
4502·56	1	First krypton spectrum	? 4505, L. & D. Intensity 2.
4490·04	4	. . . .	4490, L. & D. Intensity 2.
4475·18	7	. . . .	4475, L. & D. Intensity 6.
4463·88	1	First krypton spectrum	4464·11, Runge. Not seen. 4464, L. & D. Intensity 3.
4460·18	1		

4727·81	1		
4710·68	1		
4699·82	2	. . . .	4702·73, RUNGE. Not seen.
4695·82	2		
4694·59	4	. . . .	? 4694·82, RUNGE. Intensity 2. 4694, L. & D. Intensity 3.
4693·83	1		
4691·46	2		
4689·95	1		
4687·46	1		
4686·43	1		
4680·57	4	. . . .	4680·67, RUNGE. Intensity 3. 4680, L. & D. Intensity 5.
4673·96	1		
4672·22	<1		
4659·04	5	. . . .	4659, L. & D. Intensity 8.
4655·94	<1		
4650·33	2	. . . .	4650, L. & D. Intensity 1.
4638·53	2		
4634·05	5	. . . .	4634·07, RUNGE. Intensity 4. 4635, L. & D. Intensity 6.
4621·58	1		
4620·21	<1		
4619·31	6	. . . .	4619·30, RUNGE. Intensity 5. 4620, L. & D. Intensity 8.
4615·46	5	. . . .	4615·48, RUNGE. Intensity 4. 4615, L. & D. Intensity 6.
4457·42	2		
4454·55	1		
4454·12	1	First krypton spectrum	4454, L. & D. Intensity 1.
4453·38	3		
4443·87	1		
4443·46	2		
4436·98	4	. . . .	4436·96, RUNGE. Intensity 2. 4437, L. & D. Intensity 6.
4431·85	4	. . . .	4432, L. & D. Intensity 6.
4422·86	4	. . . .	4423, L. & D. Intensity 2.
4417·40	2		
4408·10	2	This line is visible in the spectrum of atmospheric argon, but disappears after fractionation.	4408·095, KAYSER in the blue argon spectrum. Intensity = 1.
4404·47	1		
4400·98	1		
4399·57	1	. . . .	4400, L. & D. Intensity 1.
4389·87	1		
4386·69	4	. . . .	4387, L. & D. Intensity 3.
4385·39	1		
4381·71	3		
4377·89	2		
4376·33	1	Diffused . . . . First krypton spectrum	4376·24, RUNGE. 4376, L. & D. Intensity 3.
4376·20	1		
4369·86	4		
4367·27	<1		
4366·43	<1		

TABLE VI.—Second Krypton Spectrum, with Leyden Jar and Spark Gap—*continued*.

Wave-length.	Intensity.	Remarks.	Other observers.
4362·83	1	Krypton spectrum first	4362·76, RUNGE. 4363, L. & D. Intensity 2.
4355·84	1		
4355·67	10	Visible in first krypton spectrum . .	4355·62, RUNGE. Intensity 5. 4356, L. & D. Intensity 12.
4355·14	2		
4352·76	<1		
4351·20	2	Diffused.	
4344·42	1		
4344·05	<1		
4341·50	<1		
4333·50	2		
4323·16	4	. . . .	4323, L. & D. Intensity 2.
4319·76	1	First krypton spectrum	4319·760, RUNGE. 4320, L. & D. Intensity 8.
4319·30	1	. . . .	4319, L. & D. Intensity 3.
4318·74	1	First krypton spectrum	4318·70, RUNGE. } 4318, L. & D. Intensity 3.
4317·98	5	. . . .	4318·22, RUNGE. Intensity 2 } 4318, L. & D. Intensity 3.
4305·37	2		
4301·71	3	. . . .	} 4301, L. & D. Intensity 7.
4300·67	5	Visible in first krypton spectrum . .	} 4301, L. & D. Intensity 7.
4295·35	1		
4294·99	2		

Wave-length.	Intensity.	Remarks.	Other observers.
4179·67	2	Diffused.	
4172·63	2		
4171·97	2	. . . .	4172, L. & D. Intensity 1.
4160·37	1		
4159·13	1		
4154·62	4		
4145·28	6	. . . .	4145·27, RUNGE. Intensity 3. 4145, L. & D. Intensity 8.
4139·28	4	Very diffused	4140, L. & D. Intensity 2.
4138·12	4		
4134·72	3		
4133·81	<1		
4131·48	4		
4118·28	2	Diffused	4119, L. & D. Intensity 3.
4113·90	1		
4109·38	6	. . . .	4109, L. & D. Intensity 6.
4098·89	7	. . . .	4099, L. & D. Intensity 8.
4088·48	8	. . . .	4088·53, RUNGE. Intensity 6. 4089, L. & D. Intensity 8.
4082·58	4	. . . .	A line occurs in the blue spectrum of argon of wave-length 4082·535 (KAYSER), but which does not disappear on fractionation. Intensity = 2.

4293·10	6	. . . .	4293·10, RUNGE. Intensity 5. 4293, L. & D. Intensity 10.
4283·17	2	First krypton spectrum	4283, L. & D. Intensity 3.
4281·65	<1		
4280·77	1	Diffused.	
4274·15	2	First krypton spectrum	4274·09, RUNGE. 4274, L. & D. Intensity 4.
4273·65	<1		
4268·97	3	. . . .	4269, L. & D. Intensity 3. (both lines)
4268·72	2	. . . .	
4259·60	3	. . . .	4260, L. & D. Intensity 1.
4254·98	3	. . . .	4256, L. & D. Intensity 1.
4252·87	2		
4250·76	4	. . . .	4251, L. & D. Intensity 5.
4244·32	1		
4237·11	2	. . . .	4237, L. & D. Intensity 4. (both lines)
4236·81	3	. . . .	
4228·98	1	This line is visible in the spectrum of atmospheric argon, but disappears after fractionation.	4429·015, KAYSER in the blue argon spectrum. Intensity = 1.
4226·75	3		
4226·09	3		
4225·50	1		
4223·22	<1		
4222·36	1		
4201·84	1		
4201·55	<1		
4185·29	2	Diffused	4185 L. & D. Intensity 3.

4069·97	4	Diffused.	
4067·53	5		
4065·22	8	. . . .	4065·19, RUNGE. Intensity 3. 4065, L. & D. Intensity 7.
4059·02	4	Diffused	. . . . 4058, L. & D. Intensity 6. (both lines)
4057·17	8	. . . .	4057·16, RUNGE. Intensity 2
4054·43	1		
4050·62	5	Diffused.	
4046·30	1		
4044·80	5	. . . .	4045, L. & D. Intensity 4.
4037·96	4	. . . .	4038, L. & D. Intensity 2.
4035·53	2		
4026·38	1	Diffused.	
4024·72	2	Diffused.	
4008·60	2	Diffused	4008, L. & D. Intensity 2. (both lines)
4008·21	3	. . . .	
4005·70	3	Diffused	4005, L. & D. Intensity 1.
4002·73	3		
3998·10	5	. . . .	3997, L. & D. Intensity 3.
3996·81	<1		
3994·98	6	. . . .	3994, L. & D. Intensity 6.
3992·08	2		
3990·79	2	Diffused.	
3987·93	4	. . . .	3988, L. & D. Intensity 2.
3987·22	1	Diffused.	
3965·02	4	. . . .	3965, L. & D. Intensity 1.

TABLE VI.—Second Krypton Spectrum, with Leyden Jar and Spark Gap—continued.

Wave-length.	Intensity.	Remarks.	Other observers.
3962 ·46	1		
3957 ·82	4		
3954 ·90	5	. . . .	3955, L. & D. Intensity 2.
3953 ·71	3		
3952 ·16	3	Diffused.	
3947 ·76	1		
3945 ·60	1		
3942 ·78	2	Diffused.	
3942 ·28	1	*Cf.* Xenon II., 3942·29. Intensity I.	
3941 ·03	1	Diffused.	
3938 ·98	2	. . . .	3939, L. & D. Intensity 1.
3938 ·62	1		
3934 ·29	3	Diffused.	
3932 ·80	4	Diffused	?
3929 ·34	3	Diffused	3928, L. & D. Intensity 3.
3924 ·91	1	Diffused.	
3921 ·81	2	Diffused.	
3920 ·29	8	. . . .	3920·59, RUNGE. Intensity 1. 3921, L. & D. Intensity 8.
3917 ·76	6	. . . .	3918, L. & D. Intensity 2.
3917 ·03	1		
3914 ·04	1		
3913 ·01	1		

Wave-length.	Intensity.	Remarks.	Other observers.
3821 ·93	1	Diffused.	
3817 ·23	3	. . . .	3817, L. & D. Intensity 2.
3814 ·70	2	Diffused.	
3809 ·30	2		
3806 ·46	1	. . . .	} 3806, L. & D. Intensity 2.
3806 ·28	1	. . . .	
3804 ·80	4	. . . .	3805, L. & D. Intensity 3.
3793 ·35	1		
3792 ·82	4		
3791 ·22	2	Diffused.	
3788 ·26	2	Very diffused.	
3785 ·76	1	Diffused.	
3783 ·28	10	. . . .	3783 ·40, RUNGE. Intensity 4. 3784, L. & D. Intensity 10.
3780 ·70	1		
3778 ·23	10	. . . .	3778 ·29, RUNGE. Intensity 4. 3779, L. & D. Intensity 8.
3776 ·66	1	Diffused.	
3775 ·68	1		
3773 ·20	2		
3771 ·46	4	. . . .	3772, L. & D. Intensity 4.
3768 ·10	1	Diffused. *Cf.* Xenon II., 3768 ·08. Intensity 1.	

