

IRIDIUM—continued.

A	arc Spectrum		Spark Spe	ectrum	Reduc	tion to	
Wave-length		Intensity	Wave-length Intens		Vacuum		Oscillation Frequency
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	$\frac{1}{\lambda}$	in Vacuo
	1384.087.		2300.8	1 1	0.69	13.1	43450· 56·
	2300.11	1	00 5	1	"	"	63.1
	2000 11	TWIFF	2299.8	1	"	"	69.
		The same of	97.3	2	,,	,,	43516
	2295.19	1	96·3 95·2	1 1	"	- "	35.
	2299.19	1	94.5	1	"	"	56·3 69·
			93.7	î	"	"	85.
		7 1 1	92.5	1	,,	,,	43607
	A Paris to 3		91.8	1	"	,,	21.
	THE REAL PROPERTY.		91.0	4 2	"	"	36.
		I DA	89·5 88·3	2	"	13.2	65· 87·
			87.0	2	"	"	43712
			85.7	1	,,	"	37.
			84.6	1	,,	"	58.
			81.7	2 2	,,	"	43814
		ET H	81·2 80·6	2	"	"	23· 35·
		PERM	78.5	1	"	"	75.
			77.7	î	0.68	,,	91.
			77.3	1	,,	,,	98.
	den Inch	WIRE ST.	77.1	1	"	"	43902
		EAR CO	76·3 75·6	1	"	13.3	18.
		THE STREET	72.5	ln	"		91.
			71.4	2	"	"	44012
			68.9	2	,,	,,	61.
	I H PESTINE		68.5	2	,,,	"	69.
	A VI B WES		68.1	1 1	"	,,,	76· 82·
			65.3	2	"	"	44131
	64.73	1	64.7	ln	"	"	42.1
	THE THE	10 13 5 1	63.0	ln	"	13.4	76.
	To the l	Tage 5	62.4	ln	"	,,	87.
	100		62·2 59·3	1 2	"	"	91.
	59.00	1	99 9	4	"	"	54.0
	00 00		58.8	1	"	"	58.
	The Burger	HEAT HE WAY	58.4	2	"	,,	66.
	WY - nich		57.5	2	"	"	83.
	A STATE OF THE PARTY.		57·1 56·5	2	"	. " =	91.
		1 1 2 3	56.0	i	"	"	13.
	1	1 - 10 38	55.5	1	"	"	23.
	55.22	1	55.3	1	,,	,,	28.2
SEC.	53.60	ln			,,	,,	60.0
	26		53·3 52·0	1	"	"	66· 92·
			51.5	1	"	"	44401
			50.7	i	"	13.5	17.
			49.4	1	"	"	43.
			48.8	1	,,,	29	55.

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IRIDIUM-continued.

A	rc Spectrum	A CTALLED	Spark Spe	ectrum	Reduction to Vacuum		
Wave-length		Intensity	Wave-length	Intensity	TO THE RESERVE OF THE PARTY OF		Oscillation Frequency
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	$\frac{1}{\lambda}$	in Vacuo
			2247.7	1	0.68	13:5	44476
	The Division		46.7	2	,,	,,	96.
			45.5	2	,,,	,,	44520
	PART TO THE		43.8	1	,,,	,,,	54.
	2242.80	2	42.6	4	,,,	,,,	73.6
	2 10 30 4	UNITED BY	40.5	1	,,	,,	44610
		5000	38.7	1	,,	13.6	55.
			38.3	2	,,	,,	63.
		W. 1	38.1	1	,,	,,	67.
			37.1	2	,,	,,	87.
			36.3		,,	99	44703
			34.3	1	99	,,,	43.
		172	34.0	1	,,,	,,	49.
		The state of	33.2	1	,,,	,,,	65.
			32.0	1	,,	99	89.
	1-11-11-11-11		24.2	1	0.67	13.7	44946
			20.6	ln	,,	99	45019
			19.3	1	99	,,	46.
	Market Market		18.9	1	,,,	,,	54.
			12.4	1	,,	13.8	45186
	Part of the same	The state of	11.2	1	,,	,,	45211
		The state of	10.2	ln	,,	99	31.
	The Difference		08.7	ln	,,	,,	62.
			05.0	2	,,	,,	45338
	State William		2197.5	1	,,	13.9	45492
	DATE OF THE PARTY OF		96.1	1	,,	,,,	45521
	THE STATE OF THE S		92.2	1	,,	14.0	45602
	THE REAL PROPERTY.	1 18 = 1	90.3	2	,,	,,,	42.
	The last	1000	87.0	1	,,,	,,,	45711.
	200		78.5	1	0.66	14.1	45889
	100	1 3 1 1 1 1	69.3	1	,,	14.2	46184
	S DV T AL	1	52.6	1	,,	14.3	46441
	10000	100000	51.7	1	,,	99	61.

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GENERAL

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APPENDIX S

BY

W. MARSHALL WATTS

D.Sc.(LOND.), B.Sc.(VICT.)



LONDON
WILLIAM WESLEY AND SON
28 ESSEX STREET, STRAND

MANCHESTER
ABEL HEYWOOD & SON
1908

QC453 W3 Qp2

GENERAL



APPENDIX S.

STANDARD LINES.

Buisson and Fabry, 'C.R.,' exliii. p. 165 (1906); exliv. p. 1155 (1907). Perot and Fabry, 'C.R.,' exexiii. p. 153 (1901). Kayser, 'Ann. d. Physik' (4), iii. p. 195 (1900). Eversheim, 'Zeitschrift für wissenschaftliche Photographie,' v. 152 (1907). Wave-lengths in dry air at 15 °C. and 760 mm.

Buisson and Fabry	Perot and Fabry Solar Spectrum	Kayser Iron Arc	Previous Measurements (Solar Spectrum)
Iron Arc	Solar Spectrum	Hon Ale	Rowland
6494.994			6495.209
	6471.666 Ca		71.885
30.859	ALL TO THE REAL PROPERTY.		31.063
	08·027 Fe		08.231
3393.612			6393.818
35.343	6335.346		35.550
	22·706 Fe		22.912
18.029			18.242
6265.147			6265:347
30.732	6230.746		30.946
6191.569			6191.770
	6151.639	71.	51.834
37.700	V		
6065.493	6065.506	E e de la company	6065.708
27.059			27.265
	16.650 Mn		16.856
03.039	ACCOUNTS TO	ENERGIC DATE	03.245
	5987·081 Fe		5987.286
5952.739			
34.683	34.666		34.883
5892·882 Ni	District Control of the Control of t		5893.098
	5862·368 Fe		62.580
57.760 Ni			
05·211 Ni	AND THE RESERVE		05.448
5763.013	5763.004		5763-215
60·843 Ni		S. C. S. S. C. C.	
	15.095	-	15.309
09.396			09.616
5658.835			
15.658	ESENTED TO SE	STATE OF THE PARTY	5615.879

Note.—The wave-lengths now given by Buisson and Fabry rest on the value 6438·4696, determined by Benoit, Fabry, and Perot for the red line of Cadmium, and those of Perot and Fabry on Michelson's value 5085·8240 for the Cadmium green line.

Buisson and Fabry Iron Arc	Perot and Fabry Solar Spectrum	Kayser Iron Arc	Previous Measurements (Solar Spectrum) Rowland
5586.770	5586.778		5586.991
69.632	0000 110		69.848
35.418			00 020
06.783	06.794		07.000
5497.521	5497.536		5497.731
55.616	010,000		55.826
34.530	34.544		34.742
02000	09·800 Cr		10.000
05.780			05.987
5371.498			5371.686
	5367·485 Fe		67.670
	45.820		45.991
24.196			24.373
02.316			
5266.568	MAN CHEST STATE OF THE STATE OF		5266.729
THE REAL PROPERTY.	5247.587		47.737
	47.063		47.259
32.958*			33.124
5192.362			
- The state of the	5171.622 Fe		5171.783
67.492	100000000000000000000000000000000000000		67.686
27.364			27.530
	23.739		23.889
10.415			10.570
	5090·787 Fe		5090.959
5083.343	0000 101 10		
49.827			50.008
12.072			
01.880	01.881		02.044
4966.104	02.002		
2000 202	4923·943 Fe		4924.109
19.006	1020 010 10		19.183
03.324			03.488
4878-226			
59.756†	4859.758		4859-934
23·521 Mn	2000 .00		23.697
4789.657			Control of the second
2.00 00.	4783.449		4783-601
54·046 Mn			54.226
36.785	36.800		36.963
07.287	00000		IN A REAL PROPERTY OF THE PARTY
0.20.	04.960		05·131
4678.855			4679.028
74.437	CAN BEGIN		TO THE PERSON NAMED IN
-1	4643.483		43.645
02.944	1010 100		The state of the s
4592.658	12 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		The same of the sa
47.854			
31.155		100000000000000000000000000000000000000	
4494.572‡		4494.755	4494.735 (.756 in arc)
1101012	A CHEST	89.929	1202 (00 (100 111 010)
	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	84.420	The state of the s
	The street of the street of	76.207	The second second
		69.566	
66.554	The second secon	00 000	

^{*} Eversheim, 5232·9630. ‡ *Idem*, 4494·5812.

[†] Idem, 4859.7613.

Buisson and Fabry	Perot and Fabry	Kayser	Previous Measurements (Solar Spectrum)
Iron Arc	Solar Spectrum	Iron Arc	Rowland
		4461.838	
		54.572	
	Ten Tratage	47.907	4447.899 (.912 in arc)
		42.522	
4405.014		30.801	
4427.314	A STATE OF THE	27.490	
	THE SECOND	15·301 04·929	15·299 (·298 in arc)
	STORAL TERRITOR	4391.137	04·927 (·928 in arc) 4391·149
		83.724	83.721
4375-935*		76.104	76·103 (·108 in arc)
		69.954	69.948 (in arc)
		67.759	00 010 (010)
		58.689	
52.741	The same of the	52.910	52.908
1	The state of the s	46.739	
		37.219	
15.089	ARTON DE LA COLONIA DE LA COLO	25·941 15·255	25.932
19 009		09.542	
		4299.420	
		94.290	
		91.631	
		85.614	
4282.407†		82.567	
	d cours	71.933	4271.920
		71.333	
		60.656	60.647
		50.948	50.949
		50·299 47·604	50-300
		45.423	
	THE SHALL SEE THE	38.980	
		36.118	
33.615		33.771	
		27.606	
		22.387	22.396
		19.523	
	FAGRAGIST CONTRACTOR	10.521	
		02.195	02.187
4191.441	THE PART OF THE	4199·256 91·611	4199-257
4191 441		87.221	
		81.918	
		75.799	
		71.069	* O THE STATE OF THE PARTY OF
Telephone		54.662	
47.677	REMEGRALES &		
	W. S.	44.033	
24.00	CENTER DELICATION	37.156	
34·685 18·552	LEED TO THE REAL PROPERTY.	10.700	
18.997	Market Ballet	18·709 14·608	14 000 (
		07.646	14.600 (in sun)
	DATE OF THE PARTY	4098:346	
		96.135	

^{*} Eversheim, 4375.9435. † Idem, 4282.4125.

Buisson and Fabry	Perot and Fabry	Kayser	Previous Measurements (Solar Spectrum)
Iron Arc	Solar Spectrum	Iron Arc	Rowland
		4084.166	
		79.999	
4076.641	The stancing state of	71.901	4071.903
		68.138	1011 000
		63.755	63.755
	REELECTION OF THE PARTY OF THE	62·605 55·706	62·602 (in sun) 55·701 (,,)
		45.978	55·701 (,,) 45·975
		44.776	
		32.796	
21.872		30·670 22·029	
21 012		17:303	
		07.429	
	Mark and the	3998·211 96·148	
		86.330	·
	10.00	84.112	
3977.745		77.892	3977·891 (in sun)
		69·411 66·219	
		56.823	
		56.610	
		48.927	
	The Biggs	45·269 41·032	41.034
35.818		35.966	
		28.073	28.060
		23·059 20·404	
		18.467	
		16.880	16.886
		13.784	
06.481		09·980 06·624	
00 401		03.097	
		3899.853	
		95·801 93·538	
		87.193	THE REPORT OF THE PARTY OF THE
		86.426	3886-421
		78.722	
		78·166 72·640	
3865.526		65:670	
	THE PERSON NAMED IN	60.054	60.050
	19.87.57.24	56.515	56·517 (in sun)
43.261		50.114	
40 201	THE PLANT OF THE PARTY OF THE P	41.194	
		40.586	40.589
		34.370	
		33·463 27·967	27.973
		26.028	26.024
		24.591	00 700
	CELL LOSSIES TO THE	20.573	20.566

Buisson and	Perot and Fabry	Kayser	Previous Measurements
Fabry Iron Arc	Solar Spectrum	Iron Arc	(Solar Spectrum) Rowland
		0011 001	
		3815.987	3815.984
		13.202	
		06.847	
2004.010			
3805-346		01.822	05.487
		3799.694	3799-698
		98.656	98.662
		95.149	95.150
		90.242	100
		88.031	88.032
		78.670	00 002
		76.606	
	THE PARTY OF STREET	70.452	A STATE OF THE STA
	All Follows Sales	67.339	67.344
	The grant of the	63.940	63.942
3753-615		58.381	58.379
0,00 010		49.634	49.633
	CHEST STATE OF	48.409	48.409
		45.710	45.701
		43.510	43.502
		37.278	37.282
		35.016	35.075
	10 10 10 10 10 10 10 10 10 10 10 10 10 1	33-470	33.467
		32.541	32.542
		31.102	
24.072		27.769	27.763
24.379	SECOND PLEASE OF	24.527	
		22.710	22.691
		20.083	20.086
		09.395	09:397
		07.199	07.186
		05.714	05.711
		02.180	9005 104
	THE LEASE TO BE	3695·202 87·609	3695.194
	MEN MENT	83.205	87·607 83·202
		80.062	83.202
3677-628		00 002	90.004
320		76.461	
		69.674	
	University of the Control of the Con	59.673	
		55.625	
	THE STATE OF THE S	51.615	
	ENESEES IN	50.429	
	THE PLANTS	47.997	47.995
40.391		40.541	40.536
	DESCRIPTION TO	32.195	
		31.617	31.619
		30.506	
	THE COLUMN STATE OF STREET	22.158	22.147
No. of Contract of		18.918	18.924
N. Salar		17.944	17.920
15 1- 1916.		17.474	
(4)		12.242	12.217
	The second secon	09.011	09.015

Buisson and Fabry	Perot and Fabry Solar Spectrum	Kayser Iron Arc	(Solar S	Ieasurements Spectrum)
Iron Arc	Solar Spectrum	Hon Aic	Ro	wland
3606.681	Manager Barrier	3606.836	3606.831	
3000.081	- Mariana		05.635	
		05.619	09.039	
		3599.781		
		94.767		
		87.137	THE REAL PROPERTY.	
	Ballotte and a	85.478		
		81.348	3581.344	
The state of the s	TO STATE OF THE PARTY OF THE PA	70.257	70.225	
	The second	65.535	65.528	
		58.672	58.670	
3556.879				
	FILE SE STATE OF	53.898		
		45.793	THE RESERVE	
		40.287	40.266	
	STATE OF THE PARTY	36.694		
	A LONG TO THE REAL PROPERTY.	29.960	TO SECTION	
	1246	26.822		
		26.196		
		21.415	21.404	
13.820		13.974	13.947	
		08.663		
		08.627		
		06.650		
		00.716	00.721	
	THE RELIGION	3497.989	3497.991	
		90.721	90.721	
3485:344		85.496	30 121	
9409.944		83.159		
		76.850	76.831	
		75.600	75.594	
		71.497	19.994	
		71.413	05.001	
	THE SECTION AND ADDRESS OF THE PARTY OF THE	66.006	65.991	
		60.067		
		58.454		
		50.484		
45.155	TENTAMON BA	45.301	11.000	
		44.025	44.032	
		41.138	41.135	
	LOUIS CO.	40.762	40.759	ID LOW OND
		27.263	27.282	$(3427 \cdot 279 \text{ in arc})$
		24.430	21615211	
		18.649	TENTO LINE	
		13.275		
	V CONTRACTOR OF	06.938	06.955	
	A THE STATE OF THE STATE OF	06.578	06.581	
3 99.337	THE RESERVE TO SERVE THE	3399.468	Parameter va	
	LANGE LINE	97.117	100	
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	94.721	ESHE IS	
		89.882	3389.887	
	THE REAL PROPERTY.	84.113		
	E PROPERTY OF	80.242	The same of the sa	
	S CHANGE S	78.814		
70.789	1		BALL B	
		67.675	Elgins.	
		66.993	ALERICA DE	
	THE PERIOD WITCH	66.917	78	
		55.355	The same of the sa	

	STANDAL	RD LINES—ce	ontin	ued.
Buisson and Fabry Iron Arc	Perot and Fabry Solar Spectrum	Kayser Iron Arc		Previous Measurements (Solar Spectrum) Rowland
		3351.882		3351.877
		48.056		48.011
		42.340		40 011
		42.034		
		37.793		
		28.992		
		25.589		
3323.739		1108/GOLGO		
		17.251		
		14.868		
	The same of the sa	06.479		06.471
		06.106		06·117
		3298.263		
		92.721		
		86.884		
		84.720		
0001 000	SHEET STATE	80.386		
3271.003		71·129 65·746		
		57.724		
		53.043		
		48.332		
		46.617	1	
		44.308		
		39.564		
A CONTRACT PARTY	IN CUTTON STATE	31.091		
		28.379	85	
25.790		25.905		3225.923
	FEMILES I	22.187		22.203
		16.057		11.750 (
	DATE OF THE REAL PROPERTY.	14.158	199	14·152 (in arc)
		12·112 10·953		
10		05.513	30	
		00.595		
		3199.638		
		93.423		
	The Manual Control	92.921		
		91.778		
B E E E		88.947		
		85.015		
0185 448		78.122		
3175-447		75·556 71·743	AN	
		66.551		
		65.129		
		62.064		
	The state of the	60.764		
		57.157		
	THE PROPERTY OF	51.460		
	12 20 1	44.096		
		42.565		
		40.503	3/2	
07.001		32.627		
25.661		25·770 19·609	100	
		16.747		
		12.183		
		12 100	- 1	

Buisson and Fabry	Perot and Fabry Solar Spectrum	Kayser Iron Arc	Previous Measurements (Solar Spectrum)
Iron Arc	Solar Spectrum	IIOn Aic	Rowland
PLO PRIME	TERROR EN	3100.778	3100·779 (in arc)
	10000	00.418	00.415
		00.057	00.064
			7,
		3095.013	3095.003
		91.687	00.040 (;)
		83.853	83.849 (in arc)
3075.725	NE STATE OF THE ST	75.830	75.849 ,,
		68.286	
		67.363	67·363 (in arc)
737, 237711		64.042	
	Elichnes Elica	59.202	59·200 (in arc)
	Trans.	57.562	57.557 ,,
		51.179	
	STATE OF THE PARTY	47.719	47.720 (in arc)
		41.860	11 120 (III allo)
		41.753	THE RESERVE
	San Control of the Co	37.505	37.492
	CHEST ESTABLISHED		37.494
3030-152		31.753	The state of the s
9090.197		25.960	25.958 (in arc)
	T	24.153	04.154
			91.101
		21.194	21.191 ,,
		20.764	20.759 ,,
		20.619	20.611 ,,
	ELE SUESKI DE	19.105	19.109
	THE WAR THE STREET	17.747	17.747 (in arc)
	Maria de la companya	16.305	16.296 ,,
	THE PROPERTY OF	09.690	09.696 ,,
	CARLES INC.	08.254	08.255 ,,
	n sel se se se	07.409	07.408 ,,
	Wild Tools Bill	07.262	07.260 ,,
	PER PROPERTY OF THE PARTY OF TH	01.068	01.070
	THE STREET	2999.630	0000.000
	THE PARTY OF THE P	94.554	CAPAR
	La Carlo View	90.511	94.947 ,,
0007.000	14 - 2 - 1		97.410 (in ana)
2987.293		87.410	87.410 (in arc)
		83.690	83.689 ,,
	LL ASSESS THE	81.565	81.570 ,,
		76.253	TOTAL STREET,
	THE PERSON SERVICES	73.366	73·358 (in arc)
	BERTHER DE	73.254	73.254 ,,
	MENTER BEST	70.227	70.233 ,,
	THE STATE OF	67.019	67.016 ,,
	The state of the s	65.379	65.381 ,,
		57.484	57.485 ,,
	VICE SUPPLY SEED	54.061	54.050
	PER ANY DISTRICT	48.557	94.038 ,,
	17-11-11-11	47.996	47.993 (in arc)
41:347		41.462	11 000 (III ale)
41.347			27.090 (in and)
	是(日, (現代)(日)(日)	37.030	37.020 (in arc)
	STEEL	29.119	29·127 ,,
		26.699	
	RANGE BEEN	23.409	THE BUY BELLEVIE
TO DE SE		18.144	THE CONTRACT OF STREET
12.157		12.273	12.275 (in arc)
		07.630	
	1	01 100	
	A COLUMN TO THE REAL PROPERTY OF THE PERSON	01.496	