3912 ·69	5	. . . .	3913, L. & D. Intensity 6. 3912 ·36, RUNGE. Intensity 1.
3906 ·37	8	. . . .	3907, L. & D. Intensity 6.
3901 ·28	2	. . . .	3901, L. & D. Intensity 1.
3898 ·83	3		
3894 ·83	5	. . . .	3896, L. & D. Intensity 3.
3884 ·04	1		
3883 ·77	1		
3875 ·95	2	. . . .	} 3876, L. & D. Intensity 7.
3875 ·56	7	. . . .	}
3874 ·15	2		
3873 ·38	2	Diffused.	
3863 ·99	5	Diffused.	3862, L. & D. Intensity 1.
3860 ·58	5	. . . .	3859, L. & D. Intensity 1.
3858 ·90	2	Diffused	3859, L. & D. Intensity 1.
3857 ·44	3		
3850 ·23	2	Diffused.	
3847 ·93	1	Diffused.	
3847 ·63	1		
3846 ·99	1	. . . .	3847, L. & D. Intensity 1.
3844 ·55	2	Diffused	3844, L. & D. Intensity 2.
3842 ·98	1	Diffused.	
3842 ·40	3	. . . .	3842, L. & D. Intensity 1.
3839 ·49	1	. . . .	3839, L. & D. Intensity 1.
3836 ·64	3	. . . .	3837, L. & D. Intensity 2.
3835 ·47	1		
3835 ·10	2	Diffused.	

3765 ·98	1	Diffused. *Cf.* Xenon II., 3765 ·99. Intensity 4.	
3759 ·04	2	Diffused	3759, L. & D. Intensity 2.
3755 ·92	1	Diffused.	
3754 ·35	5	. . . .	3755, L. & D. Intensity 6.
3751 ·81	1	*Cf.* Xenon II., 3751 ·80. Intensity 1.	
3749 ·77	3	Diffused.	
3744 ·95	9	. . . .	3746, L. & D. Intensity 6.
3741 ·83	10	. . . .	3741 ·85, RUNGE. Intensity 3. 3742, L. & D. Intensity 6.
3740 ·87	2		
3740 ·37	1		
3735 ·91	5	. . . .	3736, L. & D. Intensity 3.
3733 ·09	2	A line of wave-length 3733 ·122 is given by KAYSER in the blue argon spectrum. Intensity = 1.	} 3734, L. & D. Intensity 4.
3732 ·77	3	. . . .	}
3731 ·82	1		
3728 ·13	2	Diffused.	
3726 ·45	2		
3721 ·50	7	. . . .	3722, L. & D. Intensity 5.
3718 ·79	8	. . . .	} 3719, L. & D. Intensity 10.
3718 ·17	10	. . . .	}
3716 ·28	1		
3715 ·18	3	. . . .	3715, L. & D. Intensity 1.
3708 ·23	1	Diffused.	
3696 ·84	1		
3690 ·80	5	. . . .	3691, L. & D. Intensity 1.

TABLE VI.—Second Krypton Spectrum, with Leyden Jar and Spark Gap—continued.

Wave-length.	Intensity.	Remarks.	Other observers.
3686·30	6	. . . .	3686·26, RUNGE. Intensity 1. 3687, L. & D. Intensity 5.
3680·64	1	. . . .	} 3681, L. & D. Intensity 7.
3680·52	7	. . . .	
3678·77	2		
3674·37	1		
3670·38	1		
3669·16	9	. . . .	3670, L. & D. Intensity 7.
3668·74	2	Equal intensity in first krypton spectrum	} 3667, L. & D. Intensity 1.
3666·15	3	. . . .	
3663·57	4	. . . .	3664, L. & D. Intensity 3.
3661·15	4	. . . .	3661, L. & D. Intensity 3.
3660·20	1		
3654·11	10	. . . .	3654·11, RUNGE. Intensity 3. 3654, L. & D. Intensity 10.
3648·74	5	. . . .	3649, L. & D. Intensity 3.
3644·36	1		
3641·48	4		
3637·63	4	. . . .	3638, L. & D. Intensity 4.
3634·54	2	Diffused.	
3633·69	2		
3632·62	1		

Wave-length.	Intensity.	Remarks.	Other observers.
3535·48	6	*Cf.* Argon, 3535·514. Intensity = 4 (KAYSER).	
3527·53	1		
3524·93	1		
3521·27	1		
3517·52	1		
3514·68	3		
3507·58	9		
3503·38	6	. . . .	3503, L. & D. Intensity 2.
3498·63	1	Diffused.	
3497·29	3		
3493·16	2		
3492·94	2		
3488·74	8	. . . .	3489, L. & D. Intensity 2.
3487·61	1		
3478·04	1		
3474·79	7		
3471·52	<1		
3471·16	1		
3470·19	7	. . . .	3470, L. & D. Intensity 1.
3465·54	1	Diffused.	
3460·24	6	. . . .	3460, L. & D. Intensity 3.
3448·87	4		

3632 ·02	10	. . . .	3632, L. & D. Intensity 10.	3447 ·01	3		
3627 ·20	1			3446 ·66	7	Diffused.	
3623 ·74	4	. . . .	3624, L. & D. Intensity 1.	3445 ·43	1		
3615 ·97	3			3443 ·01	1		
3611 ·21	1			3439 ·60	6		
3608 ·02	9	. . . .	3608, L. & D. Intensity 6.	3439 ·03	1		
3604 ·10	1			3431 ·85	1		
3602 ·26	1	Diffused.		3431 ·15	2		
3600 ·05	6	. . . .	3600, L. & D. Intensity 6.	3428 ·95	1	*Cf.* Xenon II., 3428 ·95. Intensity 1.	
3599 ·35	4			3427 ·84	4		
3598 ·14	1			3423 ·87	3		
3596 ·99	1			3414 ·95	1		
3589 ·79	7	. . . .	3590, L. & D. Intensity 3.	3405 ·28	7		
3586 ·40	2			3396 ·72	2	*Cf.* Xenon II., 3396 ·72. Intensity 2.	
3580 ·11	1			3389 ·80	1		
3577 ·74	1			3389 ·06	3		
3572 ·82	3	Diffused	3574, L. & D. Intensity 1.	3387 ·26	1	*Cf.* Xenon II., 3387 ·26. Intensity 1.	
3567 ·88	2			3385 ·35	1		
3564 ·38	4	*Cf.* Xenon II., 3564 ·40. Intensity 4.		3381 ·24	2	. . . .	A line is given by EDER and VALENTA in the blue argon spectrum at 3381 ·27. This line was not seen by KAYSER nor myself.
3563 ·48	1						
3562 ·23	1						
3555 ·69	2	Very diffused.					
3553 ·61	4	. . . .	3554, L. & D. Intensity 2.	3379 ·18	1	*Cf.* Xenon II., 3379 ·20. Intensity 2.	
3549 ·57	3			3375 ·09	4		
3548 ·86	2			3360 ·22	2	*Cf.* Xenon II., 3360 ·20. Intensity 2.	
3544 ·69	5	. . . .	3545, L. & D. Intensity 6.	3352 ·07	6		
3544 ·29	5	. . . .		3349 ·61	3	Diffused.	

TABLE VI.—Second Krypton Spectrum, with Leyden Jar and Spark Gap—*continued*.

Wave-length.	Intensity.	Remarks.	Other observers.	Wave-length.	Intensity.	Remarks.	Other observers.
3348 ·28	2			3177 ·09	1	Very diffused.	
3342 ·59	5			3175 ·78	2	Diffused.	
3341 ·70	1	Diffused.		3171 ·06	3	*Cf.* Xenon II., 3175 ·80. Intensity 3.	
3340 ·61	2	Diffused.		3151 ·88	3		
3337 ·99	1	Diffused.		3151 ·06	5		
3336 ·84	1	Diffused.		3144 ·90	1		
3332 ·61	3			3144 ·47	2		
3330 ·88	7	*Cf.* Xenon II., 3330 ·90. Intensity 6.		3142 ·01	5		
3329 ·86	1	Diffused.		3141 ·48	6		
3328 ·34	1	Diffused.		3139 ·71	3		
3325 ·84	9			3138 ·49	1	Possibly Xenon II., 3138 ·46. Intensity 6.	
3324 ·33	1	Very diffused.		3136 ·33	2		
3321 ·26	1			3135 ·24	1		
3320 ·39	1	Diffused.		3124 ·52	6		
3319 ·48	1			3122 ·61	3		
3315 ·80	1	*Cf.* Xenon II., 3315 ·80. Intensity 1.		3120 ·73	4		
3311 ·59	6			3112 ·36	5		
3308 ·28	4			3105 ·48	1		
3305 ·79	1	Diffused.		3101 ·85	1		
3304 ·87	5			3097 ·27	4		
3301 ·97	1			3096 ·59	3	Diffused.	
3294 ·02	1			3095 ·24	1	Diffused.	
3286 ·01	4						

3285·36	1		
3282·21	1		
3271·77	4		
3268·61	7		
3264·94	8		
3261·70	1	Diffused.	
3248·16	1	Very diffused.	
3247·14	1	Diffused.	
3246·74	2		
3245·82	10		
3240·55	6		
3239·64	6		
3237·94	1		
3235·29	1		
3224·99	3		
3223·66	1	Diffused.	
3222·40	1	*Cf.* Xenon II., 3222·40. Intensity 1.	
3220·76	4		
3216·39	1		
3211·04	1		
3208·39	3		
3207·91	4		
3205·40	1	Diffused.	
3202·67	1	Diffused.	
3200·53	3		
3191·33	6		
3189·23	7		

3063·26	5		
3062·55	1		
3060·99	2	Diffused.	
3056·86	4		
3056·14	2		
3049·83	2		
3047·07	5		
3044·92	1	*Cf.* Xenon II., 3044·91. Intensity 1.	
3024·57	4		
3022·43	3		
3017·78	2	Diffused.	
3013·36	1		
3008·57	2		
3002·39	1		
2999·99	3	Diffused.	
2996·77	2		
2992·36	3		
2986·02	1		
2983·22	1		
2979·95	3		
2979·01	3		
2976·44	1		
2976·06	1		
2974·18	3		
2971·90	1		
2968·44	2		
2967·37	5		

TABLE VI.—Second Krypton Spectrum, with Leyden Jar and Spark Gap—continued.

Wave-length.	Intensity.	Remarks.	Other observers.	Wave-length.	Intensity.	Remarks.	Other observers.
2963 ·26	1			2803 ·32	4		
2961 ·19	2			2801 ·25	1	Very diffused.	
2960 ·92	2	*Cf.* Xenon II., 2960 ·93. Intensity 2.		2795 ·92	5		
2960 ·27	3	Diffused.		2790 ·31	1		
2958 ·43	2	Diffused.		2779 ·63	1		
2956 ·44	1			2779 ·23	3		
2954 ·40	2			2778 ·34	1		
2952 ·69	4			2774 ·70	1		
2952 ·23	1			2772 ·73	2		
2950 ·33	3			2761 ·87	1		
2949 ·67	2			2759 ·16	1	Diffused.	
2948 ·27	1			2756 ·66	1	*Cf.* Xenon II., 2756 ·64. Intensity 1.	
2940 ·05	1			2752 ·33	1		
2938 ·70	1			2751 ·71	1	Diffused.	
2935 ·36	2			2750 ·49	1		
2934 ·13	1			2748 ·18	1		
2931 ·03	1			2742 ·67	4		
2930 ·72	1			2742 ·13	1		
2927 ·69	1			2733 ·38	4	*Cf.* Xenon II., 2733 ·36. Intensity 4.	
2917 ·81	1			2732 ·46	1	*Cf.* Xenon II., 2732 ·48. Intensity 1.	
2915 ·88	1			2730 ·55	1		
2915 ·40	1			2730 ·02	1		
2913 ·35	1			2729 ·58	4		

2909·30	2		
2908·74	1		
2900·19	3		
2893·81	4		
2892·30	5		
2873·84	1		
2872·99	1		
2870·73	4		
2851·29	3		
2847·51	4		
2844·59	3	*Cf.* Xenon II., 2844·59. Intensity 3.	
2841·10	1	*Cf.* Xenon II., 2841·10. Intensity 1.	
2838·92	3		
2836·08	1		
2835·49	2	Diffused.	
2833·11	6		
2830·55	1	Diffused.	
2829·60	1		
2822·75	1		
2817·00	4		
2816·58	6		
2814·62	2	Possibly Xenon II., 2814·62. Intensity 6.	
2814·09	1		
2811·81	2	*Cf.* Xenon II., 2811·81. Intensity 3.	
2806·21	1		
2803·71	1		

2720·03	1	Diffused.	
2716·27	3		
2715·31	1		
2714·61	1		
2712·50	8		
2711·22	1		
2710·37	1		
2701·45	3		
2700·73	1		
2698·20	1		
2697·41	4		
2696·71	4	*Cf.* Xenon II., 2696·73. Intensity 4.	
2695·81	4		
2694·93	3		
2692·65	1		
2691·94	1	*Cf.* Xenon II., 2691·92. Intensity 1.	
2691·31	1		
2690·35	1	*Cf.* Xenon II., 2690·33. Intensity 1.	
2688·44	1		
2683·66	3		
2681·29	4		
2680·80	1		
2680·44	3		
2679·73	2		
2677·30	2	Possibly Xenon II., 2677·29. Intensity 8.	
2676·10	1		

TABLE VI.—Second Krypton Spectrum, with Leyden Jar and Spark Gap—continued.

Wave-length.	Intensity.	Remarks.	Other observers.	Wave-length.	Intensity.	Remarks.	Other observers.
2675 ·41	1			2558 ·08	1		
2670 ·78	2	*Cf.* Xenon II., 2670·80. Intensity 2.		2556 ·44	2		
2664 ·10	2	Diffused.		2556 ·01	2		
2661 ·34	1			2555 ·23	2		
2661 ·09	2	Diffused.		2554 ·35	2		
2656 ·49	2	Diffused.		2553 ·26	1		
2654 ·07	1			2548 ·68	1		
2649 ·84	1	Diffused.		2544 ·79	1		
2649 ·38	3			2538 ·43	2	Diffused.	
2648 ·80	1	*Cf.* Xenon II., 2648·79. Intensity 1.		2537 ·67	1		
2648 ·55	1			2535 ·97	1		
2648 ·26	4			2528 ·51	1		
2643 ·18	3			2527 ·26	2	Diffused.	
2642 ·19	1			2525 ·56	1	Diffused.	
2640 ·84	1			2525 ·07	2		
2639 ·86	4			2519 ·38	1		
2634 ·52	1			2518 ·02	1		
2630 ·76	2			2515 ·50	1		
2629 ·00	3			2513 ·50	1	*Cf.* Xenon II., 2513·52. Intensity 1.	
2628 ·19	1			2513 ·03	1		
2627 ·86	2			2511 ·83	1		
2627 ·34	1			2506 ·97	1		
2624 ·90	1	Diffused.		2506 ·66	2	Diffused.	

2624·63	1	*Cf.* Xenon II., 2624·65. Intensity 1.	
2620·54	4		
2616·80	2	*Cf.* Xenon II., 2616·79. Intensity 1.	
2611·08	3		
2604·72	1		
2604·59	1		
2602·23	2		
2597·80	2		
2596·83	1	Diffused.	
2595·44	1	Diffused.	
2594·49	1		
2592·57	5		
2591·33	1		
2590·83	1		
2589·19	4		
2584·21	1		
2581·84	1	Diffused. *Cf.* Xenon II., 2581·84. Intensity 1.	
2574·87	1		
2572·44	1	*Cf.* Xenon II., 2572·46. Intensity 2.	
2572·14	2		
2571·30	1		
2570·54	1		
2565·72	1		
2563·32	2		
2562·05	1		
2559·20	2		

2503·97	3	Diffused.	
2500·72	1		
2498·84	1		
2497·81	1		
2497·51	1	Diffused.	
2494·10	2	*Cf.* Xenon II., 2494·11. Intensity 3.	
2489·51	3		
2487·75	2		
2487·58	2		
2486·40	2		
2485·68	2		
2483·71	2		
2483·32	2		
2483·09	1		
2478·97	4		
2474·99	2		
2474·79	2		
2474·06	1		
2473·39	1		
2472·24	1		
2470·50	2		
2468·56	2	*Cf.* Xenon II., 2468·54. Intensity 2.	
2467·00	2		
2465·91	2		
2464·87	8		
2459·74	1		
2457·79	2		

TABLE VI.—Second Krypton Spectrum, with Leyden Jar and Spark Gap—*continued*.

Wave-length.	Intensity.	Remarks.	Other observers.	Wave-length.	Intensity.	Remarks.	Other observers.
2456·16	6			2439·64	1		
2455·42	1			2439·32	2		
2454·19	1			2428·44	3		
2453·37	2			2426·46	3		
2452·38	3			2425·15	1	*Cf.* Xenon 2425·18, a very diffused line of intensity 2.	
2446·56	2			2420·30	1		
2442·68	1			2418·13 &c.	1		
2440·96	1						

TABLE VII.—First Xenon Spectrum, without Leyden Jar and Spark Gap.

Wave-length.	Intensity.	Remarks.	Other observers.	Wave-length.	Intensity.	Remarks.	Other observers.
6198·70	1			4807·19	6	Visible in second xenon spectrum . .	4807, L. & D. Intensity = 1.
6182·92	3	. . . .	6183, L. & D. Intensity = 1.	4792·77	1		
6180·16	1	. . . .	6181, L. & D. Intensity = 1.	4734·30	8	Visible in second xenon spectrum . .	4734, L. & D. Intensity = 1.
6178·80	2			4697·17	7	. . . .	Band of close lines. L. & D.
6164·30	2	. . . .	? 6166, L. & D. Intensity = 1.	4691·13	1	. . . .	
6112·58	1			4683·83	1	. . . .	
			5935, L. & D. Intensity = 1. Not seen.	4671·42	10	Visible in second xenon spectrum . .	
5895·20	1	. . . .	5895, L. & D. Intensity = 1.	4668·32	1	. . . .	

5875 ·30	1		5876, L. & D. Intensity = 1.
			5856, L. & D. Intensity = 1. Not seen.
5824 ·98	1		} 5825, L. & D. Intensity = 2.
5824 ·08	1		
5716 ·20	2	Very diffused.	
5696 ·68	1		
5695 ·96	2		
5688 ·59	1		
5649 ·77	<1		
5619 ·07	2		
5612 ·84	<1		
5581 ·96	1		
5580 ·60	1		
5579 ·48	<1		
5563 ·83	2		
5552 ·59	2		
5488 ·73	<1		
5440 ·16	1	Diffused.	
5394 ·84	1		
5392 ·94	2		
5363 ·74	<1		
5028 ·42	2		5025, L. & D. Intensity = 1. Not seen.
4923 ·28	6		4924, L. & D. Intensity = 4.
4916 ·63	6		4917, L. & D. Intensity = 4.
4843 ·44	2		
4829 ·87	4		4820, L. & D. Intensity = 1.

4658 ·94	1		
4624 ·46	15	Visible in second xenon spectrum	4624, L. & D. Intensity = 2.
4612 ·06	2		
4582 ·89	5		
4524 ·83	6		4525, L. & D. Intensity = 5.
4501 ·13	10	Visible in second xenon spectrum	4500, L. & D. Intensity = 1.
4385 ·97	1		4386, L. & D. Intensity = 3.
4384 ·12	2		
4376 ·35	3		4375, L. & D. Intensity = 4.
4358 ·51	3		
4203 ·87	2		4204, L. & D. Intensity = 1.
4193 ·70	8		} 4193, L. & D. Intensity = 6.
4193 ·19	1		
4135 ·27	1		
4116 ·25	7		
4109 ·84	5		
4078 ·94	10		4079, L. & D. Intensity = 1.
4046 ·71	3		
3985 ·39	3		
3974 ·61	3		
3967 ·74	10		
3951 ·16	10		3951, L. & D. Intensity = 6.
3948 ·93	1		
3948 ·38	3		
3826 ·99	2	Equal intensity in second xenon spectrum.	3826, L. & D. Intensity = 1.
3823 ·86	1		

TABLE VII.—First Xenon Spectrum, without Leyden Jar and Spark Gap—continued.