Buisson and Fabry	Perot and Fabry Solar Spectrum	Kayser Iron Arc	Previous Measurements (Solar Spectrum)
Iron Arc	Solar Spectrum		Rowland
		2894-617	
		90.000	
		87.920	
	Man Jersey and Market	80.867	The second second second
		77.414	
2874.176		74.284	
		69.418	
		63.973	
		59.007	
51.800		51.910	2851.904
	1	48.828	
		44.083	44.085 (in arc)
		43.742	43.744 ,,
		38·231 35·562	38.226 ,,
		32.543	32.545 (in arc)
		25.803	32 343 (III arc)
-		25.660	25.667 (in arc)
		23.382	23.389 ,,
		17.612	20 000 ,,
13.290		13.391	13·388 (in arc)
		07.088	
		04.622	
		2797.877	
		91.989	
		88.207	2788·201 (in arc)
0	THE TAX PROPERTY OF	81.936	81.945 ,,
2778.225		78.327	78:340 ,,
		72·205 68·621	72.206 ,,
		62.125	68·630 ,, 62·110 ,,
		61.883	61.076
		57.413	01.910 "
		56.412	56·427 (in arc)
		55.834	55.837 ,,
		50.238	50.237 "
		47.080	
	Diffus Co.	46.580	
		45.177	
		44.624	
	1	44.163	49.405
	U Strangering	42·506 42·349	42.485 "
39.550		39.639	
39.000		37.407	37·405 (in arc)
		35.566	07 ±00 (III a10)
		33.978	33.973 ,,
	STATES OF	30.832	and the second second
	P20(2 10 10 10 10 10 10 10 10 10 10 10 10 10	28.914	
		25.024	
		23.671	23.668 (in arc)
		20.997	20.989 ,,
The state of the s		19.121	19.119 ,,
	THE STATE OF THE S	18.530	
14.419		14.503	
	7. 2. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	08.663	00.004.0
		06.672	06.684 (in arc)

Buisson and Fabry	Perot and Fabry Solar Spectrum	Kayser Iron Arc	Previous Measurements (Solar Spectrum)
Iron Arc			Rowland
		2690.153	
		89.302	THE STREET STREET
		89.302	THE RESERVE OF THE PARTY OF THE
9070.005			9070.149 (in and)
2679.065		79.148	2679·148 (in arc)
		73.315	
	1530 3718	69.581	
		66.897	
		56.232	
		51.800	
	Sea said	47.649	
		44.085	
		35.899	21.105 (in are)
28.296		31.139	31·125 (in arc)
20.290	Section 1	28·383 25·754	
	Hearth Hart	23.627	
		20.499	
		18.108	
		17.706	
	THE REAL PROPERTY.	13.914	X A VAN DE LA CONTRACTION DEL CONTRACTION DE LA
		11.963	11.965 (in arc)
	THE STATE OF THE S	07.155	11.909 (III arc)
		06.920	
		2599.663	
	E Santo	99.483	2599·494 (in arc)
	The state of the s	98.456	00.400
2588-016	Section 1	88.102	98.460 ,,
2000.010		85.964	A SE
		84.623	84.629 (in arc)
	THE REAL PROPERTY.	82.408	84 029 (III ale)
	THE REAL PROPERTY.	78.012	
		75.845	
	Daning To cold	74.462	
	The same of the latest and the lates	67.001	
62.541	The state of the s	62.619	TOTAL STREET
02 041	THE PARTY IN	56.963	
	S. E.I.V.	51.192	
		49.708	49.704 (in arc)
		46.072	10.000
		44.016	46.068 ,,
	10 50 130 13	42.192	SEE SECTION OF THE SE
		41.064	41.058 (in arc)
	THE REAL PROPERTY.	37.263	41 000 (III alto)
	S 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	35.699	35.648 ,,
		33.911	30.048 "
	O ROLLING CO.	29.928	LIS TO RECEIVE
	SOURCE STATE	29.223	
28·516 Si		49.779	28·599 Si
28.010.01		27.525	27.530 ,,
	The state of the s	24.393	21.990 ,,
		23.754	22.948 (in arc)
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	22.950	
	CIPOL	18.198	18.188 ,,
		17.754	
		11·857 10·927	10.934 (in arc)
		07.991	10.994 (III are)

STANDARD LINES-continued.

Buisson and Fabry Iron Arc	Perot and Fabry Solar Spectrum	Kayser Iron Arc	Previous Measurements (Solar Spectrum) Rowland
11011 1110			
		2501.228	2501·223 (in arc)
	1 2 3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	2496.625	
S THE REST OF		93·331 91·249	2491·244 (in arc)
		90.737	00 =00
		89.844	00.000
	THE RESERVE	88.232	88.238 "
		87.155	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
		84.280	84·283 (in arc)
		83.618	
		83.361	83.359 ,,
		79.872	79.871 "
		74.906	HO OH 4 (')
		72.976	72.974 (in arc)
		72·436 68·974	
		65.244	
		62.740	62.743 (in arc)
		62.279	om 110 (m m)
		57.686	57.680 (in arc)
		53.568	
		47.808	47.785 (in arc)
		42.658	
	STALL STALL	40.201	多。 作品 一种 100000000000000000000000000000000000
	Barrier Barrier	39.834	THE RESERVE TO STATE OF THE PARTY OF THE PAR
2435·159 Si	The second second	38.274	BARRIOTE OF TOTAL
2439.199 81	A Last Control of the	31.126	
		24.231	
13.310	The second	13.393	
10010		11.152	
	180 6-0-2	10.601	10.604 (in arc)
		06.742	06.743 ,,
		04.969	04.971 ,,
	District the Name of Street, S	04.519	2000 000 11
	The state of the s	2399.322	2399·328 (in arc)
		95·709 90·058	95.715 "
		88·711	88.710 (in arc)
1		84.473	88-110 (III allo)
		83.324	
		82.114	82·122 (in arc)
		80.840	Old State of the s
		79.355	The second secon
		75.273	
2373.737		73.813	73.771 (in arc)
		68.670	04.000
	1957 3 15 18	64.904	64.897
		59·187 54·969	
		48.380	48·385 (in arc)
		48.196	20 000 (III alt)
	W HE S AND S	43.567	43.571 (in arc)
		32.869	
		31.384	
	- T	27.468	The state of the s

S

IRIDIUM.

12

Exner and Haschek, 'Sitz. kais. Akad. Wissensch. Wien,' civ. 953, 1895; cv. 542. 1896.

Kayser, 'Abhandl. königl. Wissensch. Berlin,' 1897. Exner and Haschek, 'Wellenlängen-Tabellen der Bogenspektren der Elemente,' Leipzig und Wien, 1904.

Lohse, 'Astrophys. Obs. Potsdam,' xii. p. 163 (1902).

Adeney, 'Photographs of Ultra-violet Spark-spectra,' 'Trans. Roy. Dublin Soc.' (2), vii. 331.

Arc Spectrum		Spark Spe	ectrum	Reduct		
Wave-length	Intensity	Wave-length	Intensity	Vacu	um	Oscillation Frequency
Kayser Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	$\frac{1}{\lambda}$	in Vacuo
				1.61 1.53 1.49 1.47 1.46 1.43 1.42 1.38 1.37 1.36 1.35 1.31 1.30 1.29 1.28 1.28 1.29 1.29	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	16960·9 17770·5 88·0 18277·7 18324·4 44·6 18656·0 61·8 18718·2 19082·1 19306·7 19796·6 19811·4 19957·3 83·0 90112·7 20240·1 44·6 20631·8 51·5 20785·9 96·0 20845·8 20922·0 21011·0 17·6 21126·8 40·3 21230·0 58·2 21289· 98· 21304· 44· 48· 55· 68·
(4 = (1)=476(3)		74·2 73·4 72·0 71·4	In In In In	" " " " "	" "	89· 92· 98· 21401· 09·
4669·130	2	69·7 69·4	ln ln	"	"	10.

IRIDIUM-continued.

Al	ec Spectrum		Spark Spe	etrum		tion to		
Wave-l	ength	Intensity	Wave-length	Intensity		uum	Oscillation Frequenc	
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	$\frac{1}{\lambda}$	Frequenc in Vacuo	
ANTECO L	The same	Take of	4665.0	ln	1.28	5.9	21430	
4000 000	The state of		56.5	1	,,,	>>	69.	
4656.329		4	55.9	ln	"	"	70.2	
STATE OF THE PARTY			55.4	ln	"	"	72· 74·	
			54.9	ln ln	1.27	"	77.	
			54.4	ln	,,	"	79.	
		Prince of	50.7	1	,,	,,	96.	
40.231		2	40.3	ln	,,	,,	21544.8	
		2	27.5	ln	"	6.0	21604	
16.549	4616.55	4	16.6	2	1.26	"	21655-2	
14.342		0	04.7	1	"	"	65.6	
That The last	0-000		4586.5	ln	"	"	21711.	
			85.7	ln	"	"	21801	
			84.5	ln	"	,,	07.	
Tayl 1			82.0	1	,,	,,	19.	
		272	79.5	ln	1.25	,,	30.	
			70.5	ln	,,	"	73.	
4570.183	4800 00	2 3n	70.1	1	,,	"	75.0	
68.246	4568.30	3n	68·2 65·0	2 1n	"	6.1	84.1	
			64.2	1	"		21900-	
			61.0	i	, ,,	"	19.	
			58.7	î	,,	"	30.	
			58.0	1	,,	"	33.	
White the	54.72	1	54.7	1	"	"	49.1	
		300	54.2	1	"	99	52.	
F0.047			52.5	ln	"	"	60.	
50.941	48.64	2 3n	50·9 48·7	1 2	"	99	67.4	
48·645 45·837	45.84	3n	45.8	2	"	"	78·5 92·0	
49.091	40 04	3	43.0	ī	1.24	"	22006	
			42.4	i	,,	"	09.	
			39.3	1	"	"	24.	
38.819		1	38.7	1	,,	,,	26.1	
		PARTY	34.5	1b	"	. ,,	47.	
33.003	- Congruence	2	33.0	1	"	,,	54.3	
PLE MARKET			15·3 14·4	ln ln	"	>>	22141.	
	The 18 18 18 18	N I G I A L	12.0	111	"	,,	57.	
5.15 76			11.0	1b	"	"	62.	
			09.0	ln	,,	"	72.	
19C 1		DE BIDE	05.7	ln	1.23	,,	88.	
	A - 10 11 16 1		05.1	ln	,,	,,	91.	
STATE OF		E HOUSE	01.7	ln	"	"	22208	
4406.900		1	01·0 4496·1	ln 1	"	6.2	11.	
4496·200 95·525	4495.52	2	95.4	2	"		34·8 38·2	
95.323	4490-02	1	92.3	1	"	"	53.9	
91.523	2 18 52	2	91.4	2	, ,,	"	58.0	
			84.0	1n	,,	,,	95.	
			82.1	1	"	"	22305	
78.649	78.65	3	78·4 70·5	l ln	99	22	22.0	

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IRIDIUM—continued.

Ar	c Spectrum		Spark Spe	etrum	Reduct		
Wave-	length	Intensity	Wave-length	Intensity	Vacu	ıum	Oscillation Frequenc
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+.	1 \(\lambda\)	in Vacuo
10.275			4467.4	1b	1.22	6.2	22378
	THE THE		66.8	1	,,	,,	81.
	42		60.0	1	"	,,	22415
			58.2	1	,,	"	24.
4452.987	The state of the s	1	52.9	1	"	,,	50.6
	THE PARTY		52.7	ln	"	"	52.
			51.4	1	"	"	59· 61·
	4450-41	ln .	90.9	1	"	"	63.6
50.346	4400'41		50.2	1	"	"	63.9
49.540		2 0	30.2		"	"	68.0
49 040			44.0	In	"	"	96.
	- S. S. S.	- 1	43.1	1	,,	"	22501
26.459	26.45	5	26.5	4	1.21	6.3	85.1
25.936	20 40	0	200	100			87.8
22.121	SEL UNIVERSITY	1	22.0	1.	"	"	22607.3
9			21.3"	În	,,	,,,	12.
11.344		2	11.2	1	"	,,	62.5
		E 64 2 3	10.5	i	"	,,	67.
06.926		0	06.9	1	"	"	85.3
03.952	03.98	3 .	04.0	2	,,	"	22700.5
		E MILLS	01.4	1	,,	,,	14.
4399.645	4399.68	4	4399.7	6	**	"	22.7
92.758	92.80	2	92.8	1	1.20	,,	58.3
The state of			90.4	ln in	,,	"	71.
			88.5	1	,,	,,	81.
	70.5		88.1	1	,,	"	83.
	To Mind Mind		81.2	ln	,,	"	22819.9
80.930		1	80.4	1	,,	,,	23.
	The Control of the Co	THE PARTY	80.0	1	,,	,,	25.
77.175	No the last	3	77.2	1	,,	,,	39.6
76.575		0	76.6	1	,,	,,	42.6
	22		74.9	1	,,	,,,	51.
	The State of the Land		73.8	ln	,,	,,	57.
			73.0	ln	,,	,,,	61.
	Charles Collect		72.3	1	,,	,,	65.
			72.0	ln	,,	• 9	67.
	A 10 A 10 A	10000	69.2	ln	"	"	81.
62.289		1	07.0		,,	6.4	22917:3
			61.3	1	"	"	23.
	THE RESERVE		60.9	1	, "	"	25· 29·
	1 4		60.2	1	"	"	32.
	The Date of D		59.6	l ln	"	,,	38.
	A PARTY	30000	58·4'' 55·8	ln ln	1.19	"	52.
	Control of the	3 181	54.3	ln ln		, ,,	59.
		81.	53.5	ln I	"	"	64.
52.720	Bar da cold	2	52.7	i	"	"	67.7
51.462		1	52.1	1	"	"	74.4
31.402			48.1	ln	"	"	92.
	THE REAL	SHE	43:7	1h	"	"	23016
		200	42.2	In	"	"	23.
		1	39.6	1b	"		37.
32.490	4	0	000	10	"	"	75.0
30.060		0	30.0	1	"	"	88.0

IRIDIUM-continued.

1	Aı	c Spectrum	and the same	Spark Spe	ctrum	Reduct	tion to	
-	Wave-l	ength	Intensity	Wave-length	Intensity	Vacu		Oscillation Frequency
	Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	$\frac{1}{\lambda}$	Frequency in Vacuo
1				4328-8	1b	1.19	6.4	23095
	4316-456		1	24·7 16·6	1	1.18	,.	23117-
	4310.450		1	14.0	l ln	Dec. of the last	,,	74.
-			1 6	13.2	i	"	"	78.
1	11.669	4311.68	4	11.7	6	"	"	86.4
				11.5	2	,,	"	87.
	10.750	10.76	3			99	,,,	91.4
		00.10		08.3	1	,,	6.5	23205
	05.359	06.10	0	06·2 05·4	1 1	,,	,,	16·4 20·4
1	01.776	01.79	3	01.8	4	"	"	39.7
	00.802	01.10	1	00.9	i	99	"	45.0
		AL CONTRACT		4297.7	1	"	"	62.
		- 300		95.8	1	,,	,,	72.
	4286.776	4286.79	1	86.7	1	19	,,	23321.0
1			1	86.0	ln	"	,,	25.
				86.2"	ln	1.17	,,	24.
			1000	79·0 76·7	1 1b	1.17	"	63.
		Sept Street	To To	74.8	1	"	"	86.
	69-101		0	69.0	î	"	"	23417-6
	68-251	68-25	5	68.3	6	,,	,,	22.3
	66.532	The state	0	66.5	ln	,,,	,,	31.7
	65.450	65.47	ln			,,	"	37.6
-	00.051			65.3	1	,,	99	39.
	62·051 61·408		0 2	62·0 61·3	1 1	"	"	56·4 59·9
-	01 400	S. Dalueski	-	60.2	i	"	"	67.
	59.280	59.26	3	59.2	2	"	"	71.7
-	57.528		2	57.5	1	"	99	81.3
1			TOTAL TERM	49.0	ln	,,	6.6	23528
1				47.5	1	,,,	,,	37.
	10.011			47.2	1	1.16	"	38.
1	43·944 41·198		0			1.16	"	56.4
1	40.644		0			"	"	71·6 74·7
	30.486		0	N. ST.		"	"	23631.3
1	00 200			27.6	1	,,	"	48.
1				26.9	1	,,	,,	51.
	North Control			25.5	1	,,	,,,	59.
	23.327	THE PLANT	0	00.0		,,	,,,	71.4
				22.2	ln l	"	,,	78.
		21.25	1	21.5	1	"	"	82.
-	20.950	21 20	2	20.8	1	"	"	84.7
1	2000	16.6 12.00		18.9	î	"	"	96.
	18.428	Carrier St.	1	18.3	1	"	,,	98.9
	18.243		0		WEST STATE	,,	,,	99.9
1	17.908		2	17.8	1	- "	"	23701.8
		OF THE STATE OF	1 3 1 1	15·2 14·6	ln	"	,,	17.
1			2404	13.4	1 1	"	"	20.
		188 18.		12.6	i	"	,,,	32.
1	12.383	10 90 6	2	1388	The same	,,	"	32.9

S

16
IRIDIUM—continued.

A	rc Spectrum		Spark Spe	ectrum		etion to	
Wave	length	Intensity	Wave-length	Intensity		uum	Oscillation
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	$\frac{1}{\lambda}$	Frequency in Vacuo
4212-197	5 TO SALE	0	4212-1	1	1.16	6.6	23734.0
	No. 11 St. 12 St	1 2 3	11.2	1 1b	"	,,	40· 42·
	Line Bullet		10·7 09·7	10	"	"	48.
		33-34	06.7	1b	"	"	65.
			.02.5	lb Fe?	1.15	,,	89.
00.031	4200.07	2	00.1	1	,,	6.7	23802.7
			4197.8	1	,,	,,	15· 27·
			95·8 93·0	1b	"	"	43.
			83.4	2	"	"	97.
4182-626	4182-62	ln	82.7	2	"	"	23901.7
Act and a second			81.8	ln	,,	,,,	06.
72.736	72.81	2	72.8	2	,,	"	57.2
22 224	66.22	3	66·9 66·3	1 2	1.14	"	92· 95·9
66.224	00.22	3	65.3	1	"	"	24001
		33.11	63.8	i	"	"	10.
			63.5	1	"	,,	12.
		10000	62.3	ln	,,	,,	18.
			61.7	ln	"	"	22· 25·
			61·1 58·2	ln l	"	"	42.
	55.90	ln	55.8	2	"	"	55.5
	33 30	111	51.4	ī	"	,,	82.
			39.3	1	"	6.8	24152
			38.3	1	,,	"	58.
			37·8 36·5	1 1b	"	,,	68.
			29.6	10	1.13	"	24209
			29.2	i	,,	"	11.
Marin In			28.5	i	"	"	15.
arrest of			28.0	1	,,	,,	18.
			27.6	1	"	"	20· 26·
100 200 20			26·6 26·2	1	,,	"	29.
United States			23.2	ln	"	"	46.
POLICE			17.5	i	"	"	80.
			16.7	1	,,	,,	84.
400			16.4	1	,,	"	86.
15.957	15.95	3	15.8	4	"	"	88·9 24302·
		TO SECOND	13·8 10·3	l ln	,,	"	22.
			08.4	i	"	"	34.
TARREST CO.	West land		08.3	ln	,,	"	34.
TOTAL CO.		SE THE	07.8	1	,,	,,	37.
	04.35	1	00.0		"	"	57·6 82·
4000 707	4000 70	0	00.3	ln	1.12	6.9	24426.4
4092.767	4092.79	2	4092·6 91·6	4 In			33.
(100 T		TYNE T	90.3	1b	"	"	41.
	M. WINTER	E 67 4	89.6	1	"	"	45.
(50 m) 12			86.0	1	,,	,,	67.
82.542		1	82·6 82·3	1	,,	"	87·6 89·

В

IRIDIUM-continued.