Wave-length.	Intensity.	Remarks.	Other observers.	Wave-length.	Intensity.	Remarks.	Other observers.
3810 ·01	2			3650 ·36	4		
3804 ·96	3			3610 ·47	2		
3801 ·54	1			3554 ·16	2		
3796 ·47	3			3549 ·99	2		
3773 ·58	1			3506 ·90	1		
3745 ·54	1			3472 ·48	<1		
3693 ·69	3			3469 ·95	<1		
3686 ·08	3			3341 ·65	1		
3679 ·77	1			3132 ·01	2		
3670 ·10	1			3131 ·66	1		
3665 ·53	1			3125 ·85	2	Equal intensity in second xenon spectrum.	
3663 ·52	<1			3022 ·09	1		
3655 ·03	1			2536 ·58	2		

TABLE VIII.—Second Xenon Spectrum, with Leyden Jar and Spark Gap.

Wave-length.	Intensity.	Remarks.	Other observers.	Wave-length.	Intensity.	Remarks.	Other observers.
6097 ·80	7	. . . .	6097, L. & D. Intensity 6.	5619 ·18	1		
6051 ·36	7	. . . .	6051, L. & D. Intensity 6.	5616 ·99	6	. . . .	5617, L. & D. Intensity not given.
6036 ·40	6	. . . .	6036, L. & D. Intensity 5.	5613 ·14	1		
5976 ·67	7	. . . .	5976, L. & D. Intensity 6.	5607 ·18	1	. . . .	5609, L. & D. Intensity 1.

5971 ·32	1	. . . .	5972, L. & D. Intensity not given.
5945 ·71	1	. . . .	5946, L. & D. Intensity 2.
			5935, L. & D. Not seen.
5917 ·73	1		
5905 ·40	1	. . . .	5906, L. & D. Intensity 1.
5893 ·59	1	. . . .	? 5895, L. & D. Intensity 1.
5816 ·21	1	. . . .	5817, L. & D. Intensity 1.
5776 ·64	3	. . . .	5777, L. & D. Intensity 4.
5758 ·92	4	. . . .	5759, L. & D. Intensity 4.
5754 ·38	1	Diffused.	
5752 ·79	1		
5751 ·28	5	. . . .	5751, L. & D. Intensity 5.
5748 ·95	1		
5727 ·15	5	. . . .	5727, L. & D. Intensity 4.
5719 ·83	6	. . . .	5720, L. & D. Intensity 4.
5716 ·36	1		
5708 ·74	1		
5701 ·48	1	. . . .	L. & D. give a line at 5700. Intensity 6. This was not seen.
5699 ·80	1		
5686 ·73	1		
5675 ·41	1		
5671 ·15	3		
5667 ·85	6	. . . .	5668, L. & D. Intensity 4.
5659 ·67	5	. . . .	5660, L. & D. Intensity 1.
5633 ·32	1		
5625 ·18	1		
5604 ·66	1		
5595 ·32	2	Very diffused indeed.	
5591 ·96	1		
5584 ·00	2	Very diffused	5583, L. & D. Intensity 1.
5582 ·30	2	Diffused	(bracketed with 5584 ·00)
5572 ·48	2	. . . .	5573, L. & D. Intensity 1.
5570 ·60	1		
5553 ·08	1		
5548 ·40	1		
5531 ·33	7	. . . .	5532, L. & D. Intensity 4.
5525 ·81	2		
5524 ·63	1		
5518 ·96	1		
5507 ·72	1		
5495 ·20	1		
5481 ·38	3	Diffused.	
5472 ·90	7	. . . .	5473, L. & D. ? Intensity 3.
5469 ·81	1		
5460 ·63	6	. . . .	5461, L. & D. Intensity 3.
5453 ·33	1		
5451 ·22	1		
5450 ·71	5	. . . .	5451, L. & D. Intensity 1.
5445 ·70	2		
5439 ·19	8	. . . .	5439, L. & D. Intensity 3.
5419 ·40	10	. . . .	5420, L. & D. Intensity 10. 5419 ·38, RUNGE, as a weak krypton line.
5415 ·64	1		

TABLE VIII.—Second Xenon Spectrum, with Leyden Jar and Spark Gap—continued.

Wave-length.	Intensity.	Remarks.	Other observers.
5413 ·74	2		
5401 ·23	3		
5386 ·90	1		
5372 ·62	8	. . . .	5372, L. & D. Intensity 6.
5368 ·30	3	. . . .	5368, L. & D. Intensity 1.
5367 ·29	1		
5363 ·47	2		
5339 ·56	9	. . . .	5339, L. & D. Intensity 6.
5328 ·10	1		
5314 ·15	8	. . . .	5313, L. & D. Intensity 1.
5311 ·15	1		
5309 ·49	4	. . . .	5309, L. & D. Intensity 1.
5292 ·40	10	. . . .	5292, L. & D. Intensity 10. 5292 ·37, RUNGE, as a weak krypton line.
5268 ·50	1		
5262 ·16	5	. . . .	5262, L. & D. Intensity 2.
5260 ·65	5	. . . .	} 5260, L. & D. Intensity 2.
5260 ·10	1	. . . .	}
5247 ·98	1		
5239 ·14	2	. . . .	5240, L. & D. Intensity not given.
5226 ·84	1	. . . .	5227, L. & D. Intensity 1.
5223 ·85	1		

Wave-length.	Intensity.	Remarks.	Other observers.
4978 ·49	4	Diffused.	
4971 ·85	1	. . . .	4972, L. & D. Intensity 2.
4923 ·40	1		
4921 ·68	6	. . . .	4922, L. & D. Intensity 8.
4919 ·85	4		
4916 ·71	1		
4890 ·24	5	. . . .	4890, L. & D. Intensity 3.
4887 ·47	5	. . . .	4887, L. & D. Intensity not given.
4884 ·36	1	. . . .	4884, L. & D. Intensity 4.
4883 ·68	6	. . . .	4883, L. & D. Intensity not given.
4876 ·68	7	. . . .	4876, L. & D. Intensity 4.
4869 ·60	3		
4862 ·69	8		
4857 ·37	1	*Cf.* Krypton II., 4857 ·36. Intensity 1.	
4853 ·90	2		
4844 ·50	10	. . . .	4844, L. & D. Intensity 10. 4844 ·58, RUNGE as a weak krypton line.
4832 ·16	2		
4829 ·23	1	. . . .	4830, L. & D. Intensity 1.
4825 ·23	1		
4823 ·47	6	. . . .	4823, L. & D. Intensity 3.

5206·52	1		
5201·64	1	. . . .	5202, L. & D. Intensity 1.
5192·36	1	. . . .	} 5192, L. & D. Intensity 6.
5191·60	5	. . . .	
5188·28	4	. . . .	5189, L. & D. Intensity 3.
5184·68	2	. . . .	5185, L. & D. Intensity 3.
5179·02	3	. . . .	5179, L. & D. Intensity 3.
5143·24	1	*Cf.* Krypton II., 5143·25. Intensity 1.	
5125·94	3	. . . .	5126, L. & D. Intensity 3.
5122·65	3	. . . .	5123, L. & D. Intensity 1.
5107·58	3	. . . .	5107, L. & D. Intensity 3.
5099·96	1		
5092·22	3		
5080·88	7	. . . .	5080, L. & D. Intensity 2.
			5068, L. & D. Intensity 5. Not seen.
5052·74	1	. . . .	5052, L. & D. Intensity 1.
5045·09	3	. . . .	5045, L. & D. Intensity 6.
5041·62	1		
5028·62	1	. . . .	? 5025, L. & D. Intensity 1.
5013·04	1	Diffused.	
5008·74	1		
5001·20	1	Diffused.	
4994·27	1		
4993·22	1		
4991·36	2	Diffused.	
4988·22	2	. . . .	4988, L. & D. Intensity 4.

4818·15	4		
4817·30	1		
4807·19	1	First xenon spectrum	4807, L. & D. Intensity 1.
4796·66	1	Diffused.	
4794·61	2	. . . .	} 4793, L. & D. Intensity 1.
4792·72	1	. . . .	
4787·95	4	. . . .	4787, L. & D. Intensity 2.
4786·83	1	Very diffused.	
4779·33	1	. . . .	4779, L. & D. Intensity 2.
4775·85	1		
4775·33	1		
4773·34	2	Diffused.	
4769·21	4	. . . .	4769, L. & D. Intensity 2.
4757·48	1		
4749·10	3		
4744·04	1		
			4740, L. & D. Not seen.
4734·30	1	First xenon spectrum	4734, L. & D. Intensity 1.
4732·53	1		
4731·35	3	Diffused	4731, L. & D. Intensity 1.
4723·74	2	. . . .	4723, L. & D. Intensity 1.
4715·31	3	. . . .	} 4714, L. & D. Intensity 1.
4712·78	3	. . . .	
4698·20	5	. . . .	4698, L. & D. Intensity 3.
4693·50	<1		
4683·76	5		

TABLE VIII.—Second Xenon Spectrum, with Leyden Jar and Spark Gap—*continued*.

Wave-length.	Intensity.	Remarks.	Other observers.
4677·00	1	Diffused	
4676·61	3	Diffused	
4674·78	3		
4673·91	4		
4672·40	2		Band of close lines. L. & D.
4671·88	1		
4671·41	2	First xenon spectrum	
4668·72	3		
4666·48	2	Very diffused	
4659·10	1		
4658·06	3	*Cf.* argon blue spectrum 4658·08 (KAYSER).	
4653·23	3		
4652·15	6		4652, L. & D. Intensity 4.
4641·64	2		
4637·42	1		
4633·49	3		4634, L. & D. Intensity 2.
4632·83	<1		
4631·67	1	Diffused.	
4624·47	2	Diffused. First xenon spectrum	4624, L. & D. Intensity 2.
4620·60	<1		
4617·66	2	Diffused.	
4615·72	5		4616, L. & D. Intensity 3.
4472·12	<1		4471, L. & D. Intensity 1.
4468·34	<1		
4462·38	20		4462, L. & D. Intensity 10.
4460·75	<1		
4453·81	3		
4448·28	10		4449, L. & D. Intensity 6.
4441·08	3	Diffused	4440, L. & D. Intensity 1.
4434·35	6		4434, L. & D. Intensity 2.
4418·10	2		
4416·21	3	Diffused	4415, L. & D. Intensity 8.
4415·00	7		
4413·23	3		
4406·99	5	Diffused	4407, L. & D. Intensity 3.
4395·91	10		4396, L. & D. Intensity 4.
4395·30	1		
4393·34	10		4393, L. & D. Intensity 4.
4387·65	1		
4386·19	1		4386, L. & D. Intensity 3.
4385·08	3		
4373·87	3	Diffused	4375, L. & D. Intensity 4.
4369·34	4		4369, L. & D. Intensity 4.
4367·15	1	Diffused.	

4603 ·21	10	. . . .	4602, L. & D. Intensity 3.
4600 ·20	1	Diffused.	
4593 ·90	1		
4592 ·22	6	Diffused	4592, L. & D. Intensity 3.
4585 ·65	10	. . . .	4586, L. & D. Intensity 5.
4580 ·81	1	Very diffused.	
4577 ·36	6	A line occurs in Krypton II. at 4577 ·40 of intensity = 6.	4577, L. & D. Intensity 3. 4577 ·31, RUNGE. As krypton line.
4572 ·16	1	Diffused.	
4571 ·85	1	Diffused.	
4569 ·29	1		
4556 ·08	3	Diffused	4556, L. & D. Intensity 2.
4550 ·90	1		
4545 ·34	8	. . . .	4545, L. & D. Intensity 3.
4541 ·03	8	. . . .	4541, L. & D. Intensity 3.
4537 ·51	3	. . . .	}
4537 ·02	1	. . . .	} 4535, L. & D. Intensity 2.
4532 ·67	5	. . . .	}
4524 ·38	5	. . . .	4525, L. & D. Intensity 5.
4521 ·98	3	Diffused	4522, L. & D. Intensity 1.
4507 ·32	1		
4503 ·64	2		
4501 ·14	2	First xenon spectrum.	4500, L. & D. Intensity 1.
4486 ·12	2	. . . .	4486, L. & D. Intensity 1.
4481 ·01	7	Diffused	4481, L. & D. Intensity 5.
4474 ·10	<1	Diffused.	

			4356, given by L. & D. No doubt the Krypton II. line 4355 ·67, which is easily visible in xenon when only small traces are present.
			4343, L. & D. Intensity 1. Not seen
4337 ·14	2	Diffused	4337, L. & D. Intensity 3.
4335 ·95	1		
4330 ·63	15	. . . .	4331, L. & D. Intensity 10.
4321 ·95	4	. . . .	4322, L. & D. Intensity 3.
4310 ·69	2	Diffused	} 4311, L. & D. Intensity 3.
4310 ·54	2	Diffused	}
4309 ·46	2		
4308 ·16	3		
4305 ·99	<1		
4296 ·97	<1		
4296 ·52	5	. . . .	4297, L. & D. Intensity 3.
4293 ·85	2		
4286 ·86	1		
4286 ·04	4	. . . .	4286, L. & D. Intensity 3.
4272 ·74	4	. . . .	4272, L. & D. Intensity 3.
4270 ·00	3	. . . .	4269, L. & D. Intensity 3.
4267 ·97	<1		
			4263, L. & D. Not seen.
4251 ·68	4	Diffused	4251, L. & D. Intensity 3.
4245 ·54	10	. . . .	} 4245, L. & D. Intensity 10.
4244 ·56	4	. . . .	}

TABLE VIII.—Second Xenon Spectrum, with Leyden Jar and Spark Gap—*continued*.

Wave-length.	Intensity.	Remarks.	Other observers.	Wave-length.	Intensity.	Remarks.	Other observers.
4244 ·04	1			4083 ·07	<1		
4240 ·41	3			4082 ·79	2		
4238 ·37	10	. . . .	4239, L. & D. Intensity 8.	4078 ·85	2	. . . .	4079 L. & D. Intensity 1.
4227 ·12	2	. . . .	4227, L. & D. Intensity 1.	4078 ·33	1	Diffused.	
4223 ·14	5	Diffused	4223, L. & D. Intensity 5.	4073 ·62	1		
4216 ·88	1			4072 ·62	4	Diffused	4074 L. & D. Intensity 1.
4215 ·77	5	. . . .		4070 ·30	1		
4214 ·85	1	. . . .	4215, L. & D. Intensity 10.	4066 ·67	1		
4214 ·17	5	. . . .		4062 ·27	<1		
4213 ·80	5	. . . .	4214, L. & D. Intensity 6.	4061 ·30	1		
4209 ·75	4	. . . .		4061 ·06	2		
4209 ·53	4	. . . .	4209, L. & D. Intensity 8.	4060 ·60	3	. . . .	4060 L. & D. Intensity 1.
4208 ·61	6	. . . .		4057 ·55	5	Diffused	4058 L. & D. Intensity 6.
4204 ·06	2	. . . .	4204, L. & D. Intensity 1.	4056 ·22	<1	Diffused.	
4203 ·35	1			4053 ·75	2		
4201 ·38	1	. . . .	4201, L. & D. Intensity 1.	4051 ·79	1		
4197 ·92	1	. . . .	4198, L. & D. Intensity 1.	4051 ·36	<1	Diffused.	
4196 ·85	<1			4050 ·19	6	. . . .	4050 L. & D. Intensity 6.
4195 ·02	2			4047 ·45	1	Diffused.	
4193 ·25	8	. . . .	4193, L. & D. Intensity 6.	4046 ·29	1	*Cf.* 4046 ·30 Krypton II. spectrum.	
4181 ·28	<1			4044 ·96	2	. . . .	4044 L. & D. Intensity 1.
4180 ·20	10	. . . .	4181, L. & D. Intensity 10.	4044 ·09	1	. . . .	
4179 ·83	1			4043 ·73	<1		

4176 ·65	3	. . . .	4176, L. & D.	Intensity 1.	4043 ·38	3	. . . .	4043 L. & D.	Intensity 1.
4171 ·08	1	Diffused	4172, L. & D.	Intensity 1.	4039 ·39	<1			
4162 ·25	3	. . . .	4163, L. & D.	Intensity 3.	4037 ·70	2	. . . .	4037 L. & D.	Intensity 6.
4158 ·14	5	. . . .	4159, L. & D.	Intensity 3.	4037 ·43	3	. . . .		
4156 ·27	<1	Diffused.			4033 ·02	<1			
4155 ·70	<1				4030 ·69	2			
4154 ·76	1				4028 ·72	3	. . . .	4029 L. & D.	Intensity 1.
4152 ·12	1				4028 ·10	3			
4145 ·85	5	. . . .	4146 L. & D.	Intensity 3.	4025 ·32	1	. . . .	4025 L. & D.	Intensity 3.
4142 ·12	2	. . . .	4142 L. & D.	Intensity 1.	4021 ·76	1	. . . .	4021 L. & D.	Intensity 1.
4133 ·08	1				4018 ·05	1			
4132 ·52	1	. . . .	3132 L. & D.	Intensity 2.	4014 ·27	1			
4131 ·11	1	. . . .			4003 ·71	<1			
4122 ·01	1	. . . .	4121 L. & D.	Intensity 1.	4002 ·51	2	. . . .	4002 L. & D.	Intensity 3.
4113 ·34	<1				4001 ·32	1			
4112 ·25	2	Diffused	4112 L. & D.	Intensity 2.	4000 ·66	1			
4110 ·53	1				3998 ·67	1	Diffused.		
4110 ·18	1				3997 ·18	<1			
4109 ·20	6	. . . .	4109 L. & D.	Intensity 6.	3994 ·55	1	. . . .	3994 L. & D.	Intensity 2.
4106 ·25	1	. . . .	4106 L. & D.	Intensity 3.	3992 ·98	5	. . . .	3991 L. & D.	Intensity 3.
4105 ·10	2	. . . .			3990 ·40	3	Diffused.		
4103 ·19	1				3986 ·10	3	. . . .	3986 L. & D.	Intensity 1.
4100 ·48	2	. . . .	4100 L. & D.	Intensity 2.	3981 ·69	2	. . . .	3981 L. & D.	Intensity 1.
4099 ·01	4	. . . .	4099 L. & D.	Intensity 3.	3979 ·35	2			
4095 ·04	3	. . . .	4093 L. & D.	Intensity 1.	3976 ·47	1	. . . .	3975 L. & D.	Intensity 1.
4087 ·38	<1				3975 ·73	<1	. . . .		
4083 ·48	<1	Diffused.			3974 ·14	<1			

TABLE VIII.—Second Xenon Spectrum, with Leyden Jar and Spark Gap—continued.

Wave-length.	Intensity.	Remarks.	Other observers.
3972·69	2	Diffused	3973, L. & D. Intensity 2.
3970·04	1		
3965·59	1		
			3957, L. & D. Not seen.
			3955, L. & D. Not seen.
3951·73	<1		
3950·70	8	. . . .	3951, L. & D. Intensity 6.
3943·73	3	. . . .	3944, L. & D. Intensity 3.
3942·29	1	*Cf.* Krypton II., 3942·28. Intensity 1.	
3939·05	2	. . . .	3939, L. & D. Intensity 1.
3932·63	2		
3929·73	1		
			3926, L. & D. Not seen. Possibly argon, 3925·90.
3923·56	2	Diffused	3923, L. & D. Intensity 6. (3923·56 and 3922·67)
3922·67	10	. . . .	
3918·71	3		
3917·28	1	Diffused.	
3915·46	3	. . . .	3915, L. & D. Intensity 1.
3912·23	<1		
3911·77	1		
3908·00	7	. . . .	3908, L. & D. Intensity 4.
3906·02	3	. . . .	3906, L. & D. Intensity 1.

Wave-length.	Intensity.	Remarks.	Other observers.
3847·57	2		
3846·43	1		
3842·05	5	. . . .	3842, L. & D. Intensity 4. (3842·05 and 3841·68)
3841·68	7	. . . .	
3839·13	1		
3837·87	1		
3829·90	1	. . . .	3829, L. & D. Intensity 1. (3829·90 and 3828·49)
3828·49	2	. . . .	
3828·15	1		
3826·99	2	Equal intensity in first xenon spectrum	3826, L. & D. Intensity 1.
3826·33	1		
3823·34	1	. . . .	3824, L. & D. Intensity 1.
3816·93	1		
3815·32	1	. . . .	3815, L. & D. Intensity 1.
3811·93	1		
3811·19	4	. . . .	3811, L. & D. Intensity 3.
3808·14	1		
3807·42	1	. . . .	3807, L. & D. Intensity 1.
3801·86	2	. . . .	3801, L. & D. Intensity 1. (3801·86 and 3801·13)
3801·13	1	. . . .	
3792·46	1		
3791·82	5	. . . .	3792, L. & D. Intensity 1.
3787·46	1	. . . .	3787, L. & D. Intensity 1.