A	re Spectrum		Spark Spe	ectrum	Redu	ction to	
Wave-	length	Intensity	Wave-length	Intensity	Va	cuum	Oscillation Frequency
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	100	$\frac{1}{\lambda}$	in Vacuo
4081·564 80·737	4080.75	0 2	4081·5 80·6	1 1	1.12	6.9	24493.5
00 101	1000 10	-	78.2	1	"	"	98.5
75.774	75.76	2	75.7	1	,,	"	24514.
72.532		2	72.4	2	"	"	47.8
70.822	70.88	2	70.7	2	, ,,	,,	57.9
70.067	70.10	3	70.0	6	,,	"	62.6
			68.5	1	,,	,,	72.
		39-23	68·2 66·8	1 1b	"	"	74.
			65.0	1	,,	"	82.
			64.4	î	"	"	93· 97·
			62.5	î	"	99	24608
			62.1	1	"	"	11.
59.377	59.43	ln	59.3	2	,,	,,	27.3
			59.2	1	19	,,,	28.
56-620	56.65	ln	56·9 56·5	1 2	"	"	42.
55.833	30 03	0	55.7	ln	"	,,	44.1
			55.4	ln	"	"	48.9
	Service Control		54.1	ln	1.11	"	52· 59·
			53.8	1n	,,	"	61.
			53.2	ln	,,	17	65.
51.538		0	51.9	1	,,	,,	73.
51.071		0 2	51.5	ln	,,	- "	75.1
010,1	50.81	În	51.0	1	,,	7.0	77.8
48.782	00 01	0			"	"	79·4 91·8
			47.6	1	"	"	99.
			47.1	1	"	22	24702
-		The state of	46.6	1	,,	"	05.
	208		45.2	1	,,	"	14.
			44.0	ln ln	"	. "	21.
			43·2 41·4	1n 2	"	"	26.
40.578		1	11.1		"	"	37· 41·9
40.224	40.24	3	40.3	2	"	"	44.1
33.923	33.91	3	33.8	4	.,,	"	82.8
			32.2	1	99	,,	93.
			31.6	1	,,	,,	97.
			31.0	1 1	"	"	24801
			29.4	ln	"	"	04.
			25.5	1	"	"	35.
	Distance in	571-5	22.1	1	"	"	56.
20.201			21.6	1	"	"	59.
20.194	20.20	4	20.0		"	,,	67.4
The state of			20.0	6	"	,,	69.
			16·6 15·7	1 1	1.10	"	90.
	NEW TEN	13 13 18	15.3	1	-	"	95.
N. A. P. C.	21186	1	13.8	1	,,	"	98· 24907·
845-16			11.6	1	"	"	21.
	The Table 1		11.3	1	,,	"	23.
Electrical P	DE ME	23	09.0	1	,,	,,	37.

IRIDIUM—continued.

Aı	c Spectrum		Spark Spe	etrum		tion to	
Wave-length		Intensity	Wave-length	Intensity	Vac	uum	Oscillation Frequency
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	$\frac{1}{\lambda}$	in Vacuo
	AND OFF	The seal	4008.5	1	1.10	7.0	24940
			07.9	1	,,	,,	44.
		1000	07.5	1	,,	,,	46.
			06.7	1	,,	,,	51.
			06.3	1	,,	,,	54.
4005.717	Te 3 1 10 10	1	•05.6	1	,,	,,	57.3
05.164	4005.19	ln ln	05.0	1	,,	,,	60.7
00 101		13	02.0	1	,,,	7.1	81.
			01.8	ln	,,,	,,	82.
		-	00.6	1b	,,	,,	89.
		Start Start	3999.0	ln	,,	,,	99.
3996-602		0	96.6	1	,,	,,	25014.2
0000 002			95.9	1	,,	,,,	19.
92.277	3992.30	5	92.2	6	,,	,,,	41.2
32 211	0002 00	1 - 1	90.5	1	,,,	,,,	53.

IRIDIUM-continued.

Arc	Spectrum			Spark Sp	ectrum		Reduc	tion to	
Wave-l	Wave-length Int		Wave- length Inten- length			Inten-	Vacuum		Oscillation Frequency
Kayser	Exner and Haschek	sity and Cha- racter	Exner and Haschek	sity and Cha- racter	Lohse	sity and Cha- racter	λ+	$\frac{1}{\lambda}$	in Vacuo
3989·575 87·963 85·003 78·240 76·466	3976-49	2 2 2 0 5	3989·2 88·0 87·5 86·5 85·0 84·1 83·7 81·2 80·0 79·6 79·3 78·9 78·3 77·0 76·5 75·8 75·8 70·3 67·6 66·5 66·5 66·5	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3969·35 66·52	3	1·10 ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,	7.1	25058·2 61· 68·4 71· 78· 87·0 93· 95· 25111· 10· 21· 23· 26· 27· 29·6 45· 47 61· 80· 85·9 97· 25203·9 06· 14·

IRIDIUM-continued.

Arc	Spectrum		100	Spark S	pectrum		1	713.7	NA.
		1			1	1		tion to	
Wave-	length	Inten-	Wave- length	Inten-	Wave- length	Inten-	Vac	uum	Oscillation
		sity		sity		sity			Frequenc
	Exner	and	Exner	and		and			in Vacuo
Kayser	and	Cha-	and	Cha- racter	Lohse	Cha-	λ+	$\frac{1}{\lambda}$	Want S
	Haschek	racter	Haschek	racter		racter		λ	
			3964.5	1	9/4		1.09	7.1	25217
1500	Bet 13	IN THE			3963.78	0.4	,,	,,	21.3
3962.926	Note: Se	2	63.0	1	63.00	0.1	,,	,,	26.5
					61.66	0.1	,,,	,,	34.9
		O.TE	00.0	Total .	61.24	0.1	,,	,,	37.5
		Part I	60.6	1	60.63	0.1n	,,	,,	41.4
		2-19			59.03	0.4	,,,	,,	51.6
F0 000			56.8	1		100	"	,,	66.
56.262		0		The state of	F0.00	2 -2	25	7.2	69.2
					56.09	1.5b	•,	,,	70.3
		0	70 7	1	54.60	0.8p	22	,,,	79.8
70.000	2059.15	0	52.7	1 4	52.85	0.3n	12	,,,	91.0
52.099	3952-15	1	52.0	1	52.12	1.0	"	,,	95.6
50.259		0	52.1	1	50.34	0.3n	"	,,	07007 4
	48.47						"	"	25307.4
48.459	40.41	ln	- 3-01		49.42	0.1	"	"	13.0
46-420	46.40	4	46.4	4	48·45 46·44	1.1	"	,,	19.2
40.420	40.40	4	45.7	1	45.74	0.6	"	,,	32.2
THE WAY			40.1	1	45.22	0.5 0.5	"	"	37.6
44.534	44.52	1n	44.5	1	44.50	0.2	99	"	39·9 44·4
44.534	44.52	ln	44.5	î	44.50	0.2	,,,	"	44.4
11 001	1102	111	43.4	î	44 00	02	**	"	52.
A THE ST	1		10 1		42.83	0.1	"	"	55.3
199	0.5%		Test Tibe		42.15	0.1	"	"	59.7
41.242		0	41.2	1	12 10	1	"	"	66.
	343		38.5	În	38.70	0.2	"	"	81.9
	5 ELC- 1-1		37.8	1n	00.0		"	,,	88.
	Service !		36.6	ln		100	1.08	,,	95.
35.005	34.99	3	35.0	4	35.00	1.2	,,	"	25405.8
34.063		2u	34.0	2		3.43	"	"	11.8
			32.3	1			,,	,,	23.
31.903		0	32.0	1	31.93	0.6	,,	,,,	25.7
	- 1			4530	31.34	0.1	,,	,,	29.4
2112	A STATE OF		29.0	1			,,	,,	45.
200	1	1	28.6	1	28.55	0.1	,,	,,	47.5
			155 11 24		27.28	0.1	,,	,,	55.7
	26.05	ln	26.1	1	26.07	0.9	,,	,,	63.6
		6 . 1	25.5	1			,,	,,	67.
					25.35	0.1	,,	,,	68.2
24.573	24.55	ln	24.6	1	24.66	0.1	99	,,	73.1
			24.1	1			,,	,,	76.
23.634	23.63	1	23:7	1	23.63	0.9	"	,,	79.4
			011		23.10	0.3	"	"	82.8
			21.1	1	21.02	0.1	"	,,	96.4
	action 15	-16	10.0		19.25	1b	99	"	25507.9
	Market L		18.3	1	THE REAL PROPERTY.		,,	"	14.
	15.50	0	16.8	1	75.50	1.0	"	,,	24.
15.538	15.53	3	15.6	6	15.53	1.8	"	,,	32.1
15.055	15.06	1	15.1	1	15.08	0.2	"	"	35.1
181	Terral S		14.5	1	14.46	0.1	"	,,	39.1
FEBRURE:	100	G I I	14.0	1	STEP SE	12.8	"	"	42· 46·
The state of the s	and the same of the	To the last of the	10 4	1		THE PERSON NAMED IN	29	99	40-

IRIDIUM-continued.

Arc	Spectrum	1	10 10 10	Spark S	pectrum	34.15	Redno	tion to	
Wave-	length	Inten-	Wave- length	Intensity	Wave- length	Inten- sity		uum	Oscillatio Frequence
Kayser	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	Lohse	and Cha- racter	λ+	$\frac{1}{\lambda}$	in Vacue
			3912-6	ln	3912-23	0.6p	1.08	7.2	25553.7
			11.7	1	RELEVE		"	99	57.
		198	11.2	1	1 1 1 1 1 1		"	"	60.
		-	10·6 09·7	1.			"	"	64.
3909-219		0	09.7	1	09.25	0.5	"	"	70.
909.219	1 3 3 3 3		07.6	ln	07.85	0.3b	"	7.3	73.5 82.5
	HILL ALL		06.9	ln	06.50	0.5	"		89.
		- THE	06.0	1	00 00	02	"	"	94.
		The same	000	1	05.64	0.2	"	"	96.
			04.3	In	04.48	0·1n	"	"	25604
02.807	3902.78	2		8 2 18	02.97	0.2	"	39	15
02.632	02.65	4	02.7	8	02.68	2.0	"	"	16:
			01.5	1n	01.82	0.1	,,,	"	21.
		C. LOY		W SE	01.40	0.1	,,	,,	24.
			01.0	1	00.95	0.2	,,	"	27.
		The same	00.0	1n			99	"	34.
		100	DEF SER	N E E	3899.37	0.3	,,,	"	37.
			011111111111111111111111111111111111111		99.06	0·1n	,,,	99	40.
			3898.5	ln	98.57	0.ln	,,	,,	43.
	16 6 6	-		1. 18 11	97.99	0·1n	99	99	46
					97.40	0·ln	"	,,,	50.
			05.0	0	96.61	0·1n	1.07	"	56.
		1450b	95.6	6	95.73	3 0·3n	"	"	61:
			94.0	ln	95.07	0.911	"	"	68.
	10.00	The Part of	94.0	In	94.00	0·1n	"	"	73:
	1.1	0 1 Hz	940	111	93.49	0·In	"	"	76.
		War it is	93.0	ln	00 40	OIII	""	"	80.
			92.2	ln	92.32	0.4	,,	,,	84:
					92.14	0.4	"	"	85.
					91.56	0.1	"	"	89:
			90.3	1	90.39	0·In	,,	,,	97:
889.715		0	89.6	1	89.72	0.2	,,	,,,	25701
			89.1	1			99	,,	06.
			87.5	1	87.88	0·1n	,,,	,,,	13.
			86.0	1			,,	,,	26.
			85.5	1	85.58	0.1	,,	,,	28.9
			84.7	1	84.86	0.1n	,,	- "	33.0
	THE RES		84.3	ln	84.29	0·1n	,,,	,,	37.4
	TAN A	32 July 2	83.3	ln	00.44	0.01	"	,,	44.
	- 19	3-11-11-1	82.5	ln	82.44	0.6p	"	"	49·1
	200		81.0	ln	80.89	0·1n	"	"	60.0
			79.6	1	90.99	0.111	"	"	69.
	THE STATE OF	Table 1	19.0	1	79.19	0·1n	"	"	71.8
		No.	78.0	1	19:19	UIII	"	"	79-
BEET !			.00	TO BE	77.46	0·1n	"	"	82.8
37,74			77.1	1	11 10	711	"	"	85.
State of the				4 3 1	76.93	0.4	"	"	86.3
81 4			75.5	ln	75.93	0.1p	"	,,	93.0
Section Control	1250		75.0	1	North die	100	,,	,,	99.
			73.7	4	73.74	0.5b	,,	,,	25807.5

IRIDIUM—continued.

Arc	c Spectrum			Spark S	pectrum		Reduct	tion to	
Wave-	length	Inten-	Wave-	Inten-	Wave-	Inten-	Vaci		Oscillation
			length		length				Frequenc
-	1	sity		sity		sity			in Vacuo
	Exner	and	Exner	and		and		-	m vacuo
Kayser	and	Cha-	and	Cha-	Lohse	Cha-	λ+	1_	
1109101	Haschek	racter	Haschek	racter	Lionso	racter	7.7	λ	
Electric State of the Control of the	2072.00	00-9	9079.9	1	2072.21	0.5	1.07	7.0	97010
	3873.28	2 Co ?	3873.3	4	3873.31	0.5	1.07	7.3	25810.5
		1000	72.0	1	71.94	0·1n	39	"	19.5
			71.8	1	A CONTRACTOR		"	"	20.
			70-9	1	THE REAL PROPERTY.	1 1 2 2	"	,,	26.
	123311			State -	70.22	0.2n	,,	"	31.0
			69.5	2	69.66	0.3			34.8
		CHANGE OF THE PARTY OF THE PART	69.0	În	00 00	0.0	"	"	
						500	"	"	39.
		100	68.8	1			99	99	41.
	67.92	1		Harris La	68.00	0.4	59	99	46.1
	65.75	3	65.7	6	65.78	1.0	,,,	,,	60.8
	-	HETT		To a constitution of	64.73	0.3n	,,	"	67.7
		200	63.7	lu	63.68	0·1n	5.000		74.8
	200	MET	63.1	1n	-000		"	99	79.
	Pag-stile		00 1	711	62.85	0.4	27	. 33	80:
			00.0			1	99	99	
	1.0		62.2	4	62.16	0.5p	99	"	85.0
			62.1	1			22	"	85.
	-	THE RES	61.5	1	61.44	0.2n	"	,,,	89.
	100000	1 1 1 1			60.84	0.1n	,,	,,	93.
		60.7	56.8	1	57.71	1.2		,,	25914
			56.7	4	56.62	0.5n	1.06		22.
			56.2	2	56.25	0.2		99	24.0
				ln		0·1n	99	"	33.
	THE STORY		54.8	111	54.87		99	22	
	The state of the s				54.12	0·1n	99	"	.39.0
	The second of	119	52.6	ln		E SUL	99	,,	49.
		1	50.8	ln	EU (500)	155	99	,,,	61.
	FAI N. S.				50.58	0.3n	,,,	32	62.8
187			50.1	ln.			,,	22	66.
		1000	49.0	1	49.00	0.4			73.6
			48.5"	În	48.31	0·1n	99	"	78.1
	35						> >	"	
	1350	1	47.5	1	47.41	0.2n	99	"	84.5
	Total Re-	S. S. See			46.82	0·1n	99	"	88.
			46.0	1	46.07	0.2n	99	99	93.
			45.1	1	45.16	0·1n	,,	,,	99.4
			44.7	1		15 3 3	,,	,,	26003
	1000	1	E TO BE TO BE	BALL	43.05	0.2n	"	,,	13.
	100	1500	42.8	ln			100 100 7		15.
	100000	1	42.2	1			"	27	19.
	1 To 1 To 1	Mark Street		1	The second		"	"	22.
	E FU EST		41.8		10 11 15	1	"	,,,	
	BEGIN OF	-	39.6	1			"	"	37.
		FR LIT	39.2	2n	39.15	0.5b	,,,	,,	40.
		-	37.7	2	37.86	0.1	,,	,,	48.
		-	L-ALL SI	19-7,83	36.21	0.1n	"	,,	60.
	24(2) 22 (1)	E. M. B.	35.8	1		183	,,	,,	63.
			35.2	i	35.26	0.2n			66.
	1	1	32.7	i	34.06	0.1	"	"	74.
		955	34 1	1			39	"	
	0.3	2.49	010	1	32.47	0·1n	"	"	85
	A STATE OF LAND	4 52	31.9	1	31.74	0.5b	,,	"	90.
		100	31.6	1		TO STATE	,,	,,	91.
			30.5	2	30.48	0.4n	,,,	"	99.
	The same of		29.8	1b		1333	"	,,	26104
	1000	THE .	No.	1. 19	28.61	0.2n	1000	1	11:
		10	27.1	1	27.05	0.2n	"	"	22.
	7 7 1	1	26.0	i	2,00	0 24	"	"	30.
					E Comment		22	99	90.

S

IRIDIUM—continued.

22

Rayser Exner and Haschek Exner racter Exner		
Rayser Exner and Haschek Chahacher acter Haschek Haschek	Oscillatio Frequenc	
Rayser Cha-and Haschek Cha-racter Ch	Vacuo	
Rayser And Facter Haschek Facter Lonse Facter A A		
23.5		
23·5 1 23·5 0 0·3 n	100	
23·5	$6135 \cdot 3 \\ 39 \cdot 1$	
20·0 In 19·95 0·1n " " " " " " " " " " " " " " " " " " "	46.7	
20-0	54.9	
20·0	59.9	
19·2 ln 19·52 ln 3	63.9	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	71.0	
18-6	74.0	
18-6	76.3	
3817·385	78·8 82·2	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	88.4	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	94.0	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	6200.1	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	04.2	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	07.	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	08.	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	12.4	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	19· 19·4	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	22.8	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	27.	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	35.4	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	37.	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	40.6	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	47.4	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	61.0	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	70.8	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	75.4	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	78.9	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	82.1	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	87.6	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	90.9	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$6306 \cdot 6$	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	15.0	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	20.0	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	30.8	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	34.0	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	36.3	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	39.2	
93.40 0.2 , , ,	48.4	
01.6	50·3 54·2	
77 77	67.	
90.67 1.0 , ,	73.2	
90.29 0.3 , , ,	75.8	
89.6 1 89.67 0.2 , , ,	80.1	
88·67 0·1n ,, ,,	87.3	
87.4 1	96.	
$egin{array}{ c c c c c c c c c c c c c c c c c c c$	97·5 3404·2	

IRIDIUM-continued.

Arc	e Spectrum			Spark S	pectrum		Reduction to				
Wave-	Wave-length Intensity		ave-length Inten- length		Wave- length			Inten- sity	Vacuum		Oscillation Frequency
Kayser	Exner	and Cha-	Exner	and Cha-	Lohse	and Cha-	λ+	$\frac{1}{\lambda}$	Frequency in Vacuo		
any sor	Haschek	racter	Haschek	racter		racter		λ	1		
	- Bit - 1				3784.85	0.3n	1.05	7.4	26413.7		
					84.35	0·1n	"	,,	17.0		
			3781.5	1	82·37 81·33	0.3n	"	"	31.0		
			79.8	1	01 00	0.311	"	"	49.		
			79.2	În	1 victor		"	"	53.		
		- 9 5 1 4			78.85	0.1	,,	,,	55.7		
			77.7	1	77.73	0.5	,,	,,	63.5		
		200			77.14	0.2	"	,,	67.7		
		1 3 3 3	75.3	1	75.32	0.1	1.04	,,	80.4		
	-		74·5 74·0	1 1	74.59	0.2n	,,	"	85.5		
			71.8	1	71.76	0.2	"	7.5	26505.3		
	3770.89	1	70.9	i	70.86	0.2	"	,,	11.5		
	011000		70.4	ī			,,	. ,,	14.9		
3768.817	68.83	1	68.8		68.84	0.4	,,	,,	25.9		
	Salar Con		66.6	1	67.48	0.4	,,	,,	35.4		
			22.0		66.59	0.1p	"	,,	41.7		
	THE TOTAL STREET		66.3	1	00.10	0.0	"	,,	54.		
			62.1	W	62.40	0.3n	"	"	71.3		
			61.8	1	62.11	0.5	,,	"	73·3 76·4		
	59.64	1	010		60.90	0·1n	"	"	81.9		
	00 01		57.2	1	60.16	0.8	"	"	87.1		
			0.0-7116		57.31	0·1n	,,	,,	26607.3		
					56.69	0·1n	,,	,,	11.7		
			56.0	1	56.11	0.4	,,	99	15.8		
			55.7	1	FF 90	0.1	"	. "	19.		
	2 32 15		54.8	1	55·29 54·68	0·1n 0·3	"	"	21·6 25·9		
			53.4	1	53.60	0.4b	"	"	33.6		
			00 1	1	53.08	0·1n	"	"	37.3		
			2 1112-38		52.70	0.6	"	,,	40.0		
			52.5	1	The state of		,,	"	41.		
		0 183	50.8	1	50.89	0·1n	,,	,,	52.8		
50.539	50.55	1	50.5	2	50.53	0·2s	"	"	55.3		
47.950	47.90	5	48·2 47·3	$\frac{1}{6}$	47.39	1.0	"	"	72.		
47.352	47.36	9	46.4	1	46.50	0.2	"	"	84.1		
			46.0	1	1000	02	"	"	88.		
					45.77	0.9	"	"	89.3		
			45.6	2	THE THE		"	,,	90.		
			45.2	1n			,,	,,	93.		
			44.6	1	44.52	0.5b	,,	"	98.3		
			12.0		43.99	0·1n	"	,,	26702.1		
		The state of	43.6	1		N Tarie	"	"	05.		
			*0 *	1	43.02	0.8p	,,	"	08.9		
42.948	A RICE	1	42.8	2	10 02	000	"	"	09.		
18 010	42.44	2	42.4	1	42.47	1.0	"	"	12.9		
	Tara a		41.8	1	41.92	0.2n	,,	,,	16.7		
	3203	Nac'	2 1 1 1 5 T	1500	40.73	0.2b	,,	. "	25.2		
		Sel I	N. S. S. S. S.	100	39.63	0.3	77	"	33.1		

IRIDIUM—continued.