3905·71	1		
3903·82	2	. . . .	3903, L. & D. Intensity 1.
3903·30	1		
3897·88	1		
3895·18	6	. . . .	3894, L. & D. Intensity 3.
3894·17	<1		
3893·59	<1		
3892·51	1		
3891·73	1		
3887·14	1		
3886·88	2		
3385·54	1		
3885·15	4	. . . .	3885, L. & D. Intensity 3.
3882·81	1		
3880·60	6	. . . .	3880, L. & D. Intensity 3.
3879·35	1		
3877·95	8	. . . .	3877, L. & D. Intensity 3.
3877·12	1		
3869·79	2	. . . .	3870, L. & D. Intensity 2.
3866·80	1	Diffused.	
3862·71	<1		
3861·19	4	. . . .	3862, L. & D. Intensity 2.
3858·67	2	. . . .	3858, L. & D. Intensity 2.
3856·20	<1		
3854·44	4	. . . .	3855, L. & D. Intensity 1.
3849·97	3	Diffused	3850, L. & D. Intensity 2.
3848·75	2	. . . .	3849, L. & D. Intensity 1.

			3783, L. & D. Probably 3783·28 Krypton II.
3781·13	10	. . . .	3781, L. & D. Intensity 6.
3776·46	7	. . . .	3776, L. & D. Intensity 3.
3774·38	<1		
3772·68	5	. . . .	3773, L. & D. Intensity 1.
3771·05	1	. . . .	3770, L. & D. Intensity 1.
3768·08	1	*Cf.* Krypton II., 3768·10. Intensity 1.	
3765·99	4	*Cf.* Krypton II., 3765·98. Intensity 1.	3766, L. & D. Intensity 1.
3763·52	2	. . . .	3763, L. & D. Intensity 2.
3762·43	4	. . . .	3762, L. & D. Intensity 1.
3758·13	1		
3757·03	1	. . . .	3757, L. & D. Intensity 1.
3756·14	1		
3751·80	1	*Cf.* Krypton II., 3751·81. Intensity 1.	
3750·86	4		
3745·85	5	. . . .	3746, L. & D. Intensity 3.
3738·04	3	. . . .	3737, L. & D. Intensity 1.
3736·15	1		
3731·33	1	. . . .	} 3731, L. & D. Intensity 2.
3730·29	3	. . . .	
3728·33	1		
3727·45	1		
3720·93	4	. . . .	3721, L. & D. Intensity 2.
			3717, L. & D. Not seen, possibly argon 3717.
3715·73	1	*Cf.* argon 3715.	

TABLE VIII.—Second Xenon Spectrum, with Leyden Jar and Spark Gap—continued.

Wave-length.	Intensity.	Remarks.	Other observers.	Wave-length.	Intensity.	Remarks.	Other observers.
3712 ·04	3	. . . .	3712, L. & D. Intensity 2.	3607 ·58	1	. . . .	
3711 ·78	2	. . . .		3607 ·17	5	. . . .	3607, L. & D. Intensity 4.
3709 ·88	1			3606 ·22	3	. . . .	
3709 ·07	2			3602 ·03	2	. . . .	3602, L. & D. Intensity 1.
3708 ·29	3	. . . .	3708, L. & D. Intensity 1.	3601 ·21	3	. . . .	
3706 ·32	1			3596 ·75	5	. . . .	3597, L. & D. Intensity 3.
3698 ·87	1			3595 ·53	2		
3692 ·75	<1			3593 ·61	1		
3689 ·96	1	. . . .	3689, L. & D. Intensity 1.	3592 ·14	1		
3676 ·75	7	. . . .	3677, L. & D. Intensity 3.	3591 ·34	1		
3672 ·68	2	. . . .	3673, L. & D. Intensity 2.	3589 ·40	<1		
3669 ·28	5			3587 ·84	2		
3666 ·90	5			3587 ·45	1		
3665 ·26	1			3584 ·68	1		
3664 ·60	1			3583 ·79	6	. . . .	3584, L. & D. Intensity 8.
3664 ·05	3	. . . .	3664, L. & D. Intensity 1.	3579 ·85	6	. . . .	3580, L. & D. Intensity 8.
3662 ·99	1			3578 ·71	1		
3662 ·44	1			3578 ·14	1		
3661 ·79	2	. . . .	3662, L. & D. Intensity 2.	3576 ·80	5		
3658 ·97	<1			3575 ·08	1		
3658 ·59	1	. . . .	3658, L. & D. Intensity 1.	3574 ·56	1		
3658 ·32	<1	. . . .		3574 ·26	1		

3657·88	1			3570·31	1		
3654·75	5	. . . .	3655 L. & D. Intensity 2.	3569·67	1		
3653·27	2			3565·35	4	. . . .	} 3565, L. & D. Intensity 8.
3649·71	4	. . . .	3650 L. & D. Intensity 1.	3564·40	4	*Cf.* Krypton II., 3564·38. Intensity 4	
3648·47	2			3563·15	1		
3646·83	<1			3562·37	3		
3645·05	2	. . . .		3561·53	3		
3644·58	2	. . . .	} 3645 L. & D. Intensity 6.	3558·12	1		
3644·20	2	. . . .		3556·64	2	. . . .	3556, L. & D. Intensity 3.
3641·15	4	. . . .	3641 L. & D. Intensity 2.	3556·00	1		
3636·17	2			3554·60	1		
3635·49	1			3553·42	1		
3634·34	1			3552·29	6	. . . .	3553, L. & D. Intensity 5.
3633·87	1	Diffused.		3550·21	1		
3632·30	4	. . . .	3632 L. & D. Intensity 2.	3549·39	1		
3631·44	1			3548·35	1		
3628·69	2			3547·04	1		
3624·21	8	. . . .	} 3624 L. & D. Intensity 10.	3545·04	2		
3623·28	5	. . . .		3542·50	6	. . . .	3543, L. & D. Intensity 6.
3621·75	1			3540·09	3		
3620·18	2			3537·56	3		
3619·03	2			3533·39	1		
3616·02	3	. . . .	3616 L. & D. Intensity 1.	3531·93	1		
3614·59	1			3531·43	1		
3612·52	3	. . . .	3613 L. & D. Intensity 4.	3530·76	1		
3612·16	1			3530·40	1		
3609·60	5	. . . .	3610 L. & D. Intensity 2.	3528·14	1		

TABLE VIII.—Second Xenon Spectrum, with Leyden Jar and Spark Gap—*continued*.

Wave-length.	Intensity.	Remarks.	Other observers.	Wave-length.	Intensity.	Remarks.	Other observers.
3527 ·39	1			3438 ·28	1		
3526 ·04	<1			3437 ·96	1		
3522 ·98	5	. . . .	3523, L. & D. Intensity 4.	3437 ·68	2		
3519 ·26	3			3435 ·91	2		
3518 ·12	1			3435 ·17	1		
3516 ·92	1			3432 ·18	1		
3516 ·38	1			3431 ·71	4		
3515 ·53	1			3430 ·62	1		
3513 ·72	3			3429 ·13	1		
3511 ·83	1			3428 ·95	1	*Cf.* Krypton II., 3428 ·95. Intensity 1.	
3511 ·60	1			3428 ·61	1		
3509 ·05	1	. . . .	3510, L. & D. Intensity 2.	3428 ·20	1		
3506 ·74	1			3426 ·61	1		
3503 ·99	1	. . . .	3504, L. & D. Intensity 1.	3424 ·88	1		
3501 ·86	3	. . . .	} 3501, L. & D. Intensity 4.	3420 ·89	4		
3500 ·53	2	. . . .	}	3418 ·11	<1		
3498 ·33	1			3413 ·34	1	Diffused.	
3498 ·04	4			3409 ·60	<1	Diffused.	
3495 ·00	1			3407 ·76	1		
3494 ·69	2			3407 ·25	1		
3488 ·34	1			3405 ·62	1		
3483 ·39	1			3404 ·06	3		
3479 ·82	1			3400 ·02	1		

3479·29	1		
3475·43	1		
3474·42	1		
3472·59	3		
3471·47	1		
3470·73	1		
3470·27	1		
3469·31	1		
3468·35	5	. . . .	} 3648, L. & D. Intensity 2.
3467·37	5	. . . .	
3463·63	<1		
3462·69	<1		
3461·44	3	. . . .	3641, L. & D. Intensity 1.
3458·90	6		
3455·87	1		
3454·41	7	. . . .	3454, L. & D. Intensity 1.
3452·13	1		
3450·86	1		
3450·19	1		
3446·52	1		
3445·01	1		
3444·61	1		
3444·38	4		
3443·49	1		
3442·08	1	Diffused.	
3440·91	1	Diffused.	
3438·88	1	Diffused.	

3397·65	1		
3396·72	2	*Cf.* Krypton II., 3396·72. Intensity 2.	
3395·68	1		
3394·92	2		
3392·73	4		
3390·78	3		
3390·13	1		
3387·26	1	*Cf.* Krypton II., 3387·26. Intensity 1.	
3386·89	4		
3385·85	1		
3384·28	3		
3384·07	2		
3381·81	1		
3380·24	3		
3379·20	2	*Cf.* Krypton II., 3379·18. Intensity 1.	
3377·17	1		
3374·11	1		
3370·81	1		
3367·64	1		
3366·87	3	Diffused.	
3364·82	1		
3363·64	1		
3362·93	1		
3360·20	2	*Cf.* Krypton II., 3360·22. Intensity 2.	
3358·13	4		
3356·09	2		
3354·51	1		

TABLE VIII.—Second Xenon Spectrum, with Leyden Jar and Spark Gap—continued.

Wave-length.	Intensity.	Remarks.	Other observers.	Wave-length.	Intensity.	Remarks.	Other observers.
3350 ·53	1	Diffused.		3284 ·81	1		
3349 ·91	3			3283 ·75	<1	Diffused.	
3345 ·11	1			3281 ·33	1		
3344 ·41	1			3280 ·94	<1		
3340 ·85	1			3280 ·66	4		
3340 ·54	3			3279 ·31	<1		
3340 ·23	2			3278 ·61	3		
3339 ·67	1			3277 ·41	3		
3339 ·37	1			3276 ·55	3		
3339 ·17	3			3275 ·07	2		
3339 ·00	2			3273 ·89	3		
3334 ·38	1			3273 ·06	3		
3332 ·97	5			3271 ·35	1		
3331 ·80	5			3269 ·57	<1		
3330 ·90	6	*Cf.* Krypton II., 3330·88. Intensity = 7.		3269 ·11	5		
3328 ·45	1			3268 ·31	2		
3327 ·64	1			3267 ·52	1		
3322 ·30	6			3267 ·19	4		
3320 ·21	2			3266 ·21	1		
3319 ·69	1			3264 ·76	4		
3319 ·15	1			3262 ·18	1		
3318 ·76	1			3260 ·81	<1		
3317 ·59	1			3260 ·42	<1		

3316 ·47	1		
3315 ·80	1	*Cf.* Krypton II., 3315 ·80. Intensity 1.	
3315 00	1		
3314 ·41	1		
3313 ·64	1	Diffused.	
3313 ·01	1		
3312 ·34	<1		
3311 ·95	<1		
3310 ·52	5		
3306 ·94	3		
3306 ·04	4		
3304 ·19	2		
3303 ·47	2		
3301 ·65	3		
3300 ·38	1	Diffused.	
3298 ·85	1		
3298 ·06	<1		
3296 ·07	4		
3295 ·63	2		
3294 ·70	<1	Diffused.	
3294 ·09	1		
3293 ·17	<1		
3291 ·72	1	Diffused.	
3290 ·44	<1		
3288 ·03	5		
3286 ·17	1		
3285 ·93	8		

3259 ·57	4		
3258 ·04	1		
3256 ·79	3		
3256 ·39	3		
3253 ·38	5		
3250 ·70	3		
3249 ·14	<1		
3248 ·98	<1		
3248 ·76	1		
3247 ·80	5		
3246 ·99	4		
3245 ·17	<1		
3244 ·30	3		
3242 ·98	7		
3241 ·26	1		
3239 ·41	6		
3237 ·50	1		
3236 ·97	5		
3235 ·85	4		
3235 ·49	<1		
3234 ·69	1		
3234 ·36	1		
3233 ·56	<1		
3233 ·39	1		
3231 ·83	5		
3230 ·80	<1		
3230 ·12	1		

TABLE VIII.—Second Xenon Spectrum, with Leyden Jar and Spark Gap—continued.

Wave-length.	Intensity.	Remarks.	Other observers.	Wave-length.	Intensity.	Remarks.	Other observers.
3229 ·21	1			3168 ·77	<1		
3227 ·32	4			3167 ·67	<1		
3225 ·65	4			3166 ·92	<1		
3225 ·26	2			3166 ·26	1		
3223 ·91	1			3164 ·63	2		
3223 ·52	2			3164 ·43	1		
3223 ·14	4			3163 ·10	2		
3222 ·40	1	*Cf.* Krypton II., 3222·40. Intensity = 1.		3160 ·82	2		
3221 ·45	1			3159 ·97	1		
3221 ·18	2			3156 ·85	2		
3219 ·97	<1			3155 ·66	3		
3218 ·13	<1			3153 ·58	3		
3216 ·92	<1	Diffused.		3153 ·14	4		
3214 ·66	1			3151 ·98	5		
3214 ·30	4			3151 ·11	6		
3212 ·68	<1			3150 ·86	6		
3212 ·46	1			3149 ·11	1		
3210 ·40	3			3148 ·17	1	Very diffused.	
3209 ·54	4			3146 ·84	<1		
3206 ·49	1			3145 ·17	1		
3206 ·21	<1			3143 ·77	2		
3202 ·81	1			3142 ·60	1		
3202 ·17	2			3141 ·77	2		

3201·94	<1		3139·21	1		
3201·67	3		3138·87	1		
3199·87	1		3138·46	6		
3199·39	1		3134·86	1		
3198·75	4		3132·87	1		
3196·68	3		3130·48	2	Very diffused.	
3196·37	5		3126·90	1		
3195·10	<1		3125·86	2	Equal intensity in first xenon spectrum.	
3193·86	<1		3125·12	<1		
3193·35	2		3124·75	1		
3188·80	<1		3124·15	1		
3187·91	<1		3122·32	1		
3187·60	2		3122·00	8		
3186·93	1		3121·15	1		
3185·93	<1		3119·34	1		
3185·35	5		3116·88	1		
3184·74	3		3114·56	4		
3184·42	2		3113·69	<1		
3181·57	1		3112·87	3		
3180·62	<1		3108·72	1	Diffused.	
3179·40	5		3107·91	2	Very diffused.	
3177·27	2		3106·50	5		
3176·18	3		3105·75	1		
3175·80	3	*Cf.* Krypton II., 3175·78. Intensity 2.	3104·60	3		
3175·38	5		3103·64	2		
3173·15	1	Diffused.	3103·38	<1		
3170·81	1		3102·88	1		

TABLE VIII.—Second Xenon Spectrum, with Leyden Jar and Spark Gap—continued.

Wave-length.	Intensity.	Remarks.	Other observers.	Wave-length.	Intensity.	Remarks.	Other observers.
3102·54	<1			3032·63	<1		
3101·68	2	Diffused.		3031·97	1	Diffused.	
3100·04	3			3029·91	2		
3098·68	1			3029·05	1	Diffused.	
3098·33	1			3028·49	<1		
3097·03	1			3027·77	1		
3094·91	1			3027·41	1		
3094·69	2			3026·66	3		
3093·55	1	Diffused.		3023·99	5		
3092·57	2			3023·83	5		
3091·22	5			3020·47	1		
3090·15	3			3019·96	<1		
3089·07	1			3017·89	<1		
3085·74	<1			3017·58	4		
3083·70	6			3015·91	1		
3083·05	1			3015·57	2		
3082·74	2			3014·77	3		
3080·61	3			3014·32	2		
3079·86	4			3013·53	1		
3077·82	1			3013·05	<1		
3075·47	1			3012·45	<1		
3073·62	4			3011·44	<1		
3073·31	1			3010·85	3		

3071·49	3	
3070·19	2	
3068·71	1	
3067·43	4	
3066·69	1	
3065·33	6	
3063·49	2	
3061·71	3	
3057·16	<1	
3056·63	3	
3055·42	2	
3054·62	4	
3051·41	1	
3051·14	1	
3049·04	1	
3048·31	1	
3047·93	1	Diffused.
3046·40	3	
3045·42	3	
3044·91	2	*Cf.* Krypton II., 3044·92. Intensity 1.
3044·36	2	
3042·22	3	
3037·47	1	
3037·00	2	Diffused.
3034·36	3	
3033·86	1	
3033·22	2	
3009·16	3	
3004·81	1	
3004·48	4	
3004·11	3	
3002·01	3	
3001·70	3	
3000·12	<1	
2999·44	2	
2999·24	2	Diffused.
2997·69	2	
2995·11	1	
2994·86	2	
2993·07	5	
2991·91	<1	
2991·65	2	
2991·42	3	
2990·74	1	
2990·48	1	
2987·00	2	
2986·32	3	
2985·72	4	
2984·77	4	
2982·39	3	
2981·47	2	
2980·26	<1	
2979·48	6	
2976·95	<1	

TABLE VIII.—Second Xenon Spectrum, with Leyden Jar and Spark Gap—*continued*.

Wave-length.	Intensity.	Remarks.	Other observers.	Wave-length.	Intensity.	Remarks.	Other observers.
2976 ·58	3			2928 ·20	<1		
2974 ·97	2			2927 ·74	<1		
2973 ·65	3			2927 ·30	1		
2972 ·48	1			2926 ·27	4		
2971 ·40	2			2925 ·58	<1		
2971 ·08	1			2925 ·11	<1		
2970 ·65	3			2924 ·56	1		
2970 ·29	1			2924 ·12	3		
2969 ·95	2			2923 ·68	4		
2969 ·63	1			2922 ·62	<1		
2969 ·42	1			2922 ·10	<1		
2968 ·74	3			2921 ·74	<1		
2967 ·11	3			2920 ·05	3		
2965 ·13	3			2918 ·74	<1		
2964 ·35	3			2917 ·76	4		
2963 ·59	3			2916 ·81	3		
2961 ·69	1			2915 ·87	<1		
2960 ·93	2	*Cf.* Krypton II., 2960 ·93. Intensity 2.		2915 ·22	1		
2960 ·53	3			2914 ·28	4		
2959 ·55	4			2912 ·56	5	Diffused.	
2957 ·77	5			2912 ·06	5		
2956 ·05	1			2911 ·63	1		
2955 ·08	<1			2911 ·38	<1		

2954·84	1	
2954·27	3	
2954·08	1	
2951·73	1	
2950·91	<1	
2949·88	2	Very diffused.
2948·23	4	
2947·69	5	
2946·52	1	
2945·71	2	
2945·41	5	
2944·78	1	
2943·59	2	
2943·07	1	
2942·25	4	
2941·55	3	
2940·37	5	
2939·89	3	
2939·29	4	
2938·38	<1	
2937·61	<1	
2936·03	6	
2934·98	1	
3932·92	4	
2932·27	3	
2930·44	5	
2929·41	1	
2910·54	1	
2907·35	4	
2906·71	5	
2905·26	<1	Diffused.
2904·79	<1	
2904·32	1	
2902·84	1	
2902·47	1	
2900·59	1	
2899·56	<1	
2898·97	<1	
2898·65	1	
2898·19	1	
2897·85	1	
2896·79	4	
2896·20	<1	
2895·40	4	
2891·86	4	
2890·81	<1	
2890·14	2	
2889·22	2	
2888·74	<1	
2887·29	2	
2886·86	3	
2884·39	<1	
2883·89	2	
2879·94	1	

TABLE VIII.—Second Xenon Spectrum, with Leyden Jar and Spark Gap—continued.