Arc	Spectrum	100		Spark S	pectrum		Reduction to		
Wave-	length	Intensity	Wave- length	Inten- sity	Wave- length	Intensity		tion to	Oscillation Frequency in Vacuo
Kayser	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	Lohse	and Cha- racter	λ+	$\frac{1}{\lambda}$	in Vacuo
					3739-69	0·1n	104	7.5	26737 0
3738.682	3738.66	2	3738.6	4	38·67 36·19	0.3	1.03	"	40·0 57·7
34.900	24.00	3	24.0	6	35.60	0.1	,,	,,	62.0
34.900	34.90	3	34.8	0	34.54	0.1	"	"	67.0
			34.4	1	all lake		"	,,	71.
			34.0	1	34.05	0.2	"	,,	73.1
			33·4 33·3	1	33.25	0.1	"	"	78· 79·8
	100		32.7	1	32.76	0.1	"	"	82.3
	23 24		32.1	1			"	99	87.
31.504	31.51	2	31.3	6	31.51	0.8	"	,,	91.3
THE R.	30.58	3	30.6		30.60	1	. "	,,	97.9
	1997				29.75	0·2n 0·1	"	"	26804.0
	28.16	5	28.1	2	28.19	1.2	"	7.6	15.2
			27.4	1	27.57	0.3n	,,	,,,	19.5
	27.05	4	27.0	2	27.10	ls	,,	,,	23.1
25.536	05.55	2	97.6		26.25	0.3	. ,,	"	29·0 34·0
20.000	25.55	2	25.6	4	25·57 24·75	0·7 0·1	"	"	39.8
	100			Y. A	23.61	0.3n	,,	"	48.1
22.904	T STERRIGHT	3	22.9	2	2 L C 20		,,	,,,	53.
			22.6	2	22.57	0.6	,,	,,	55.6
21.628	PASSES SE	1	22.2	1	22.12	0.1	,,	,,	78·8 62·3
21.028		1	21.2	1	21.65	0.2	"	"	65.
		1321		100	20.93	0·1n	99	"	67.4
				448	19.51	0·1n	,,	,,	77.7
		BUSH	17.6	1			,,	,,	91.
		1	HUE PAR	MA.	17·14 16·34	0·1 0·1b	,,	. "	94·8 26900·6
		19 21	15.8	1	10.94	0.10	,,	,,	05.
			14.5	i	14.48	0·1n	,,,	99	14.1
			SU FIS	1	13.85	0.1	,,	,,	18.6
10.000	10.00		10.5		12.86	0.5	,,	,,	25.8
12.630	12.66	2	12·7 11·5	4	- 医路路		,,	99	27·3 36·
		53.4	11.9	1	11.27	0·1n	"	"	37.3
		7 1	Abella Land		10.53	0·1n	,,	,,	42.7
		1000	08.8	1	08.83	0·1n	,,	,,	55.1
07.145	07.15		08.3	ln	08.18	0.2n	,,	,,	59·8 67·4
07.147	07.17	1	07.1	1	07.14	0.3	,,	"	70.6
	F-19.19	-Blank	00 1		06.20	0·1n	. "	"	74.2
			05.8	1	1		"	*,,	77.
			05.5	1	05.43	0.1	,,	,,	79.8
	THE REAL PROPERTY.	1 6 6	09.5	,	04.57	0·1n	,,	,,	86.1
		H are	03.7	1	03.40	0·1n	,,	,	94.6
01-107		2	01.2	4	01.08	0.8	"	"	27011.4
3698-261	3698-25	2	3698.1	1350	3698.27	0.5	,,	,,	32.1

IRIDIUM—continued.

	Are Spectrum			THE RESERVE		Reduct	ion to		
Wave-1	ength	Inten- sity	Wave- length	Intensity	Wave- length	Inten- sity	Vac		Oscillation Frequency
Kayser	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	Lohse	and Cha- racter	λ+	$\frac{1}{\lambda}$	in Vacuo
3696.308	3696-27	1n	3696·6 96·3	l ln	3696·71 96·23	0·2 0·3n	1.02	7.6	27043.5
3030 303	3030 21	111	96.0	1	95.74	0.2n	"	"	50.6
92.851	92.85	2	92.7	2	92.84	0.8	"	**	71.8
			92.3	6	92.44	1.0b	"	,,,	74.8
					90.86	0·1n	"	,,	86.4
00 450		0	00.4	0	90.17	0.3	,,,	,,	91.4
89·476 88·321		0	89.4	6	89.45	1.0 0.2n	"	>>	96·6 27105·2
88.921	87.24	$\frac{1}{2}$	88·2 87·1	1	88·26 87·24	0.5	"	2,9	13.0
	01 24	-	011	1	86.09	0·1n	99	"	21.4
1000		26	84.4	4	84.51	0.5	"	29	33.0
			83.6	1	83.71	0·1n	,,	2,	39.0
			83.0	1	83.09	0·1n	,,	7.7	43.4
			82.4	1	82.52	0·1n	,,	"	47.6
The Latest		UT. FJE	81.9	1	01 85	0.1	"	"	52.
	E ELE		01.6		81.75	0·1n	>>	"	53.3
			81.6	1	81·10 79·58	0·1n 0·2n	"	"	58·1 69·3
			78.3	1	78.51	0.2n	"	"	77.2
		dia a	77.1	î	1001	0 211	"	"	88.
			76.7	î	76.83	0.2	,,	,,	89.6
75.160	75.15	5	75.0	8	75.16	1.0	,,	,,	27202.0
			74.0	1	74.26	0·1n	,,	,,,	08.7
			73.2	1	73.30	0·1n	"	"	15.8
	Party !		72.0	1	72.15	0.3	,,	,,	24.3
	See 11				71.75	0.1	. ,,	,, 4	27·3 32·6
7.42					71·03 69·70	0.5	"	"	42.5
	20 41.		68.2	1	68.36	0·1n	"	"	52.4
			67.8	î	67.92	0.2n	"	"	55.7
				S. FILE	66.35	0·1n	,,	"	67.4
			65.1	1	65.12	0.2b	,,	,,	76.5
64.780	64.77	5	64.7	4	64.78	0.8	,,	,,	79.1
			64.3	1	00.74	0.0	,,	,,	83.
		7	63.5	1	63.54	0.3	"	"	88·3 92·
61.867	61.86	5	61.7	4	61.88	0.9	"	"	27300.7
61.527	61.52	2	61.4	2	61.52	1.0	29	"	03.3
			60.6	1			,,	"	10.2
4			STITLE.		60.18	0·1n	,,	,,	13.4
			59.2	1			,,	"	21.
		1	58.7	1	F0.1-	0.7	"	,,	24.
57.774		0	57.6	1	58.15	0.7	1,01	"	28·5 31·5
91.114		U	91.0	1	57·72 57·06	0.1n	1.01	"	36.7
STATE OF					55.05	0·1n	"	,,	51.7
		ASTERNATION OF THE PARTY OF THE	545	ln.	54.55	0.2	"	"	55.4
200			54.0	ln	02.50		,,	,,	60.
53.358		1	53.2	10	53.34	2.3	,,	,,	64.4
			51.5	1n			,,	,,	78.
47.857	47.85	2n	50·3 47·8	1 2	50.47	0.1	,,	,,	85·0 27405·7

IRIDIUM -- continued.

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			IRII	DIUM	continued.				
Ar	c Spectrum			Spark S	pectrum		Doduc	tion to	
Wave-	length	Intensity	Wave- length	Intensity	Wave- length	Intensity		uum	Oscillation Frequency
Kayser	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	Lohse	and Cha- racter	λ+	$\frac{1}{\lambda}$	in Vacuo
			3647.0	1	3647.02	0·1n	1.01	7.7	27411.9
3645.468	3645.47	1	45.4	ln	46.21	0·1n	,,	,,	18·0 23·6
3049.400	9049.41	1	40.4	111	45.34	0·1n	"	"	24.6
		16. 17	44.0	ln		Ni in	,,	22	35.
		172 6 6	49.0	1	43.29	0.1n	,,	,,	40.0
41.037	41.03	3	43.0	1			,,	"	42·2 57·0
41 001	41 00		40.9	1	40.91	0.3b	"	"	58.0
	- 10 生	W.St.	40.7	1			,,	"	60.
			90.0	130	39.72	0·1n	,,	"	66.9
			38.8	1	38.95	0.1	"	7.8	72·6 78·
			38.1	ln	To Plan	F-13%	"	"	79.
		W.	15000		37.58	0.1	,,	,,	83.1
0.0 0 000	00.00		22.0		37.19	0.ln	,,	,,	86.0
36.370	36.36	8	36·2 36·5	4 2	36.35	1.0	"	"	92.2
			30.3	-	35.64	0.3	"	"	97.8
			35.0	1	35.08	1.0	"	,,	27501.9
	3				34.08	0.1	,,	,,,	09.5
	- 17		33.7	1 1 Fe?	-315		"	"	12· 28·
			31·7 31·5	1 Fe?	1 68		"	"	29.
		Des to	30.8	ln	100 300		"	"	34.
29.911	29.91	3	29.9	1	E		,,	"	41.1
00.017	00.01	0	29.8	1	29.80	0.3p	"	"	41.9
29·317 28·843	29·31 28·84	2 10	29·3 28·8	1 4	28.82	1.2	"	"	45·6 49·3
20 040	20 04	10	28.3	1	20 02	12	"	"	53.
	27.95	1	27.9	1	1 1 1 1 1 1 1 1 1 1		"	,,,	56.0
			26.7	1	26.88	0.2n	,,	",	64.1
26·460 25·872	26.44	5	26.4	4 2	26.44	0.6	"	"	67.4
20.912	25.87	3	25·8 25·4	1	25.89	0.3	"	"	75.
			24.7	î			"	,,	80.
			24.3	1	N 1 5		- "	,,	84.
23.976	23.95	3	23.8	1	23.97	0.2n	,,	,,,	86·3 27601·
			22·0 21·7	1 1			"	- "	04.
			21 1		20.54	0·1n	"	"	12.
			19.9	1	19.94	0.1	"	,,	17.
19.236	19.30	2	19.3	2		1 970	,,,	"	22.1
17:378	17:37	8	17·9 17·3	1 4	17:39	0.7	1.00	"	33.
17.978	17.37	0	16.4	1	16.62	0.2n	"	,,,	42.2
	THE STATE OF	The SEA	15.6	1	15.68	0·1n	"	"	49.5
		-	14.5	1	14.59	0·1n	,,	,,	57.8
			Det Tax		13.95	0·1n	,,	"	68·7 67·9
					13·28 12·59	0·1n 0·2n	,,	,,	73.2
09.933	09-91	8	THE UNIO	TOP I	09.94	0.5	"	"	93.6
THE PARTY OF		50	09:0	1	The state of the s	214	Seat 1	10 10 10	27701.

IRIDIUM—continued.

Arc	Spectrum	1		Spark S	pectrum		Reduc	tion to	
Wave-	length	Intensity and Character	Wave- length	Inten- sity	Wave- length	Intensity		uum	Oscillation Frequency
Kayser	Exner and Haschek		Exner and Haschek	and Cha- racter	Lohse	and Cha- racter	λ+	$\frac{1}{\lambda}$	in Vacuo
	100		3607.3"	1			1.00	7.8	27714
3605.958	3605.99	3	05.9	10	3605.99	2.5	"	,,	23.9
		F	04·9 04·5	1	04.67	0.8	"	,,,	32· 34·0
			03.8	1	03.96	0.2	29	99	39.5
			02.2	î	00 00	02	"	"	53.
01.568	01.56	4	01.5	î	01.59	0.3	. "	"	57.9
			00.5	2	00.54	0.1	"	"	65.8
	200 100		3599.8	1	3599.94	0.5	"	19	70.6
98.936	98.91	3		3 3	98.92	0.3	,,	,,	78.3
		8 3 1 3		1	98.29	0·1n	,,	"	83.1
		F P P P			97.9	0·1n	"	"	86.1
96.356		0	96.4	1	97·30 96·37	0.2	,,,	"	90.8
00 000		0	95.6	1	3031	11	"	"	27804
			95.0	i	1 1/200		"	7.9	08.
94.557	94.56	5	94.5	4	94.60	0.8	"	,,	11.8
94.308	94.30	3	94.3	1	TE STATE		,,	,,	13.9
	93.16	3 Ru?	93.1	2	93.21	1.1	,,	,,	22.6
			92.2	1			"	,,	30.
	() () () () ()		91.9	1	01.55	0.1	"	,,	32.
		10 E	91.3	1	91.55	0·1n	"	"	35·2 37·
		g M	91-3	1	89-90	1·1n	"	"	48.
	89.34	3 Pt?	89.3	2	89.43	1.1	"	"	52.
			88.9	ln			"	"	56.
		B.T. OF	88.3"	1n	No.		,,	"	60.
			87.3	1	87.41	0.3p	,,	. >>	67.4
		4-11-	87.1	1			,,	,,	70.
	A Roote	Marine.	86.3	1	86.39	0.ln	"	"	75.3
	A CONTRACTOR		85.8	l ln	85.50	0·1n	"	11	80· 83·2
			85·3 84·6	1n 1	84.72	0.1n	"	_"	88.3
			83.5	2	83.62	0.2n	"	, ,,	96.8
	83.24	10 Rh		2	83.30	0.1	"	. 99	99.6
			81.0	1	80.97	0·1n	"	"	27917.5
			78.2	1				,,	39.
			77.7	1			0.99	"	43.
		ELX?	77.3	1	77.24	0.2n	99	"	46.6
			76.9	1			"	,,	49.
			76·3 75·9	1			29	"	54· 57·
THE REAL PROPERTY.	1860		75.6	î	B - 58		"	"	59.
2000			75.2	î	DE POL		"	"	62.
HIAN TO	611333	300	74.9	În	100		,,	"	65.
Charte.			74.6	1	74.75	0·1n	,,	"	66.1
573.888	73.89	10	73.8	8	73.87	1.45	,,	,,	72.9
	F1/3 - L		73.1	1	-12		"	"	79.
	A CONTRACTOR	100	72·9 72·5	1		1	"	,,	80.
SUPERIN		P.S. P.	72.3	1	4-1-		"	"	84· 87·
	No. of the last		71.9	1	REPLE	5 5 5	"	"	88.
			70.7	i	70.74	0.4	"	"	97.5

IRIDIUM-continued.

	ion t-	Dodenst		pectrum	Spark S		-	Spectrum	Arc
Oscillation Frequency		Reduct	Inten-	Wave- length	Inten-	Wave- length	Intensity	length	Wave-
in Vacuo	$\frac{1}{\lambda}$	λ+	and Cha- racter	Lohse	and Cha- racter	Exner and Haschek	and Cha- racter	Exner and Haschek	Kayser
28003	7.9	0.99			1	3570.0			
03.7	"	,,	0.1	3569.95	1.	60.5			
07.	,,	. "	2.	68.17	1n 2	69:5 68:1			3568-156
23.7	"	,,	0·1n	67.40	4 .	00.1			2000 100
30.1	"	"	0.5	66.59					
42.9	,,	,,	0.2n	64.96	1	64.8			
58.2	"	,,	0·1n	63.02	1	63.0			
60.1	,,	"	0.1	62.78		22.4	100	200	
73.9	"	"	0.5	61.03	1	61.5			
78· 82·	"	"			1	60.0			
82.4	,,	"	0.2	59.95	1	000			
84.	"	"	-	00 00	1	59.8			1916
88.6	"	"	1.	59.17			8	3559.15	59.160
96.	,,	,,			1	58.2"			
28102.9	"	29	1.	57.36	4	57.3	5	57.35	57.325
09.	,,	"	0.1-	FF.00	1	56.6	F. 115		
14.4	"	"	0·1n	55.90	1	55·9 55·8			
24.	"	"			1	54.7			
29.	"	"	0.1	54.05	i	53.9	1000		
32.	,,	22	NAT TO	L DE	1	53.7		15 10 14	
35.3	,,	55		The Barre	105	EL GR	2 Pd?	53.26	
40.	"	"		The second	1	52.7			
43·1 48·0	2,7	"	0.1	52.31	2	52.2	2	52.27	52.223
56.	8.0	"	0.1	51.54	1	51·4 50·7		/ LEE 18	
59.	"	"			1	50.3		THE	
63.1	"	"	0·1n	49.74		000	Mag		
70.8	"	22	0·1n	48.77	2	48.7			
83.	"	"			lu	47.2			
88.	,,	,,,	1 G 1 41	POTENTA	1	46.5	ln	46.60	
91.	,,	23			1	46.2		The P	
94.	"	"	D. SUPPLE	THE REAL PROPERTY.	1 1	45.8			
28203	"	"	Par I Par		1	45·2 44·7	45.15		
07.5	"	"	0·1n	44.15	i	44.2		LUM LA	
13.	"	"	0·1n	43.46	1	100.1650	15.50		
17.6	,,	"	0.1	42.88	1	42.7	12.15		
24.	"	"		13.25	1	42.1		1	
26·1 28·	,,	"	0·1n	41.81		43.0	SITTLE ST	100	
34.	,,,	"	1000		1	41.6		1	
44.8	"	"	0.2	39.47	1	39.5			
51.	"	,,,	-	00 11	i	38.7			
55.8	"	"	0·1n	38.10	1			A STATE OF	THE STREET
60.	,,	0.98		A HE	1	37.6		18.05	
63.	,,	,,		T. Ess	1	37.2			
65.	"	"	198	1875	1	36.9	9 3	1 3 1	Total Pro
69.	"	"		THE PAR	1	36.7	REAL PROPERTY.	The same	STEEL ST.
72.6	"	"	0.4	35.99	1	36·4 35·9	1 1 1 D		
85.	"	"	0.	00 00	i	34.5	ALL SE	100	THE STATE OF

IRIDIUM-continued.

Arc	Arc Spectrum			Spark S	pectrum		Rodne	tion to	
Wave-l	length	Inten- sity	Wave- length	Inten -	Wave- length	Inten- sity		uum	Oscillation Frequency in Vacuo
Kajser	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	Lohse	and Cha- racter	λ+	$\frac{1}{\lambda}$	in Vacuo
			3534.3	1	7		0.98	8.0	28286•
			00.4		3532.99	0·1n	"	"	96.6
			32·4 31·7	1	32.41	0.1	"	99	28301.3
			31.5	1	31.47	0·1n	"	"	07.
			30.8	i	30.88	0·1n	"	"	13.6
			28.7	i	28.75	0.2	"	"	30.6
	1 3 1 3 1 2				28.15	0.3	"	"	35.5
OFFICE STATE	Man Man	100	26.8	1	26.87	0·1n	"	,,	45.8
	100		24.0	1			"	"	69.
		3 4 5 1	23.4	1			"	,,	74.
3522-191	3522-21	6	22.4	4	22.17	0.6	,,	,,,	83.3
			20.3	ln	20.19	0.1n	"	,,,	99.6
		1	19.7	1	10.00	0.7	,,	,,	28404
			18.6	1	18.85	0·1n	"	,,	10.4
			19.0	1	17.03	0·1n	99	99	12.
16.110	16.11	6	16.0	4	16.07	0.3	"	- 39	25·1 32·6
10 110	1011	0	100	7	14.60	0.1	"	"	44.7
13.807	13.82	10	13.7	6	13.80	1.2	"	"	51.1
12.356	12.36	3	12.3	2	12.35	0.1	27,	"	62.9
12.054	12.04	3	11.9	1	12.04	0.1	"	"	65.4
10.793	10.80	3	10.7	1	10.79	0.2	,,	,,,	75.6
		-	10.3	1	Devaluation		"	8.1	82.
			09.4	1	09.37	0.5	"	,,,	87.
	1		09.0	1			,,	,,,	90.
08.731	08.71	1	00.4				"	, ,,	. 92.5
			08.4	1	07.04	0.2	"	>>	95.
			06.2	1	07.64	0.1	"	,,	28501.1
Entert.	A BALL		05.2	ln	00.13	0.1	"	"	13.4
			00.2	In	04.78	0·1n	99	"	24.3
		_	04.3	1	01 10	0 III	,,	"	28.
03.088	03.09	2	03.0	î		20/20	"	"	38.1
				4.8	02.69	0.3	"	"	41.4
			01.6	ln	ALC: TO	2001	"	>>	50.
			00.8	1	00.85	0.1n	,,	,,	56.4
1000			00.5	ln			,,	,,,	69.
3499-271		1	3499.0		3499.08	0.9	,,,	"	70.8
			98.3	1			0.97	,,	77.
			97.8	1	07.14	0.0	,,	"	81.
96.580	3496.59	1	96.5	ln	97.14	0.2	,,	,,	86.7
90.900	9490.99	1	96.0	ln			"	"	91·2 96·
			300	111	95.93	0·1n	"	"	96.5
			95.5	ln	00 00	0 111		"	28600
94.787	94.79	3	94.8	2	94.81	0.1	"	"	05.9
		190 8	93.7	1			,,,	,,	15.
			93.2	1			, ,,	"	19.
92.217	92.21	1	92.3	1	11-11-		,,	,,	27.0
			92.0	1	1000	75.3	"	,,	29.
7.25			91.3	1	1 1 1		,,	,,	35.
			89.2	1		E 1 E 2	,,	"	38.
			90.9	1	1 1		>>	99	41.

IRIDIUM-continued.

			1		continued.		1	-		
Arc	Spectrum			Spark S	pectrum	Reduc	tion to			
Wave-	length	Inten- sity	Wave- length	Intensity	Wave- length	Intensity		uum	Oscillatio Frequenc in Vacuo	
Kayser	Kayser Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	Lohse	and Cha- racter	λ+	$\frac{1}{\lambda}$	in Vacuo	
			3490.5	1			0.97	8.1	28652	
3488.727	3488.73	3	88.7	1	19149		,,	,,	55.7	
	THE REAL PROPERTY.		88.2	- ln	103/10		,,	,,	60.	
			87.6	1 .	15/4/27	1 2 2	,,	,,	65.	
		55311	86.2	1	F 1182 11	1	,,	,,	77.	
85.660	85.68	3	85.6	1	1	Hillian	,,	,,	80.8	
84.649	84.66	4	84.6	1	3484.65	0.1	,,	,,	89.2	
84.256	84.26	3	84.3	1	84.21	0.1	"	"	92.5	
	83.63	1	09.0				"	"	97·6 28701·1	
00 500	00.70	4	83.2	1	82.73	0.1	"	,,	04.7	
82.760	82.78	4	82.5	1	82.13	0.1	"	"	07.	
	100 100		81.5	1	1000		,,	"	15.	
			010	1	81.35	0·1n	"	,,	16.	
81.254	81.26	3			01 00	0 111	"	"	17.2	
01 201	01 20		80.7	ln	1 34.3	1820	,,	"	22.	
			79.9	1			"	"	28.	
			79.4	i	79.50	0.1	,,	,,,	31.7	
77.930		1	78.0	2	77.90	0·1n	,,	77	44.8	
76.611	76.60	3	76.7	2	76.62	0·1n	>>	,,	55.6	
	1 3 1 7 3		76.3	1			,,	"	58.	
76.182	76.17	1		1			,,,	,,	59.1	
			75.8	1	-4: 110		, ,,	,,	62.	
					74.96	0·1n	,,	,,	69.2	
			74.5	1			,,	,,	73.	
					74.36	0.1n	,,	,,	74·2 80·	
		G THE	73.6	1			,,,	"	83.	
	TO 00	R SH X	73.3	1			,,	"	85.6	
	72.98	1	72.7	1			"	,,	94.	
		4 . 2	72.0	1	• 70.85	0.1	"	8.2	28803.2	
		7 70	70.2	1	. 10.00	01	,,	1	09.	
	69.79	2	10.2	1	SAUST		"	"	11.9	
68.749	68.75	2					,,	"	21.5	
00.149	68.02	ĩ	68.1	1			,,	,,	26.7	
	0002		67.1	1			,,	,,	34.	
			66.2	1	1		12	,,	42.	
65.390	65.39	3	65.5	2	65.38	0.1	,,	,,	48.6	
	A STATE OF THE STA			LIES TO	62.23	0.1	,,	,,	74.9	
			61.8	1			,,	,,	79.	
	WE STE		61.3	1			,,	,,	83.	
	-	E 5 1	60.0	ln		0.7	,,,	,,	94· 28903·1	
			58.8	2	58.85	0.1	0.96	,,,	09.4	
	58.10	2	P	1			99	"	15.	
	FF 05	1	57.4	1n	1 3 5 5	-	"	"	16.5	
FF.040	57.25		56.0	1	The state of		,,,	,,	27.4	
55.949	55.95	1	55.1	1		1 1 1 1 1 1 1 1	,,	"	35.	
	944		52.1	1	1000	123 115	"	,,	60.	
	18 18 11 11		51.7	1	1	1881	,,	,,	63.	
50.916	50.93	1	51.0	i		E TRUE	,,	,,	69.6	
90.910	00 00		50.3	1	Harris		,,	,,	75.	
49.133	49.13	10	49.2	4	49.10	0.3	,,	,,	84.7	
48.621	48.61	1	48.8	1			, ,,	,,	88.9	

IRIDIUM-continued.

Arc	Spectrum			Spark S	Spectrum		D. 1		14
Wave-	length	Inten- sity	Wave- length	Inten-	Wave- length	Inten-	Reduc	uum	Oscillation Frequency
Kayser	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	Lohse	and Cha- racter	λ+	1 _ \lambda	Frequency in Vacuo
0.110 700	3447.90	1	3448.0	1		18 8	0.96	8.2	28995
3446.793	46·79 46·49	2 2	46.8	1	9440.40	0.1	"	"	29004.3
46·476 45·682	40.49	0	46.4	l ln	3446.48	0.1	"	99	06.9
40.007	The state of	0	44.2	1			"	33	13.6
			712	-	40.71	0·1n	,,	"	55.6
			39.0	1n		-	"	"	70.
38.244	38.21	2	38.2	ln			"	"	76.6
37.670	37.65	4	37.6	4	37.69	0.3	,,	"	81.3
37.189	37.20	10	37.2	6	37.19	0.3	,,	,,,	85.3
			S (Banda)		36.88	0.1	"	,,	88.
35.554	and the	0					.99	,,	99.2
35.200		0					,,	,,	29102.2
34.915	00.10	2			35.07	0.2n	"	>>	04.6
33.475	33.46	2	33.4	1			"	"	16.9
32.930	32.92	1	32.3	1	1910		"	8.3	21.4
	32.20	1	31.6	1		The same	"	"	27·5 33·
31.476	31.45	1	31.0	1		Est to	"	"	33.8
30.941	30.94	1	31.1	1		10000	"	"	38.2
30.197	30.20	1	30.0	1		ROLL	"	"	44.5
29.748	00 20	0	000	1		153	"	"	48.4
29.026	29.01	2	29.1	1	E BY		"	"	54.6
			28.6	1	1 1100		,,	"	58.
	28.47	3	- 3		28.47	0.1	,,	,,	59.2
			. 28.3	1	ma Time		,,	,,	61.
			27.7	1			,,	"	66.
			27.3	1		Par Line	"	,,	69.
	27		26.8	ln			"	"	74.
25.526	97.70	100	26.0	ln	St. 1875	Be a	"	"	80.
24.854	25·50 24·85	1 3	25·5 24·9	1			"	"	84·4 90·0
24.004	24.00	9	23.9	1			"	"	98.
21.923	21.93	2	22.0	1			"	"	29215.0
21 020	21 00	-	21.5	i	A COLUMN		""	"	19.
20.895		0	2.3		125	13.	"	"	23.8
20.646	20.64	3	20.8	1	3 4 4	PER.	"	,,	26.0
20.111	7	0	20.2	1	1		,,	,,	30.5
19.592	19.57	3	19.6	2		-	,,	,,	35.0
18.533	18.54	1			FEE BILL		,,	,,	44.0
		1000	17.5	1	17.46	0·1n	0.95	,,,	53.2
*****			16.3	1			- "	,,	63.
15.906	15.87	2 3	15.8	1			"	"	66.7
15.408	15.39	3	15·4 14·9	In		Wales	"	"	70.8
Contract of	1 3 3 3	1.7	13.4	1	13/50		"	>>	75· 88·
19.762	12.75	2	12.6	1 1	153	14.2	"	,,	93.5
11.730	11.72	2	11.7	1	Par Tago	9 3	"	"	29302.3
12 100	11 12	-	10.3	1		30	,,	"	15.
10.180	10.19	1	10.2	î	PAN P		,,	"	15.6
09.931	09.91	î	10.	1	19 12		"	,,	17.9
1 3 (B)	09.40	În	09.5	i		TAR HE	,,,	,,	22.4
Carry Co.		1	08.2	1	08.32	0·1n	,,	"	31.7
- 1000			05.5	1	12000		22	,,	56.

IRIDIUM-continued.

Arc	Spectrun	n		Spark S	Spectrum		D -1	42.	
Wave-	length	Inten- sity	Wave- length	Intensity	Wave- length	Inten- sity		etion to	Oscillatio. Frequency in Vacuo
Kayser	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	Lohse	and Cha- racter	λ+	$\frac{1}{\lambda}$	m Vacuo
	2000	-	3403.6	1n	THE RES		0.95	8:3	29372
3402.962	3402.95	2	03.0	1	P. T. IN		,,	,,	77.8
02.182	02.17	2 3	01.0		100		,,	"	84.6
01.927	01.92	3	01·9 3398·3	l ln		HEER	,,	"	96.8
			97.5	1			"	"	25.
	-		97.1	î	100000		"	,,	29.
	-		96.3	1	12 19		,,	,,	36.
	THE LANGE		96.0	1			,,	8.4	38.
3395.129	3395.14	3	95.2	2	The Line		,,	,,	45.5
			93·6 92·7	1 2			,,	"	59.
		1.	91.5	1			"	"	67.
91.032	91.05	1	91.1	î			"	,,	81.0
89.473	01.00	î	011				"	"	94.7
2011	102 5	0	88.9	1	- 1		,,	,,	29500
88.158	88.15	1	88.1	1			,,	,,	06.2
88.023	88.05	1				lie al	,,	,,	07.1
00.000			87.8	1		150	"	"	09.
86.678	86.34	0 3	86.4	1	FE PAR		"	"	19·0 22·1
86.330	85.91	1	00.4	1			"	"	25.7
85.752	85.76	2	85.7	1			"	"	27.1
85.272	85:27	2	85.3	i	77 77 78		"	,,	31.3
5 1 3			85.0	1			,,	,,	34.
83·917 83·474	83.91	1 0	83.9	ln		80	,,	"	43·2 47·0
00 111			82.2	1			,,	"	58.
market of			81.6	1		4.595	"	,,	63.
518			81.3	1			,,	,,	66.
81.151	81.18	3		11/2			,,	,,	67.2
79.993	80.01	1	80.0	1			2.5	"	77.4
78.550	REELE	0n	79·5 78·5	1 1			,,	"	82· 90·1
78.219	CONTRACT OF	On	78.1	1			,,	"	93.9
77.288		On	101	•		200	0.94	"	29601.2
76.146	76.15	1	76.2	1	A silver		,,	,,	11.2
CAN I			75.5	ln			,,	,,	16.8
74.942		0					,,	,,	21.7
74.597	74.61	1	74.6	1			"	"	24.7
70.000	74.16	1	74.1"	1			"	,,	28.6
72.958	72.96	1 4	72.7	$\frac{2}{2}$,,	"	39·2 51·1
70.785	70.78	3	70.7	1		232	"	,,	58.3
10.00	69.14	1		3			"	"	72.8
68.640	68.64	8	68.0	1	3468-57	0·ln	,,	*,	77.2
67.210	67.21	2					,,	,,	89.8
67.063	67.09	2	67.0	1			,,	,	91.0
AND STATE OF THE PARTY OF THE P		22 112	66.6	1		1	,.	•,	96.
THE RESERVE OF THE PARTY OF THE		-	66.3	1			,.	"	98.
CE.CEO	65.00	1			and the same of		1000		907709.0
65·678 65·273	65.69	1	65.6	1			"	"	29703·2 06·9

IRIDIUM—continued.

		III	DIUM—concent	·····			<u> </u>
Aı	rc Spectrum		Spark Spe	ectrum		tion to	
Wave-	length	Intensity	Wave-length	Intensity	Vaic		Oscillation Frequency
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	1 - \lambda	in Vacuo
3364-380	3364.40	2	3364.4	1	0.94	8.4	29714.7
			61·8 61·6	1 1	"	"	38.
			61.2	1	"	"	43.
60.950	110	7			"	8.5	45.0
			60.2	1n	"	,,	. 52.
60.038	60.00	ln	70.0		. ,,	,,	53.1
	59·90 59·63	3 2	59·9 59·7	ln l	"	"	54·3 56·7
59-262	99.03	0	99.1	1	"	"	59.9
00 202		0	58.3	1	. "	99	68.
			58.2	i	"	"	69.
56.697		0	, Table	200	,,	,,	82.7
56.342		0			,,	99	85.8
55.942	55.95	2	55.9	1	,,,	"	89.3
55.739		0	55.5	1	,,,	"	91.2
			55.3	1	,,	"	95.
53.696	53.70	1	53.7	i	"	"	29809.3
52.987	53.00	2	52.9	î	"	"	15.6
			52.3	ln	"	,,	22.
			51.5	ln	,,	,,	29.
			50.2	1	,,	,,	40.
		May 1	50.0	2	"	"	42· 59·
48.015		1	48·1 48·0	1	"	"	60.0
47.695	47.72	2	47.6	1	"	99	62.7
46.609	46.61	ī	46.6	În	.19	"	72.5
			45.5	1	"	"	82.
			44.7	ln	"	,,,	90.
44.360	44.36	2	44.4	1	,,	"	92.6
43.745	43.55	ln	43.1	1	"	"	98·9 29903·1
43·182 42·930		0	45'1	1	"	"	29903.1
±2 550		0	42.5	1	"	"	09.
			42.0	În	"	"	14.
		MATERIAL STREET	41.0	1	,,	,,	23.
40.485	40.50	3	40.6	1	,,	,,,	27.2
	90 40		40.3	1	"	"	29.
39.532	39·70 39·56	ln 4	39.6	1	"	>>	34·3 35·6
39.028	99.90	0	EST BULL		"	"	40.3
38.535	38.56	5	38.5	2	0.93	, ,,	44.6
37.985		1	37.9	2	,,	,,,	49.7
37.637	71333	0	37.5	1	"	"	52.8
36.195	36.21	1	36.2	1	,,	,,	65.7
25,105	TISTING S	0	35.7	1	99	,,	70.
35.185	-	0	34.9	1	"	,,	74·8 77·
34.318	34.35	6	34.3	4	"	"	82.5
33.600	0100	0	010		"	"	89.1
30.968		0	27.9	1	"	,,	30012.6
27.688	18 43 43	0	The state of the s		,,	"	42.4
27.039	27.04	2			,,	,,	48.3

S

IRIDIUM-continued.

34

Ar	c Spectrum		Spark Spe	ectrum	Reduc		
Wave-1	ength	Intensity	Wave-length	Intensity	Vacı	uum	Oscillation Frequency
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	1_ \(\lambda\)	in Vacuo
3326-687	3.00	0		2 816	0.93	8.5	30051.4
26.245	3326.25	1	3326.3	1	"	,,	55.4
26.056		0		1	,,	"	57.1
	25.58	1	25.5	1b	9.9	31	61.4
THE PLET	00.00		23.9	1	"	8.6	77.
23.011	23.03	4	$\begin{array}{c} 23\cdot 1 \\ 22\cdot 9 \end{array}$	2 4	"	"	84.5
22.750	22.77	5	22.7	4	"	"	86.9
21.901	22 11	0	22 1	-	"	?? ??	94.6
21 301			20.7	1n	"	,,	30106
20.504		1			"	,,	07.3
19.680		0		The state of	,,	23	14.8
19.231	19.25	1	19.2	In	"	"	18.8
18.812		0	10.0		>>	"	22·6 24·6
18.596	18.60	1	18.6	ln	"	,,	33.1
17.664	17.45	0	17.5	1	3 9.	27	35.0
17·457 16·771	16.80	2	16.7	1	"	"	41.1
16.534	10 00	- On	107	-	"	"	43.4
16.129		0			"	,,	47.1
13.472					,,	,,,	71.2
12.268	12.31	4	12.3	1	,,	,,,	82.0
11.365		0	11.3	1n	,,	,,	90.4
11.161	11.16	1			,,	>>	92.3
10.674	10.69	5	10.7	2	.,,	,,	96·6 30202·6
10.032	09.55	0 1	09.6	1	"	,,	07.0
09.535	09.99	0	09.0	1	,,	99	12.6
08.581	08.57	In			"	"	15.9
07.774	07.78	i	07.8	ln ln	"	,,	23.2
			06.6	1	,,	,,	34.
05.980	05.99	1	06.0′′	ln	,,	,,	39.6
05.787	05.80	1	THE TANK		,,	,,,	41.3
			05.2	1	99	"	47.
05.057	05.07	2			"	,,	48·0 53·5
04.460	03.78	0 2	03.7	1	"	,,	59.8
03·771 03·236	03.24	2	09.1	1	"	"	64.7
03.230	00 21	-	02.7	ln	"	"	70.
01.900		1	02.0	1	"	,,	77.0
01.735		0			,,	,,	78.5
01.502		0		10 30 20	,,	,,	80.6
00.732	Burney St. St.	0	THE RESERVE TO	1 2 30	"	"	87.6
	ASS STATE	100	3299.3	ln	0.92	"	30301.
	Carlo Land		99·0 98·3	1	"	"	10.
2207.855	3297.65	2	98.3	1	"	"	16.0
3297.855	3497 00	4	97.4	ln	"	"	18.
95.220	95.24	2	95.3	1	"	,,	38.3
00 1110			94.7	1	"	,,	43.
94.251		0	94.3	1	,,	99	47.3
94.150		0		100	"	,,	48.2
		1	93.6	1	29	22	53.

IRIDIUM-continued.