Wave-length.	Intensity.	Remarks.	Other observers.	Wave-length.	Intensity.	Remarks.	Other observers.
2877·87	1			2827·06	2	Diffused.	
2873·65	2			2826·18	4		
2872·91	1			2824·25	1		
2871·85	4			2822·67	2		
2871·43	3			2822·36	1		
2871·27	5			2820·22	1		
2869·71	<1			2819·87	2		
2868·61	1			2817·51	3		
2867·55	1			2816·10	5		
2866·96	1			2814·62	6		
2864·92	4	Diffused.		2811·81	3	*Cf.* Krypton II., 2811·81. Intensity 2.	
2864·32	1			2810·67	2		
2864·00	<1			2810·00	<1		
2862·56	3			2809·68	1		
2862·06	1			2809·23	3		
2858·03	1			2808·77	1		
2857·29	<1	Diffused.		2807·39	4		
2856·80	1			2806·83	<1		
2855·92	1			2805·24	1		
2855·42	<1			2804·82	1		
2854·70	4	Diffused.		2803·15	2		
2853·78	1			2800·37	5		
2853·28	<1			2798·01	2		

2852 ·55	2	Diffused.	
2851 ·10	1		
2850 ·41	1		
2847 ·81	4		
2846 ·63	2	Diffused.	
2846 ·07	2		
2845 ·26	2		
2844 ·60	3	*Cf.* Krypton II., 2844 ·59. Intensity 3.	
2844 ·28	1		
2841 ·46	<1		
2841 ·10	1	*Cf.* Krypton II., 2841 ·10. Intensity 1.	
2840 ·22	<1		
2839 ·75	2		
2838 ·99	2		
2838 ·55	1		
2837 ·03	<1		
2836 ·32	<1		
2835 ·16	<1		
2833 ·32	2		
2833 ·08	1		
2832 ·59	<1		
2832 ·19	<1		
2829 ·35	1		
2828 ·84	1		
2828 ·37	1		
2828 ·01	1		
2827 ·62	4		

2797 ·74	1		
2797 ·29	3		
2796 ·73	2		
2795 ·00	5		
2789 ·64	1		
2785 ·95	1		
2785 ·53	1		
2785 ·10	1		
2783 ·49	4		
2782 ·86	2		
2782 ·45	1		
2780 ·86	1		
2780 ·02	1		
2779 ·78	2		
2778 ·11	3		
2777 ·10	4		
2774 ·99	3		
2774 ·02	1		
2773 ·68	2		
2772 ·54	4		
2770 ·56	1		
2769 ·35	2		
2767 ·96	1		
2767 ·71	1		
2766 ·33	2		
2766 ·10	1		
2763 ·71	<1		

TABLE VIII.—Second Xenon Spectrum, with Leyden Jar and Spark Gap—continued.

Wave-length.	Intensity.	Remarks.	Other observers.	Wave-length.	Intensity.	Remarks.	Other observers.
2763 ·18	1			2703 ·58	4		
2762 ·90	2			2702 ·48	3		
2761 ·73	4			2701 ·99	1		
2760 ·88	3			2701 ·71	1		
2759 ·87	<1			2699 ·29	1	Diffused.	
2759 ·36	3			2697 ·70	1		
2758 ·55	1			2696 ·72	4	*Cf.* Krypton II., 2696 ·71. Intensity 4.	
2758 ·02	3	Diffused.		2696 ·08	1		
2757 ·76	1	Diffused.		2695 ·52	1		
2756 ·64	1	*Cf.* Krypton II., 2765 ·66. Intensity 1.		2695 ·28	1		
2755 ·08	3			2694 ·27	2		
2754 ·80	2			2691 ·92	1	*Cf.* Krypton II., 2691 ·94. Intensity 1.	
2754 ·05	<1			2691 ·63	1		
2751 ·09	1			2691 ·44	1		
2748 ·96	<1	Diffused.		2690 ·33	1	*Cf.* Krypton, 2690 ·35. Intensity 1.	
2748 ·02	3			2689 ·82	1	Diffused.	
2744 ·26	1			2687 ·12	3		
2743 ·71	<1			2685 ·73	1		
2743 ·24	1	Diffused.		2685 ·49	<1		
2740 ·93	3			2682 ·84	1	Very diffused.	
2739 ·91	1			2680 ·12	1		
2739 ·40	1			2679 ·57	<1		
2737 ·18	2			2678 ·70	2		

2734·31	5	Diffused.
2734·11	1	
2733·36	4	Diffused. *Cf.* Krypton II., 2733·38. Intensity 4.
2732·48	1	*Cf.* Krypton II., 2732·46. Intensity 1.
2731·61	1	
2728·37	2	
2727·38	3	
2725·45	2	
2724·71	<1	
2723·56	<1	
2723·09	1	
2720·41	1	
2718·92	<1	
2717·47	7	
2715·91	1	
2715·07	4	
2714·20	<1	
2713·50	1	
2712·06	1	
2711·69	2	Diffused.
2711·16	1	
2708·65	3	
2707·49	2	Very diffused.
2707·15	1	
2706·89	2	
2704·61	1	

2677·29	8	*Cf.* Krypton II., 2677·30. Intensity 2.
2676·22	<1	
2675·51	<1	
2673·95	2	Very diffused.
2672·35	3	
2670·80	2	*Cf.* Krypton II., 2670·78. Intensity 1.
2670·40	1	
2669·12	4	
2668·14	3	
2665·30	1	
2664·97	1	
2664·61	<1	Diffused.
2663·43	2	
2662·60	<1	Diffused.
2661·99	<1	
2661·14	2	
2659·51	1	
2658·37	2	
2655·57	1	
2653·47	<1	
2652·93	1	
2652·28	2	Diffused.
2651·69	1	
2650·34	1	
2649·76	1	
2648·79	1	*Cf.* Krypton II., 2648·80. Intensity 1.
2643·89	1	Very diffused.

TABLE VIII.—Second Xenon Spectrum, with Leyden Jar and Spark Gap—continued.

Wave-length.	Intensity.	Remarks.	Other observers.	Wave-length.	Intensity.	Remarks.	Other observers.
2643·56	1			2581·84	1	Diffused. *Cf.* Krypton II., 2581·84. Intensity 1.	
2642·68	1			2578·80	2		
2641·25	3			2578·51	3		
2639·30	2			2577·11	3		
2637·63	3			2574·18	1	Very diffused.	
2636·95	2			2573·06	1		
2636·58	2			2572·46	2	*Cf.* Krypton II., 2572·44. Intensity 1.	
2635·78	1			2570·41	1		
2635·20	<1			2569·53	1		
2634·33	3			2568·94	2		
2634·05	1			2567·62	<1		
2633·53	<1			2567·25	1		
2630·56	2			2565·09	<1		
2629·70	3	Diffused.		2564·12	1		
2627·10	1			2561·04	2		
2626·12	1			2560·11	1		
2624·65	1	*Cf.* Krypton II., 2624·63. Intensity 1.		2557·91	1		
2623·31	1	Diffused.		2556·30	1		
2621·88	1			2551·85	2		
2621·52	1			2550·70	1		
2620·07	<1			2549·92	3		
2619·83	1			2549·05	1		
2617·06	1			2546·89	<1		

2616·79	1	*Cf.* Krypton II., 2616·80. Intensity 2.
2615·83	1	
2615·54	1	
2614·13	3	
2612·61	1	Diffused.
2611·17	1	
2610·73	1	
2609·04	3	
2607·68	1	
2607·09	2	
2605·69	10	
2600·29	3	
2599·77	<1	
2598·59	3	Diffused.
2597·14	4	Diffused.
2595·19	1	
2595·81	1	
2593·70	<1	
2591·84	2	
2591·26	1	
2590·59	3	
2588·52	1	
2587·72	1	
2585·45	1	
2584·04	1	
2583·90	1	
2582·74	1	
2546·57	1	Diffused.
2544·27	1	
2542·03	1	
2541·22	<1	
2539·08	1	
2538·16	1	
2537·04	2	
2536·08	2	
2533·47	2	
2531·45	1	Diffused.
2530·33	1	
2527·10	4	
2526·97	4	
2524·58	2	
2524·13	2	
2521·58	1	
2520·28	1	
2519·17	3	Diffused.
2517·21	1	Diffused.
2515·26	1	
2514·85	<1	
2514·70	<1	
2514·16	1	Diffused.
2513·52	1	Diffused. *Cf.* Krypton II., 2513·50. Intensity 1.
2511·43	1	Diffused.
2510·65	2	

TABLE VIII.—Second Xenon Spectrum, with Leyden Jar and Spark Gap—*continued*.

Wave-length.	Intensity.	Remarks.	Other observers.	Wave-length.	Intensity.	Remarks.	Other observers.
2509 ·89	<1			2463 ·14	1		
2505 ·05	1			2455 ·19	1		
2501 ·16	2			2454 ·40	1	Diffused.	
2498 ·20	1			2452 ·76	2		
2495 ·27	1			2451 ·50	1		
2494 ·11	3	*Cf.* Krypton II., 2494 ·10. Intensity 2.		2451 ·02	1		
2493 ·60	<1			2449 ·16	1		
2493 ·18	1			2448 ·63	1		
2492 ·69	<1			2447 ·79	1		
2491 ·93	2	Diffused.		2447 ·21	1		
2490 ·89	4	Diffused.		2446 ·23	1		
2490 ·23	4	Diffused.		2436 ·63	1		
2486 ·86	1			2435 ·59	1	Diffused.	
2486 ·46	4			2433 ·75	1		
2485 ·13	1			2432 ·87	1		
2483 ·59	1			2429 ·11	1		
2479 ·98	1			2425 ·18	2	Very diffused. *Cf.* Krypton II., 2425 ·16. Intensity 1.	
2479 ·25	1			2423 ·08	1		
2476 ·02	10			2422 ·28	3		
2472 ·50	1			2421 ·36	1		
2471 ·42	2			2418 ·83	1		
2470 ·30	2			2418 ·47	1		
2469 ·57	2	Diffused.		2416 ·86	1		
2468 ·54	2	*Cf.* Krypton II., 2468 ·56. Intensity 2.		2414 ·88 &c.	1		
2463 ·72	1						