A	rc Spectrum	100	Spark Spe	ectrum		etion to		
Wave-	length	Intensity	Wave-length	Intensity		uum	Oscillation Frequency	n
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	1 -	in Vacuo	,
			3292.6	1	0.92	8.6	30363	
			92.2	ī	,,,	,,,	66.	
			91.6	1	,,	,,	72.	
3291.187		0	91.4	1	,,	,,	75.6	
91.010		0	00.0		,,	,,,	77.2	
90.640		0	90.2	1	,,	,,,	80.6	
			89.2	1	99	8.7	94.	
		3 3 2 8	88.7	1	"	"	99.	
07,700	2007.70	-	88.4	1	22.	- 99	30401.	
87.726	3287.72	5	87.7	1	"	,,,	07.5	
87.198	87.20	4	87.2	1	"	"	12.3	
85.721	04.00	0	85.7	ln o	"	"	26.0	
84.695	84.69	2	84.6	2	"	,,,	35.5	
84.456	The state of the s	1	010		,,	,,	37.7	
00.450	00.40	0	84.0	1	,,	,,	42.	
82.458	82.46	2	82.5	1	,,,	,,	56.3	
99.094	3- 2- 2	0	82.3	1	"	"	58.	
82.024	07.05	0	07.0		"	"	61.3	
	81.85	1	81.8	1 .	"	,,	67.9	
90.705			81.2	ln	,,	,,	68.	
80.705		1	80.6	1	,,	,,	72.5	
80.011		0	70.0	182	,,	,,	79.0	V
ALC: STATE OF	The second	1000	79.6	1	"	,,	83.	
AT STEELS	70 47	1	79.1	1	,,	,,	87.	ř
	78.41	1	78.2	1	,,	"	93.9	
77.400	PP. 47		77.9	1	,,	,,	99.	
77.422	77.41	5	77.4	1	"	,,	30503.1	
76.291	76.28	1	76.3	1	,,	"	13.7	H
75.735	75.74	2 1	mr o		"	"	18.8	
75.452	75.45		75.6	1	,,	,,	21.4	
75.167	75.15	1	75.0	1	"	"	24.0	
74.686	74.68	2	F1.0		,,	,,	28.6	
70.770	THE STATE OF	0	74.2	1	"	,,,	33.	
72.772	ASTELL STREET	0	72.7	1	"	. ,,	46.4	
77.000	77.04		72.5	1	"	,,	49.	
71.936	71.94	3	71.8	1	,, .	99	54.2	
71.372	71.38	4	71.4	1	"	,,,	59.5	
69.835	Service .	0	00 =		"	,,	73.9	-
00.000		0	69.5	ln l	"	,,,	77.	
68.663		0	68.7	1	" "	,,	84.9	
67.000	05.00		68.5	1	,,	"	86.	
67.236	67.22	1	67.2	ln	,,	,,	98.3	
66.580	66.59	8	66.5	2	"	,,	30604.3	
65.399	1	0	010		"	,,	15.4	
	44.50		64.6	1	,,	,,	23.	
00.400	00.44		64.3	1	,,	,,	26.	
63.436	63.44	1n	00.7		"	,,	33.8	
63.062	63.09	1	63.1	1	,,	,,	37.2	
62.852	62.85	1			"	,,	39.3	1
00 - 1-	20.00			1	"	,,	42.	
62.147	62.15	5			,,	,,	45.9	
1 1 1 1 1	and of the same of				,,	,,	54.	
	At I do		61.0	ln	,,	"	57.	
			59.7	1n	0.91	27	69.	
62.147	62.15	5		2 1 1n	,, ,,	" " " " " " " " " " " " " " " " " " "	42· 45· 54· 57·	13

IRIDIUM-continued.

A	rc Spectrum		Spark Spe	ectrum		etion to	
Wave-	length	Intensity	Wave-length	Intensity	Vac	uum	Oscillatio Frequency
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	$\frac{1}{\lambda}$	in Vacuo
E SON			3259.0"	1	0.91	8.7	30676
3257.916					99	,,	85.8
40.010	3256.92	2	56.9	ln l	99	,,	95.1
56.346	+	1		The state of	"	"	30700.6
56.194	31	2	75.0	1	"	"	02.0
	55.20	2	55·9 55·1	1	,,,	"	05· 11·4
54.542	54.54	4	54.4	4	. ,,	"	17.6
53.497	0707	1	53.4	2	"	"	27.4
99 491		1	52.0"	ln ln	"	8.8	42.
49.866	49.87	3	49.8	i	"		61.7
49.638	49.63	2	49.6	i	"	"	63.9
47.417	10 00	ī		200	99	"	84.9
46.951		0	46.9	1	"	"	89.3
46.431		2	46.3	i	"	37	94.2
45.510		0	45.4	ln	"	"	30803.0
45.022	45.02	1	45.0	1	"	,,	07.6
44.887		0		1 8 L A	"	,,	08.9
43.568		0	43.8	1	"	,,	21.4
42.734	42.78	1			,,	,,	29.1
42.462	42.47	1	42.4	1	,,	,,	32.9
42.132		1			,,	,,	35.1
41.640	41.65	6	41.6	4	,,	,,	39.7
41.395	100	0			,,	,,,	42.1
40.688	40.69	1	40.7	1	,,	"	48.8
40.351	40.35	3	40.4	1	" "	,,	52.2
	Facilities 1	18816.3	39.5	lb lb	,,	,,,	60.
38.675	I I I I I I I I I I I I I I I I I I I	0	38.5	1	"	,,,	67.1
38.414	1	1		2	22	,,,	70.5
38.003	1	0	37.9	1	"	,,	74.4
10-25	LO COLLEGE		37.4	ln	"	"	80.
37.115	1	0	37.0	1	99	"	82.9
1.000	- The -		36.1	1	"	"	93.
	S10-57, 511.6		35.7	1	"	,,,	96.
35.537	Section 1	0	25.0	1	"	"	98.0
35.370	1000	0	35.3	1	"	"	30908
Color Sel	The second second	1000000	34·5 33·0	1	"	"	30908
32.618	4	0	32.8	1	"	"	25.9
32.342		1	34 6	1	11	"	28.5
32.145	32.14	4n	32.0	4	"	,,	30.4
02 170	02 1 T	211	31.7	ln ln	"	"	35.
			31.2	i i	"	"	39.
30.903	30.90	4	TOTAL NEWS	- CO 10	"	"	42.3
		100	30.7	2	"	,,	44.
29.412	29.40	5	29.3	4	"	"	56.6
28.672	1 000 B 0 B	0	28.6	2	"	,,	63.7
27.675		0	27.8	ī	"	,,	73.2
218			27.0	1	,,	"	80.
26.840	26.83	2	26.7	1	"	,,	81.3
	Sec. Sec. 4	2 2 4	25.8	1	,,	"	91.
	- A	1/- 11	25.5	1	"	,,,	94.
24.637	The section	0	24.5	1	"	"	31002.4
24 016	24.06"	ln	Thurs or a	F. Congress	,,	,,	08.2

IRIDIUM-continued.

-	Aı	cc Spectrum		Spark Spe	ctrum	Reduct		
-	Wave-l	length	Intensity	Wave-length	Intensity	Vacu	um	Oscillation Frequency
	Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	$\frac{1}{\lambda}$	in Vacuo
-	3223.645	3223.65	1	3223.6	1	0.91	8.8	31012.0
F	23.138		0	23.0	1	,,	,,,	16.9
-	22.854		0		1	,,	- ,,	19.6
1	22.600		1	22.5	4	"	99	22.0
-	01 415	01.40		22.4	2	"	,,	24.
	21.415	21.40	4	21.3	6	0.90	39	33.5
	20.924	20·91 19·66	10	20.7	2		"	38.2
	18.593	18.60	4	19·6 18·6	1	99	"	50·4 60·6
	17.700	17.70	1	10.0		"	"	69.3
	17.301	1110	0	17.3	In	39	"	73.2
	16.905	To the state of	1			"	"	77.0
	16.431		Õ	16.5	1	"	8.9	81.5
	Section 1		Page 1	15.2	1	,,	,,	93.
				14.3	1	,,	. ,,	31102
				14.0	1	"	"	05.
	13.681	13.68	3	13.6	1	,,	,,	08.1
-				13.2-	1	,,	,,	13.
	12.629		0			,,	,,	18.2
	12.350	12.37	4	12.1	. 8	,,	,,	20.8
	12.240	12.22	4			,,	21	22.1
		Series I		11.5	1	,,,	,,	29.
	10 101			11.4	1	"	,,	30.
	10.131		2	00.0	The state of	19	99 .	42.5
		STATE OF THE PARTY		09.9	1 1	"	. 22	45.
	09.050		0	09·6 09·1	1	22	"	48· 53·0
	08.287	08.27	2	08.1	j	"	99	60.5
	00 201	07.22	i	07.0	i	"	59	70.8
		01 22		06.3	i	,,	"	80.
7	05.837		0	05.7	î	"	"	84.2
	05.227	05.22	3	05.1	î	"	"	90.2
	04.587		2	04.5	i	"	,,	96.4
	04.230		0	a talled and a variety		,,	1,	99.8
				03.2	1	99	,,,	31210
			DEL BUY	02.7	1	,,	,,	15.
	02.250		0			22	. ,,	19.1
	02.023		0	STEP STEP STEP		99	"	21.3
		THE RESERVE		01.8	1	,,	,,	24.
	01.027	01.02	2	01.0	1	,,	"	31.1
	00.166	00.16	ln	00.1	1	,,	,,,	39.5
	3199.058	3199.06	5	3199.0	2	,,	"	50.3
	98.226	98.23	1	98.1	1	"	,,	58 4
	05.000		0	97.5	1	99	,,	65· 81·4
	95.882		0	95·7 94·2	1	"	"	98.
	93.345		2	84 2	1	"	"	31306.2
	93.345		1	93.2	1	"	"	07.3
	00 240		-	90.0	1	"	"	33.
	The same			90.2	În	, ,,	"	37.
	89.486	89.47	1	89.4	1	"	"	14.2
	88.702	001	î	88.7	î	"	"	51.8
	88.487	SET HOSE HE	0			"	,,	53.9

IRIDIUM—continued.

Aı	rc Spectrum		Spark Spe	ectrum	Reduct		
Wave-	length	Intensity	Wave-length	Intensity	Vacu	ium	Oscillation
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	$\frac{1}{\lambda}$	in Vacuo
3186-667	THE SERVE	1	3186.8	1	0.90	8.9	31371.8
86.184		0		1 2 3	,,	,,,	76.6
86.030		0			"	"	78.1
		1000	85.7	1	,,	"	81.
			85.4	1	"	"	84.
	A.M. S.M.		84.8	1	"	"	90.
00.004			83.7	ln	"	"	31401
82.924		1	82.8	ln.	"	"	08·7 10·
82.514	1000000	0	02.0	. In	"	"	12.8
02 314		0	82.0	ln	"	"	18.
			81.4	1	0.89	"	24.
80.487	3180.48	4	80.4	i		9.0	32.8
79.328	79.32	3	. 79.2	ln	"		44.2
79.811	78.80	1	78.7	i	"	"	49.4
		A THE STATE OF	78.4	i	"	"	53.
77.712	77.70	4	77.6	1	,,	,,	60.2
77.325		0	- 77.2	1	,,	"	64.0
			76.7	1	,,	"	70.
76.106		0	76.0	1	,,	,,	76.1
		A CHANG	75.3	ln ln	,,,	,,	84.
			74.8	1	,,,	,,	89.
73.466		3	73.3	1	,,	,,,	31502.3
73.222		0			,,	"	04.7
72.915	72.91	3	72.9	1	,,	,,,	07.8
71.812	71.80	2	71.7	1	"	99	18.8
	123 11 11 11		71.5	1	- "	99.	22.
		- Share	71.3	1	"	"	24.
00.010	00.01	0	70.0	1	"	"	37· 46·6
69.010	69.01	6	69.2	4	"	"	49.9
68.673	100	1	68.4	2	"	"	52.6
68·404 68·297	68.30	4	00 4		"	"	53.7
67.792	00 30	0	The state of the s		"	"	58.7
67.328	67.30	3	67:3	1	"	"	63.5
66.886	66.85	i	66.8	i	. "	"	67.9
00000			66.3	În	,,	,,	74
65.833		1	BENEVILLE.		,,	,,	78.3
65.323		1	65.3	1	"	,,	83.4
64.376		0.	64.1	2	,,	,,	92.8
63.972	- MINE	1			,,,	,,	96.8
62.953		0	63.0	1	,,	,,	31607.0
62.871	1	0			"	"	07.8
62.445		0	62.5	1	"	"	12.1
61.948	61.95	2	61.9	1	"	"	17.
61.477	61.49	2	61.4	1	"	"	36.0
59.992	50.04	2	60.1	1	"	"	40.5
59.644	59.64	4	59·6 59·2	1	"	"	43.
59.280	59.29	4	58.6	1	"	"	50
57.836		0	90.0	-	"	"	58.
57.614	57.60	2	57.6	1	"	"	60.
0.014	37 00		57.1	1	99.	"	66.
56.274	56.28	2	56.3	1	"	"	73.

IRIDIUM—continued.

A:	rc Spectrum		Spark Spe	ctrum	Reduc		The same	
Wave-	length	Intensity	Wave-length	Intensity	Vac	uum	Oscillation	
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	$\frac{1}{\lambda}$	in Vacuo	
			3155-2	In	0.89	9.0	31685	
3154.874	3154.85	3	54.8	2	,,	,,	88.1	
54.679	54.66	3	54.7	1	"	"	90.0	
		T-10/35	52.7	1	,,	,,,	31710	
51.748	51.75	ln	51.7	ln	"	"	19.4	
50.727	50.76	4	50.7	1	"	,,,	29.6	
50.128		0	40.0		"	"	35.7	
			49·6 49·0	1 1	"	"	41.	
48.346	1000	0	49.0	1	"	"	53.7	
40.940		0	48.1	1	"	"	56.	
47.860	47.85	1	47.9	î	"	"	58.7	
47 800	41 00	-	46.9	î	"	9.1	68.	
			46.6	i	,,	,,	71.	
			45.7	l ln	,,	"	80.	
	45.17	3	45.2	2	,,	,,,	85.7	
		3 1330	44.5	1	,,	,,	93.	
		La la sala	44.4	1	,,	,,	94.	
		7	44.0	1	,,	,,	98.	
43.668		0		4-31	,,	99	31800.9	
42.994	BEER DE NE	0	100		,,	,,	07.7	
42.371		1		更	,,	,,	14.0	
		1 2 4 1 1	A THE REAL PROPERTY.		, ,,	,,	18.3	
41.946	The second	1	41.2	2	0.88	"	26.	
	40.52	3	40.4	1	"	"	32.8	
39.704	39.70	1	90.0	1	22	,,,	41·1 52·	
			38·6 37·8	1n	"	"	60.	
36.418	36.56	1n	31.8	0	"	"	73.7	
30.418	90.90	In	35.5	ln .	"	29	84.	
35.358	T STATE OF	0	30 0	111	"	"	85.2	
99.990			35.0	ln	"	"	89.	
			34.2	i	"	"	97.	
	33.89	1	2131		"	,,	31900.1	
33.432	33.45	8 nr	33.4	6	"	,,	04.7	
33.210	33.23	3			"	"	07.0	
STATE OF		19.11	32.7	1	,,,	,,,	12.	
	177	A CONTRACTOR	32.3	1	"	,,	16.	
10 7	43-31-31	PART TO	29.9	1	,,	,,	41.	
	ATT TO SERVICE OF	F-2 3 F	29.7	1	"	,,	43.	
		4	29.3	1	"	,,,	47.	
28.510	28.51	3	28.6	2	"	"	55.0	
	1335	11 3	26.9	1	"	"	72.	
04 000	04.00		25.0	1	"	"	91.	
24.203	24.20	1 0	24.3	1	"	"	32000.9	
24.024		2			"	"	08.0	
23.334	22.82	1	22.6	2	"	"	13.2	
22.509	22.82	3	220	4	22	"	16.5	
21.894	21.91	4	22.1	4	"	"	22.7	
20.885	20.90	5	20.9	2	"	- "	33.0	
20 000	2000		20.5	1	"	"	37.	
			19.8	1	"	,,	44.	
19.422	The state of	0		104 119	,,	,,	48.1	

IRIDIUM-continued.

A	rc Spectrum		Spark Sp	ectrum		tion to	
Wave	length	Intensity	Wave-length	Intensity	Vac	uum	Oscillation
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	$\frac{1}{\lambda}$	in Vacuo
3118-967	the real	1	3118-9	2	0.88	9.1	32052.8
17·968 17·645	3117-64	0			. ,,	"	63.1
17.049	3117-04	1	17.4	2	"	"	66·4 69·
		E INTERNA	16.3	1	"	"	80.
14.669	14.69	3	14.6	i	"	, ,,	96.9
14.170	14.16	3 Pd ?	14.2	1	"	9.2	32101.1
13.908	A English	1			,,	,,	04.9
13.229	ME WALL BE THE	1		3334	"	,,	12.1
12.475	12.48	2	12.5	1	"	"	19.5
			12.2	1	"	"	23.
	LUSSE TE		10·4 10·0	1 1	"	39	41.
	09.49	1	09.5	1	"	"	45· 50·4
08.670	08.67	î	08.7	1	"	- 27	58.9
			08.2	î	• • • • • • • • • • • • • • • • • • • •	"	64.
			07:7	1	"	"	69.
			07.3	1	"	,,	73.
			06.8	1	,,	,,	78.
06.072	Section of the bill	0	06.2	1	"	,,	85.8
04.901		0	05.3	1	,,	,,	94.
04·301 03·875	03.88	0 1	04·3 03·9	1	"	,,	32204.2
03 010	09 00	-	02.8	1n	"	"	08·6 20·
01.288	01.29	2	01.3	1	0.87	"	35.5
00.586	00.50	8	00.5	6	"	"	43.2
			3099.9	1	,,	"	50.
	30670		99.6	1	,,	"	53.
			99.2	1	,,	,,	57.
3099.055	3099.05	ln	00 =		,,	,,	58.7
00.555		0	98.7	1	"	"	62.
98.555		U	98.4	1	"	,,	63·9 66·
97.931	97.94	2	97.9	1	"	"	70.4
0, 001	0101		95.4	i	,,	"	97.
	94.49	1	94.6	1	"	"	32306.3
94.326		1	94.3	1	,,	"	08.0
94.144	94.14	2	94.1	ln	,,	,,	09.9
		- 10	93.5	1	,,	,,	17.
			93.1	1	"	"	21.
		self to	92·8 92·5	1.	"	"	24· 27·
	The sylven		91.6	ln	"	"	37.
91.254		0	01.0	111	,,	,,	40.1
90.871		0		13 20 6	"	"	44.1
90.277	90.29	2	90.1	1	"	"	50.3
89.660		0		35	"	"	56.8
88.163	88.15	5	88.2	6	"	"	52.6
411111111111		THE RILL	87.7	1	"	"	77.
06.504	86.58	1	87.3	1 2	"	"	82.
86.564	86.08	4	86·5 86·0	ln l	"	"	89·2 95·
			85.3	111	"	"	32403
85.088		1	000	2004	"	"	04.8

IRIDIUM—continued.

A	rc Spectrum		Spark Spe	ectrum	Reduc	tion to	
Wave-	length	Intensity	Wave-length	Intensity	Vac	uum	Oscillation Frequency
	1 77 1	and	Exner and	and		1	in Vacuo
Kayser	Exner and Haschek	Character	Haschek	Character	λ+	$\frac{1}{\lambda}$	
3083.343	3083:37	4	3083.3	4	0.87	9.3	32422.9
83.085	00000	Î	83.0	4	,,	"	25.7
82.823		0			99	,,	28.4
10 Kin		0	82.2	ln	"	"	35.
81.709		1	81.6	ln	,,	11	40.2
			81.0	ln	,,	"	48.
			80.2	1	,,	,,	56.
79.892		0	79.9	1	,,	,,	59.4
78.793		2			,,	,,	71.0
	78.70	1			,,	,,	71.9
77.996	78.00	1	CONT. TARRE		,,	,,,	79.4
A Charles	77.75	2	77.7	1	,,	,,	82.0
76.800	76.80	3	76.8	2	23	, ,,	92.0
75.577	E STREET	0	75.6	2	"	,,	32504.9
		1000	75.0	1	,,	1 33	11.
74.864	74.87	2			,,,	,,	12.4
		200	74.5	1	,,	,,,	16.
73.800		0	THE RESIDENCE		"	"	23.7
73.390	73.42	2	73.5	2	,,	,,	27.9
72.904		0	72.7	1	,,	,,	33.2
		1.35	72.2	1	,,,	,,	41.
72.078		0			"	,,	42.0
			71.7	1	,,	,,	46.
	- 3 - 3 K 1 5		71.4	1	,,,	,,,	49.
		Self-Art	70.5	. 1	,,	1)	59.
69.825	69.82	3	69.9	1	99	,,	65.9
69.220	69.18	4	69.2	6	99	>>	72.5
69.005	69.00	5	69.0	6	"	,,	74.6
68.507		1	68.6	1	,,,	,,,	79.8
			67.7	1	99	99	88.
			67.3	1	99	,,,	93.
66.760		0	66.5	1	"	"	98.4
66.167		0	05 5		"	"	32604.7
65.944	07.05	0	65.7	1	"	"	07.1
65.292	65.27	1	64.0	8	"	"	14·0 18·1
64·904 64·622	04.05	3 2	64.9	0	"	,,	21.0
	64.65	0	64.3	1	"	"	25.5
64.216		0	61.6	2	0.86	"	53.4
61.515	61.59	3	61.5	1		"	54.2
61.515	61.53	0	61.1	1	"	"	59.
60.950	60.96	2	01.1	1	"	99	60.2
60.460	00.90	0	60.1	1	,,,	"	65.5
60.114		1	001	-	99	"	69.2
59.858		1	59.9	1	,,	,,,	71.9
00 000	THE STREET		58.8	î	"	"	83.
58.438		0	58.5	1	"		87.1
58.087	A	0	300		Control of the last	99	90.8
00 001			57.7	1	"	"	95.0
57.590		2			"	"	96.3
57.398	57.40	4		18 18 18 18	"	"	98.2
0.000	3.10		57.3	1	,,	"	99.3
56.770		0		- 6	"	"	32705.0
00110		1 000	55.4	ln	"	,,,	20

IRIDIUM—continued.

Ar	c Spectrum	1000	Spark Spe	ectrum	Reduct		
Wave-l	ength	Intensity	Wave-length	Intensity	Vacu	ıum	Oscillation
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	$\frac{1}{\lambda}$	in Vacuo
3054.570		1			0.86	9.3	32728.5
54.351		0	3054.2	1	,,	9.4	30.8
53.709	3053.70	2	53.7	ln	,,	22	37.7
		10230	53.2	1	,,	"	43.
52.288	52.30	2	52.3	2	99	"	52.8
71.040	F1.0F		51.5	1 1	"	"	61.
51.243	51.25	1	51·3 50·6	1	"	"	64.1
.50.134		1	50.5	1	"	"	76.
49.559	49.52	5	49.4	i	"	29	82.4
48.783	1002	1	48.9	î	"	"	89.6
47.904		i	48.0	În	"	"	32800.0
47.277	47.27	5	100		"	"	06.8
45.768		0	45.7	1	"	"	23.8
		12.9	45.3	1	"	"	28.
44.255		0		13.5	,,	,,	39.4
43.671		0 .	43.6	1	22	,,	45.7
42.760		2	42.7	8	,,	29	55.5
42.429		0			"	,,	59.1
41.979		I	42.0	1	,,,	,,	63.9
			41.6	1	,,	,,	68.
41.056		1	40.0		99	"	73.9
10 700	40.50		40.9	1	"	,,	75.6
40.580	40.58	3	40.0	1	,,	99	79.1
20.270	39.38	5	40.0	1 4	,,,	99	85· 92·0
39·378 37·861	37.86	3	39·3 37·7	1	1)	" "	32908.5
91.001	31.00	3	37.2	1	"	"	16.
36.361		0	36.5	1	"	"	25.8
00 001			35.0	î	"	"	40.
34.675	34.66	2	34.6	1	"	22	43.1
			34.4	1	,,	,,	46.
		31 3	34.2	1	"	,,	48.
33.744	33.75	2	33.7	1	,,,	,,	53.1
	of Stewa	1000	33.0	I	"	,,	61.
32.528	32.55	2	32.6	1	"	,,	66.3
30.568		0		TO STATE OF	"	"	87.7
30.365	20 50	1	90 5	0	"	"	89.9
29.487	29.50	5	29.5	2 4	"	"	99.4
26.489	25.99	3	26.5	4	"	, ,,	33032·2 37·6
	25.99	9	25.8	2	"	0 33	40.
		11/296	25.3	1	2)	9.5	45.
	DAY ELE	10 27 12	25.0	1	"	,,	48.
24.410		2	24.4	î	,,,	"	54.8
		1	23.4	î	,,	"	66.
		1193	23.2	i	,,	"	68.
22.807	22.81	2	22.7	1	0.85	,,,	72.3
22.536	22.54	2	22.5	ln	"	"	75.3
	REMUTE S		21.6		,,	, ,,	86.
		1 1 3 1	21.1	1	"	,,,	91.
			20.7	1 - 3	,,	, ,,	95.
20.125	20.12	3	20.1	1		100	33101.7

IRIDIUM-continued.

A	re Spectrum		Spark Spe	ectrum		tion to	
Wave	length	Intensity	Wave-length	Intensity	Vac	uum	Oscillation Frequency in Vacuo
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	$\frac{1}{\lambda}$	in Vacuo
3018·151 17·450	3017.43	2 4	3018·1 17·4	1n 1	0.85	9.5	33123·5 31·2
16.550	16.55	3	16.8	1	,,	,,	36· 40·9
10000	1000		16.4	2	"	"	43.
			15·8 15·1	1 1	"	,,	49· 57·
14.854	1 5 5 7	1	14.9	1	"	99	59.6
[14.585		1	14.6	1	,,	"	62.5
	alla		14.3	1 1	"	"	66.
12.984		1	13·2 13·0	1	"	"	78· 80·2
12.695	12.71	2	130	-	"	"	83.3
			12.4	1	"	"	87.
11.812	11.84	3	11.7	1	,,	,,	92.9
10.020	10.03	2	08.8	1	"	22	33212.8
08.753		1	08.5	1	"	"	26·8 30·
07.838		0	000	200	"	"	37.0
07.745		0	07.7	2	"	,,	38.0
		1000	06.5	1	"	,,	52.
	a second law.	10 mg	06.3	1	"	"	54· 61·
05.338	05.33	2	00 1		"	"	64.7
			05.1	1	"	,,,	67.
			04.7	1	,,	,,	72.
04·429 03·761	03.78	0 4	03.7	1	, ,,	> >	74·7 82·0
03.701	03.10	*	03.2	ln	"	"	88.
02.375		1		124	"	"	97.5
	15 th 15	Bi. A	02.0	2	"	"	33302
01.909		0	01.6	1	"	,,	06.
01.383		0	01.2	1	"	"	08.5
		14/485	01.0	î	"	"	12.
00.149	00.15	2	00.2	1	"	"	23.7
0000 1 4 4			2999.7	1	"	"	27.
2999;155		0	99·2 98·7	ln 1	"	,,	33.2
			97.8	1	"	"	48.
	2997.54	3	97.6	2	"	9.6	51.1
97.314	97.31	2	97.4	1	"	,,	53.6
96.785	96.20	0 4			"	"	59.5
96.202	90-20	4	95.5	ln	"	"	66.0
	Con Later	TO WELL	94.8	1	"	"	82.
STATE OF THE RESERVE		1-4	94.7	1	"	"	83.
93.751		0	93.8	1	"	"	93.3
93.184	NE STEEL	2	93.5	l ln	,,,	"	96.
99.104	·	-	91.9	ln ln	"	"	33414
91.520		1	91.7	ln	,,	"	18.2
90.746	90.77	3	90.7	1	,,	"	26.7
	The same of the sa		90.1	1	99	1 ,,	34.

IRIDIUM—continued.

A	rc Spectrum		Spark Spe	ectrum	Reduc	tion to	
Wave-	length	Intensity	Wave-length	Intensity		uum	Oscillation Frequency
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	1_ \(\lambda\)	in Vacuo
			2989.6	1	0.85	9.6	33440
2988:335	o specime	0	87.6	1	"	"	53·8 62·
			86.7	1	99 99	"	72.
85.921	2985.94	3	85.9	1	"	"	80.8
		Mary II	83.8	1	,,	,,	33505
00.000		0	83.7	1 Fe ?	0.04	"	06.
82.962		0	82·9 82·7	1	0.84	"	14.1
	82.55	1	82.5	i	"	"	18.8
	The same of the same	2	81.8	1	"	,,	27.
81.042		2			"	"	35.7
80.776	80.80	4 0			**	39	38·6 40·9
80·578 80·375	b survivor	0		N. Carlo	"	"	43.2
00 010			80:0	1	"	- "	47.
			79.8	1	,,	,,	50.
		1 1 1	79.2	1	,,	,,	56.
			78.5	2	99	"	64.
78.056		2	78·2 78·0	1	. 22	"	68· 69·3
10 000	77.80	1	77.6	1	"	"	72.2
			77.3	i	"	"	78.
76.857		0		Can tel	,,	"	82.9
		8 11=1	76.4	1	,,	"	88.
75.062		4	75.6	ln	"	"	97· 33603·1
15.002	75.07	3	75.1	2	"	,,	03.0
74.659	74.66	1	74.6	1	"	"	07.7
74.220	74.24	2	74.3	1	,,	,,	12.5
			74.2	1	"	"	13.
72.646		0	73.7	1 1n	"	"	19.
71.205	71.20	0 2	72·5 71·6	2	"	, ,,	30·4 46·8
11 200	11 20		69.7	1	"	9.7	64.
	69.07	1	69.2	1	,,	,,	71.6
20.00	68.60	1	68.7	1n	"	,,	76.2
68.334	68.32	2	68.4	l ln	"	,,	79.3
67:360		0	67·8 67·4	In	"	"	90.3
01 000			67.1	i	"	"	93.
66.245	66.24	2	66.3	1	,,	,,	33703.0
27.000	200		65.7	1	"	,,	09.
65.329	65.34	3	65.4	1	,,	,,	13.3
65.095		0	64.3	2	"	"	25.
63.111	63.11	3	63.2	2	"	"	38.6
		11157	63.1	1	,,	"	39.
	100	BAR B	62.7	1	,,	,,	43.
62.580		1	61.0		,,	"	44.7
61.595	61.59	2	61·8 61·7	1	"	"	54· 55·9
61.009	61.03	i	61.2	i	"	"	62.4
		134 44	60.3	2	"	,,	70.

IRIDIUM—continued.

A	rc Spectrum		Spark Spe	etrum		tion to	
Wave-	length	Intensity	Wave-length	Intensity	Vac	uum	Oscillation Frequency
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	$\frac{1}{\lambda}$	in Vacuo
2959.573		0	33		0.84	0.7	33778-9
2.000 010		0	2959.2	1		9.7	83.
59.049		0	2000 2	1	"	"	84.9
56.699		0	56.7	1	"	"	33811.8
00 000			56.0	1	"	"	20.
		The state of	55.5	În	"	"	26.
54.909		1	54.9	4	"	"	32.3
53.205		ō	54.6	1 Fe?	"	"	52.
52.686		0	52.7	ln	"	"	57.8
51.363	2951.35	8	51.3	4	"	"	72.9
51.266	20100	2	010	-	"	"	74.1
50.883	50.89	2			"	"	78.4
50.606	50.61	ī	50.6	1	"	"	81.6
- 00 000	0001	1	50.4	1	"	"	84.
49.882	49.89	3	49.8	1	99	.,,	89.7
10 001	1000		48.5	ln	"	19	33906
	47.48	1	7.00	111	"	. "	17.6
47.093	47.10	3	47.1	2	"	"	22.0
1, 000	1110		45.7	1	"	"	38.
			44.0	1	"	9.8	58.
43.287	43.30	8	43.3	4	"		65.4
10 201	1000	0	42.7	1	0.83	"	72.
41.197	41.20	2	41.2	1		"	90.0
40.669	40.66	3	40.7	2	"	"	96.1
40.548	40 00	0	40.1	4	"	"	
39.390	39.40	3	39.4	4	"	"	97·5 34010·8
00 000	99 40	0	39.2	1	19	,,,	13.
38.877	38.87	1	33 4	1	"	"	16.8
38.606	38.60	3			"	"	19.9
38.097	30 00	0			"	"	25.5
37.656		0			"	"	30.9
37.371		0	37.3	1	"	"	34.2
36.814	36.85	8	36.7	4	"	"	40.5
00011	36.20	ln ln	36.2	1	"	"	47.8
35.427	00 20	0	30 2	1	"	"	56.8
35.305	35.30	i	35.3	1	"	"	58.2
34.748	34.76	6	34.7	4	"	"	64.6
33.252	33.25	1	32.7	1	"	"	82.1
00 202	. 00 20	1	32.7	i	37	"	88.
	THE REAL PROPERTY.	0	32.2	i	"	**	94.
31.821		0	022		"	"	98.7
30.743	30.75	2	30.7	1	"	"	34111.2
30.298	30.30	ī	30.3	î	"	"	16.4
Contract of	0000		29.8	4	"	"	22.
27.833		0	200		"	"	45.1
			. 27.7	1	"	"	47.
27.129	27.14	1	27.1	i	,,	"	53.3
			26.7	1	"	"	58.
26.212		0	26.2	1	"	,,,	64.1
THE PARTY NAMED IN			25.2	4	"	"	76.
24.912	24.94	10	24.9	4	"	"	79.1
	2101	10	24.0	1	"	99	90.
21.237		0	21.3	2	"	9.9	34222.2
	5 Old 2 188		20.9	ī	"	,,	26.

IRIDUIM—continued.

A	rc Spectrum		Spark Spe	ectrum	Reduc	tion to	
Wave-	length	Intensity	Wave-length	Intensity	v ac	uum	Oscillation Frequency
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	$\frac{1}{\lambda}$	in Vacuo
E CHESTS .			2919-9	1	0.83	9.9	34238
2919.299	**	0	19.3	4	"	"	44.9
18.683	2918.69	3	18.7	4	,,	"	52.1
17.885	17.86	1	18·1 17·9	1 1	"	"	59· 61·6
17.000	17.00	1	16.8	1	"	"	74.
16.479	16.49	4	16.4	4	"	"	78.0
15.793		0	15.7	1	"	,,	86.1
15.625		0			"	,,	88.1
	The latest		14.1	2	"	"	34306
		NET STOR	13.9	1	"	"	08.
13.592	THE REST	0	13.7	1	"	"	12.0
13.992	12.36	1 Pt?	12.4	1	"	"	26.5
	12 00	110:	11.4	1	"	"	38.
			10.7	ln	"	,,	46.
09.912		0		EASTERN SE	,,	"	55.4
09.669	09.66	2	09.6	1	,,	"	58.3
185 - 24			08.8	1	,,	,,	68.
			08.4	1	"	"	73· 81·
07:353	07:36	3	07·7 07·3	1n 1	"	"	85.6
07353	0730	3	06.5	ln	"	"	96.
			06.0	1	"	"	34402
05.774	05.75	2	05.7	î	"	"	04.5
04.913	04.93	4	04.9	1	"	"	14.5
03.995		0			,,	,,	25.4
03.852	Name of the last	0	03.7	1n	0.82	"	27.1
			03.4	ln	"	,,	32· 44·1
02.430	09.00	0	01.9	1	"	"	48.0
	02.09	3	01.9	1	"	"	59.
00.492	00.50	1	00.4	1	"	"	68.0
00.165	0000	0	001		"	"	70.9
2899.733	2899.74	2	2899.6	1	,,	"	76.0
99.055		0			,,	>>	84.1
98.455		2	98.5	ln l	"	,,	91·2 97·
0 2 200		0	98.0	1	"	"	99.2
97·783 97·260	97.27	0 5	97.1	2	"	"	34505.4
97.200	97.27	1	97.1	2	"	10.0	07.6
95.705	3101	0	95.7	1	"		23.9
94.388		0		1300	"	"	39.6
			94.0	1	,,	,,	44.2
93.785		0			,,	,,,	46.8
92.371		1	92.3	1	"	"	63·7 72·
00.004		0	91.7	1	"	"	84.5
90.634		0	89.7	1	"	"	95.8
89.688		1	88.3	1	"	"	34612
87.240		2	00 0	0.00	"	"	25.1
0. 210		40.48	86.9	1	"	"	29.
85.615	BET DESTRUCTION	0			,,	"	44.7
Halp Hank	But of Control	SETTE T	85.4	1b	,,	,,	47.

IRIDIUM--continued.

	Ar	c Spectrum		Spark Spe	etrum	Reduc		
	Wave-l	ength	Intensity	Wave-length	Intensity		uum	Oscillation Frequency in Vacuo
Ka	yser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	$\frac{1}{\lambda}$	in Ŷacuo
				2884.7	1	0.82	10.0	34656•
900	0.710	9000 77		84.2	1	,,	,,,	62.
	3·549 2·970	2883.55	1 0	83.5	1	"	"	69.5
	2.742	82.77	5	82.6	1	"	99	76· 79·0
	- , 12	02		82.2	î	"	, ,,	86.
			16 8 75	81.7	1	"	"	92.
	1.270	81.30	2	81.1	1	"	,,	96.7
	0.324	80.29	1	80.2	1	,,	"	34708.5
	0.174		0	80.1	1	"	"	10.1
	9.878	FO. 57	0	70.7		"	,,	13.7
	9.515	79.51	3 2	79.5	l In	"	"	18.1
	8·632 7·781	77.79	4	78·7 77·7	1	"	"	28·7 38·9
	7.108	1113	0	77.1	1	"	99	47.1
	6.096	76.10	4	76-1	2	"	"	59.3
7.	5.721	75.72	4	75.7	2	"	"	63.9
		75.10	1			"	,,	71.4
7	3.929		0	73.8	1	"	,,	85.6
Size I		73.46	2	73.4	1	"	,,,	91.2
7	2.227		0	77.0		"	"	348062
			100	71·9 71·7	1	"	39	10.
			No.	71.2	1	"	"	13.
				71.1	i	,,	"	20.
7	0.698		0			"	"	24.8
	0.304		0	70.2	In	,,	"	29.5
69	9.815	69.80	2			,,	"	35.5
	1/2			69.6	1	"		38.
	The sy	68.70	1	0=0		"	10.1	48.9
C	6.700	66.76	9	67.8	1	"	"	60.
01	6.798	00.70	3	66·7 65·6	1 1	,,	>9	72·3 87·
65	3.955	63.95	3	00.0	1	0.81	"	34906.7
0.	0 000	00 00	J	62.8	1		"	21.
		62.60	1	62.6	Î	"	,,,	23.2
65	2.455	62.49	1n			"	"	24.7
				61.0	ln	,,	"	43.
. 60	0.767	60.77	2	60.7	1	"	,,,	45.5
0.0	0.700			60.4	1	"	"	50.
00	0.126		0	60.0	1	"	"	53.4
				59.4	1	"	"	55· 62·
59	9.138		0	00 1	1	"	"	65.5
	100			58.9	1	"	"	68.
	1000		F 1937-2	58.5	1 Fe?	"	"	73.
	7.058	57.05	1	57.0	1	,,	"	91.0
	6.048	56.03	1	56.1	ln	,,	"	35003.4
58	5.931	55.96	1			,,	,,	04.6
	15 THE 1			55.7	1	"	,,	08.
E.	4.722		0	55.5	1	99	"	10.
	3.416	53.43	1	53.5	1	,,	"	35.5
	2.605	00 10	0	52.6	î	"	"	45.6

IRIDIUM—continued.

Aı	rc Spectrum		Spark Spe	ectrum		tion to	
Wave-	length	Intensity	Wave-length	Intensity	Vac	uum	Oscillation Frequency
Kayser	Exner and Haschek	and Character	Exper and Haschek	and Character	λ+	$\frac{1}{\lambda}$	in Vacuo
ARTER T			2852.3	1	0.81	10.1	35049
2851.648	2851.65	ln	51.6	1	**	,,	57.3
51.518	51.56	ln			,,	,,	58.7
51.161	THE PERSON	0	50.8	1	"	,,	63.3
50.906		0			,,	,,	66.5
			50.5	ln	"	,,,	81.
49.848	49.86	8	49.7	6	,,	,,	79.4
49:557	THE WAY	0			,,	,,	83.1
48.557		0	48.4	1	,,		95.4
46.753	Hart Hart	0	46.8	1	,,	10.2	35117.5
	Par Libert		46.5	1	,,	,,	21.
	4 - 5 9 6	1 1 1 1 2 2	46.3	1	,,	,,	23
45.245	Con Carlo	1			,,	,,	36.0
45.009	47 5 29	0	44.6	1	,,	,,	39.2
42.390	42.40	2	College Con		,,	,,	71.4
			42.1	1	,,	,,	75.
41.798	41.80	1		Fe The Co	,,	,,	78.8
			41.6	1	,,	,,	81.
40.332	40.35	4		100	,,	,,	96.8
	THE PARTY OF	1 1 1 1 1	40.2	4	,,,	,,	99.
39.287	39.32	6			,,	,,	35209.7
20120 -0			39.2	4	"	,,	11.
	The Ballet		38.3	In	,,	,,	.21
37.421	37.42	3			,,	,,	33.1
			37.2	2	,,	,,	36.
36.506	36.51	4		1500.01	,,	"	44.4
36.197	36.21	1	THE	3/129	,,	,,	48.2
35.762	35.75	3	35.7	1	,,	99	53.8
35.408	Car Carlot				,,	"	58.1
		0	34.2	1	,,,	,,	73.1
33.777	To the Serie S	0	100		,,,	,,	78.4
33.337	33.35	3	33.2	8	,,	,,	83.8
32.874		2	32.6	1	22	- 22	89.6
31.912	31.93	1	31.8	1	,,	,,	35301.5
31.455	31.46	1	1035 I		22	,,	07.3
30.964		5 35	Dr. Selfall and		22	"	13.4
30.601	30.57	2	30.4	ln	22	,,	18.2
30.264	THE REAL PROPERTY.	3	ET OF SECTION		"	,,	21.2
29.720	29.73	1	29.8	1	"	,,	28.9
27.259	27.27	1	27.2	1	,,	,,	59.7
26.316	F. STEED LOVE	0	26.3	ln	22	22	71.6
		1000000	25.7	1	"	22	79.
			25.5	1	,,	,,	82.
24.546	24.59	6	24.4	2	0.80	77	93.4
24.228	Visit Telling	1	E MARKET S	1	,,	"	97.7
23.831	W. 3 3 4 4	0	23.7	1	,,	,,	35402.7
23.280	23.34	4	23.3	1	,,	10.3	09.1
20.738	The Marie of	2	20.6	1	,,	,,	41.4
20.614	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0	1 SHOW		,,	"	43.0
19.848	The Office of the	0	19.8	ln	,,	,,	52.4
	1000	5 1 1 1 M	19.3	1	,,	,,	60.
	REAL PROPERTY.	a destruction	17.6	1	,,	22	81.
17.284		0		The state of	"	"	84.9
17.039	17.04	1	17.0	1	"	99	88.4

IRIDIUM-continued.

Aı	c Spectrum		Spark Spe	ectrum	Reduct	tion to	
Wave-l	ength	Intensity	Wave-length	Intensity	Vacı	uum	Oscillation
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	$\frac{1}{\lambda}$	in Vacuo
2816-409		0	2816.5	1	0.80	10.3	35495.9
15.744		0	15.9	î	,,	,,	35504.3
74.000			15.5	In	,,	99	07-
14·966 14·532	2815.00	1	15.0	1	99	,,	14.1
14.004	14.52	1	14·5 14·1	1	"	"	19.8
		8.41.33	13.6	1	"	,,	26· 31·
		18-11-8	13.3	1	"	"	35.
12.896	12.91	2	12.7	î	"	"	40.2
			12.0	2	,,	"	52.
		1886	11.4	1	,,	,,	. 59.
10.055	70.05		11.3	1n	,,	,,	60.
10.657	10.65	1	10.5	1	,,,	,,	68.6
08.249		0	08.7	1	,,	"	93.
07.754	07.75	1	08·1 07·6	1	"	"	99·1 35605·4
06.772	0,10	0	0,0	1	"	"	17.8
06.479	06.50	1	06.3	1b	"	"	21.4
		The same	05.8	1b	"	"	30.
04.300		0	04.6	2	"	,,	49.2
			03.2	1	,,	,,	63.
			02.7	2	,,,	,,	70-
HET TOO			01.9	1	"	,,	80.
		Parlace at	01·5 01·1	1	"	,,	85.
00.923	00.91	3	01.1	1	"	,,	90· 92·3
00.755		1	00.6	. 4	"	"	94.4
2799.835	2799.84	2	2799.6	î	"	"	35706.1
99.522	Mark Street	0			"	10.4	10.0
			99.3	1	"	,,	13.
00.000	00.00		98.7	ln	22	,,,	20.
98.283	98.29	4	98.1	2	"	,,	25.7
97.456	97·82 97·45	5 4	97.6	2n	"	,,	31.7
96.558	96.55	2	97·3 96·3	2	"	, ,,	36·5 47·9
	00 00	-	95.7	ln	"	"	59.
		86.5	95.4	2	"	"	63.
94.189	94.20	1		103	"	"	78.1
93.907		0	93.6	2n	,,	,,	85.7
			92.2	1	"	,,	35804
90.795			91.4	1n	,,,	"	14.
90.199		0	90.6	1	,,,	,,	21.7
			90·2 89·7	1	"	"	29· 36·
			89.4	ln ln	"	99	40:
89.066		0	89.1	1	"	"	43.9
Marie I			88.5	ln	"	"	51.
87.687		0	87.8	1	"	"	61.6
07 000		THE ROLL	87.4	1	,,	,,	65.
87.099		1		The state of the s	,,	,,	69.2
		1	86.3	I	"	,,	79.
			85·9 85·6	1	"	"	85.
85.319	85.33	3	99.0	1	"	99	89· 92·1

50 IRIDIUM—continued.

Wave-length Intensity and Character Exner and Haschek Exne	Ar	rc Spectrum		Spark Spe	ectrum	Reduct	tion to	
Exner and Haschek Character Haschek Character A +	Wave-l	ength	Intensity	Wave-length	Intensity	Vacu	ıum	
2783.797 83:492 0 83-5 1 0.70 , 35911-8 15.7 82:885 0 83:1 1 , , , , , , , , , , , , , , , , , , ,	Kayser		and		and	λ+		
83:492 0 83:5 1 " 15:7 82:885 0 82:5 1n " 21:0 82:342 0 81:7 1 " 30:5 81:401 2781:42 4 81:3 2 " 42:6 81:07 81:07 1 81:0 1 " 47:1 80:507 80:55 1 79:3 1 " 47:4 80:507 80:55 1 79:3 1 " 79:4 79:752 1 79:3 1 " 90:9				2785.2	1		10.4	
82-885 0 83·1 1 " 21·35 82-342 0 82·5 1n " 30·5 81-401 2781-42 4 81·3 2 " 42·6 81-07 1 81·0 1 " 47·1 80-507 80·55 1 79·3 1 " 54·0 79·752 1 79·3 1 " 79·3 1 77·645 77·645 1 79·3 1 " 79·3 77·645 77·55 2 77·4 1 " 79·3 77·645 77·55 2 77·4 1 " 79·3 77·645 77·50 1 70·3 1 " 79·3 77·645 77·55 2 77·4 1 " 99·3 75·073 75·09 1 74·9 6 10·5 24·5 75·073 75·09 1 74·9 6 10·5 24·5 72·547 72·58 3 72·5 2 " 70·1 72·547 72·58 3 72·5 1 " 9·2 72·547 72·58 3 72·5 1 " 9·2 72·547 72·58 3 72·5 1 " 9·2 <td></td> <td></td> <td></td> <td>22.5</td> <td>1</td> <td></td> <td></td> <td></td>				22.5	1			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	83.492		U					
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	82.885		0					
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				82.5	1n			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	82.342		0	0.1	154	,,	"	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	01.401	0701.49	1 .					
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			-					1
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				01 0	1			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		00 00		79.3	1			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$								
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				76.0	1	,,	,,	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		88.55	0	77.4	P. Toron	"		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		77.55		11.4	1			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	11-149		100	76.3	1			
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	75.646	75.65	3					
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				74.9	6		10.5	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	74.685					,,	,,	1
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		74.05	1			,,	"	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$								
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	79.547	79.59	3					
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$.20				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			139.68	69.6	1			96.
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$,,		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			The Wall			,,	,,	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	05 504	07.70				,,		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				070	1	"	"	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	07.425	0, 11		66.9	1			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		I was delta		66.3				39.
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$						1		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$						"	"	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	131		1				1	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	THE STATE OF		1000					
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			THE FARM				3 6670	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Bullion III	THE STATE OF STREET		63.5	1			76.
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	63.287	STATE OF THE PARTY	0			ALC: U		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$,,	,,,	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	01.500		0	62.1	In			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				61.3	. ln	THE LIBERT		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$				010	111	1		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		HATTER STATE	0	60.6	1			18.7
59·405 59·42 2 59·4 1 , , 29·1 59·100 59·11 1n 58·8 1h , , , 37·5 59·4		60.00	2					
59·100 59·11 1n 58·8 1h ,, ,, 33·5	07					,,,	,,	
58.8 1h ", ", 37.				59.4	1			
50.4	59.100	59.11	In	58.8	16	1. 44.		
				58.4		**	**	42

IRIDIUM-continued.

A	rc Spectrum		Spark Spe	ectrum	Reduc		
Wave-	length	Intensity	Wave-length	Intensity	Vacı	uum	Oscillation
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	1_ \(\lambda\)	in Vacuo
2758.325	2758.33	2	2758-2	1	0.79	10.5	36243.4
	ASSAMILE SE				,,	**	45.
	E STREET	COURT I	57·6 56·6	1	"	"	53.
56.206	FC.00		90.0	1	99	, ,,	66.
30.700	56.20	1	56.0	1	"	99	71·3 74·
	DESCRIPTION OF THE PARTY.	THE RESERVE OF	55.8	1	"	"	77.
		1	55.2	1	"	"	85.
	HAS TON		54.6	1	**	59	92.
53.954	STATE OF THE STATE OF	0	53.8	2	"	99	36300.9
00 004		0	53.2	1	"	"	11.
	BAD AREA		52.8	2	"	,,	16.
	WEST TO SERVICE		52.3	1	"	"	23.
	PR CENTED SE		51.8	1	"	"	29.
			50.8	i	"	10.6	43.
	The second	TANK I	50.0	ln ln	"		53.
	B - 8 - 8	19	49.3	1	"	"	62.
49.075		0	100	-	,,	,,	65.3
10 010	PITE BATE	0	48.8	1	,,	"	69.
48.395	A STATE OF THE STA	0	48.3	i	,,	"	74.3
10 000	1913 -		48.0	1	"	"	80.
47.602	47.62	1	400	-	,,	"	94.7
47.383	T1 02	0			"	"	87.7
1, 000	ASSET WAS		46.1	1	"	"	36405
	MILE VENTER	1000	45.5	i	,,	"	13.
			45.2	. 1	,,	•,	17.
			44.5	î	"	"	26.
44.091	44.09	3	44.1	2	"	"	31.3
43.769	11.00	0	43.9	ī	"	"	35.6
43.477		0	43.5	2		"	39.5
40.432		1			0.78	"	80.0
40.267	40.22	1			,,	"	82.5
40.166	40.16	1			,,	"	83.6
40.085	40.08	ī		1 2 1	27	"	84.7
39.413	39.39	1	39.4	2	22	,,	93.7
			39.3	1	,,	13	95.
38.875		0	38.7	1	,,	12	36500.7
			38.4	1	,,	,,	07-
			37.6	In Rh?		12	18.
	37.38§	2	37.3	1	,,	"	20.7
			36.8	1	,,	,,	28.
36.509	THE STREET, ST.	0			,,	,,	32.3
			36.3	1	,,	,,	35.
	35.78	ln	35.7	1	,,	,,	42.1
	C TO STORY	STIES IN	35.3	1	19	"	48.
35.165		1			,,	,,	50.3
	A DOLLAR	TIN SE	35.0	ln	,,	,,	52.
34.596	THE REAL PROPERTY.	0	The same of		,,	,,	58.1
	THE STATE OF		34.3	1	,,,	,,	62.
	34.03	5			- "	,,	65.4
		-	33.4	2	25	**	74.

[§] Occurs also in Pt. || Occurs also in Pt and Pd.

52
IRIDIUM—continued.

Aı	re Spectrum		Spark Spe	ectrum	Reduct		
Wave-	length	Intensity	Wave-length	Intensity	Vacu	lum	Oscillation Frequency
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	$\frac{1}{\lambda}$	in Vacuo
2732.752	2732.75	2			0.78	10.6	36582.6
		1	2732.5	4	,,	,,	86· 93·2
31.954		0	31.2	1	99	"	36603
		19 3 19	31.1	i	99	"	05.
	30.79	2			"	,,	08.8
30.500		0 -		199	"	,,	12.7
29.638	29.64	1	29.6	1 1	, ,,	99	24·3 35·
		P. Carlot	28·8 28·6	1	,,	,,	38.
28.494		1	200	To the same	"	33	39.6
28.224		0	The state of the s		,,	"	43.2
			28.0	1	,,	••	46.
		May Br	27.6	2	"	10.7	51· 61·
00.500	26.56	1	26·9 26·6	1	,,		65.5
26.566	20.90	1	25.6	1	"	"	78.
		110	25.3	I	,,	,,	83.
24.884		0	24.8	1	12	93	88.1
23.849	23.85	2	00.7		>>	"	36702·1 04·3
09.040	23.68	2 0	23.7	1 1	"	"	10.2
23.248		0	22.7	i	"	"	18.
			22.3	1	"	,,	23.
21.443		0	The state of		,,	,,	34.5
THE EN	-		20.9	l ln	,,	"	42.
20·534 19·906	20.55	2 0	20.4	1	"	"	55.3
19.900	12-11-12-12-12-12-12-12-12-12-12-12-12-1	0	18.9	1	"	"	69.
	THE RESERVE	The second	18.6	In	,,	99	73.
17.730		0			99	,,	84.7
16.612		0	16·6 16·5	1	"	"	36801
11.00			16.1	ln	"	"	07.
	19 11 11 11	7.3	15.2	1	,,	1,	19.
	1 1 1	1		10272	,,	,,	26.5
14.643	13.95	1	14.1	4	,,	29	35.9
13·195 12·817	12.82	1 3	12.8	1	"	"	52.7
12.911	14.04	3	12.3	î	"	" "	58.
	8 10 67	1 3	12.0	1	,,,	,,	62.
11.402	The same of	0	11.6	1	"	,,	70.6
	2 3 3 1 5	1000	10.8	1 1	,,	,,	81.
10.177	10.18	1	10.9	1	"	"	87.2
10177	10 10	19.00	09.5	1	,,	,,	96.
		Julia El	09.2	1	,,	,,	36900
F 9-25 - 1 - 20			08.8	$\frac{1}{2}$	"	"	06.7
08.752	4 3 3 5 5	0	08.7	1	"	"	18.
The state of the s	E E E	1	07.7	i	"	"	21.
07.265		0	07.3	1	"	,,	26.9
06.985		0	07.1	1	"	,,	30·8 49·1
05.632	05.65	1	05.5	1 1	,,	99	49.1

From "NATURE" (Dec. 5th, 1907).

"We have recently had an opportunity of inspecting and testing the binocular diffraction spectroscope patented and sold by Dr. Marshall Watts, and have found it to be a remarkably efficient instrument for the spectroscopic investigation of lightsources of definite form, such as vacuum tubes. It consists of an ordinary good field-glass having attached in front of each object-glass a transparent diffraction grating mounted on optically worked plane glass. In examining a luminous vacuum tube we found that the bright lines apparently stood out in relief, whilst the illumination, even in the second and third orders, was very satisfactory. The first-order spectrum of Capella, on by no means a perfect night, was seen as quite a bright colour band. For the examination of broader lightsources, such as flames or arcs, a metal or ebonite plate with a slit in it may be usefully employed in order to obtain a purer spectrum. The price of the binocular spectroscope is £3 3s., and furthur details of the instrument may be obtained from Dr. Watts, "Shirley," Venner Road, Sydenham."

Sir W. HUGGINS says:-

"I am very pleased with your spectroscopic opera-glass. It does all that you say of it. The whole visible spectrum of a vacuum tube, or of an induction spark, is seen at once, brilliantly, and with great distinctness."

Chalcat indicate of the spectroscopic investigation of light-

Sig W. BUCCONS mays.

"I am rely pleased with your spontenedth come place. It does that that you say it. The whete which spectrum of a comparation aparts is seen at once, included and its seen at once in the great distinctions."

IRIDIUM—continued.

A	rc Spectrum		Spark Spe	ectrum	Reduc	tion to	
Wave-	length	Intensity	Wave-length	Intensity	Vacı		Oscillation Frequency
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+_	$\frac{1}{\lambda}$	in Vacuo
2705·453 05·296		0		. *	0.78	10.7	36951·7 53·8
05.213	2705-21	ln			"	"	55.0
	05.02	1	2705.1	1	"	"	57.8
		Man File	04.8	ln l	99	,,,	61.
04.722	04.10	0	0.1.0	-	"	"	61.7
04.117	04.12	2	04.0	1	,,	99	69.9
			02·8 01·7	1	"	10.8	37003·
			01.4	1	"		07.
01.200	01.21	ln	011		"	"	09.7
	De la company	Par Be	01.1	- 1	"	,,	11.
			00.5	1		"	19.
2698.688		2	2698.7	. 1	0.77	,,	44.2
			98.1	1	99	,,,	52.
			97.5	1	99	"	60.
			97·2 96·9	1 1	"	"	64.
96.010	96.04	1	90.9	1	99	"	80.8
95.550	95.57	ln ln	95.6	1	,,	"	87.2
00 000			95.1	Î	"	"	94.
94:320	94.33	5	94.3	2	"	"	37104.2
93.571	93.60	1	93.5	1	,,	,,	13.8
			93.4	1	,,	"	17.
92.964	92.99	1		To Belle In	"	"	22.8
00.400	00.45	91.9	92.8	ln	"	"	25.
92·429 92·267	92.45	3b ^r	92·4 92·2	1	29	"	30.2
91.998		0	92.2	1	99	99	36.3
01 000			91.5	1	99	99	43.
91.154	91.19	1	010	in a	"	99	47.7
		13 TO 18	90.7	2	"	,,	54.
89.769	S Tarris	0			99	"	67.3
88.381		0	88.2	1	,,	,,	86.3
		1500	87.6	1	99	99	97.
	The Party I		87.1	1	"	99	37204
	The state of the s		86·8 86·3	1	"	99	08.
		P. P. Fall	85.7	1	"	"	23.
	1	4 9 3 3	85.1	i	"	"	32.
			84.8	1	"	,,	36.
	84.15	2	84.0	2	"	"	44.9
83.387		0	83.2	1	"	99	55.5
00 702	00.55	1	82.8	1	"	,,	64.
82.536	82.55	1	82.6	1	"	59	67.3
81.184	81.22	1	82·2 81·3	1 1	"	99	72· 85·9
01.194	01.77		80.5	1	"	"	89.9
	ALL RUTER T	I SHINE	80.1	i	"	"	37301
79.506	79.51	1	79.3	î	29	, ,,	09.5
TO THE OWNER OF	79.17	2	COR TOTAL	1.	"	"	13.2
	TO THE CALL	142	78.7	1	,,,	10.9	21.
Wille SILV			78.3	1	"	,,	26.
77.899	1	0	77.7	1	22	99	31.8

IRIDIUM—continued.

A	rc Spectrum		Spark Sp	ectrum	Reduc	tion to	
Wave-	length	Intensity	Wave-length	Intensity	Vac	aum	Oscillation Frequency
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	$\frac{1}{\lambda}$	in Vacuo
2676-911	2676.93	2	2676.7	1	0.77	10.9	37345.5
		1000	76.2	1	,,	20	55.
			75.7	1	,,	,,	62.
75.376		0	75.4	1	,,	,,	67.0
		I Bearing	75.2	1	,,	,,	69.
we and	mo mo		74.3	1	,,	,,	82.
73.694	73.70	3	73.8	1 2	"	,,	90.5
70.000		0	73.5	1	"	,,	93.
72.888	71.09	4	73·0 71·9	1	,,	,,	37401.8
71.930 70.006	71·93 70·01	4	70.0	1	"	"	15·2 42·2
70.000	69.56	1	69.5	1	"	"	48.5
69.070	69.09	2	69.0	i	"	"	55.2
03 010	00 00	1 4	68.5	i	"	"	63.
68.362		0	00 0		,,	***	00
00 002			68.2	1	22	"	67.
		E	67.9	î	,,	,,	72.
67.540	67.54	1	67.5	ī	"	,,	76.8
0,010	0.02	The state of	66.6	i	"	"	90.
	66.50	1		WE LIE	"	"	91.4
		1	66.4	1	"	"	93.
	THE PARTY OF		65.7	1	"	,,	37502
65.144		0			,,	,,	10.5
64.871	64.87	5	64.9	2	,,	,,	14.4
			64.6	2	,,	,,	18.
63.400	63.42	2	63.5	1	,,	,,	34.9
62.706	62.71	3	62.7	1	"	,,	44.8
62.080	62.10	5	62.2	1	,,,	,,	53.6
			61.7		,,	99	59.
			61.3	2	***	99	65.
60.163		0			,,	,,	80.8
60.040		0	FO. F		. ,,	"	82.5
			59.7	ln	"	"	87.
~~ 000		0	58.3	ln	"	"	37607
57.700	F7.00	0	57.7	1	,,	,,	11.5
57.799	57.82	1	57.6	1	,,	"	14·2 17·
56.898	56.91	2	56.8	i	"	"	26.4
90.090	30 31	-	56.2	i	- "	"	37.
			56.1	î	"	"	38.
			55.7	În	,,	"	44.
54.670		0	54.7	ln	0.76	11.0	58.6
54.033	54.05	2	53.9	1	,,	,,	67.5
53.853	53.86	2	53.9	î	"	"	70.1
-000	00 00		53.7	î	"	"	72.
			53.2	i	,,	,,	79.
53.124	53.13	1	Marie Control		,,	,,	80.5
			53.0	1	"	,,	82.
	52.76	1n		100	,,	,,	85.6
	52.60	ln l		100	,,	"	87.9
			52.1	1	,,	,,	95.
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			51.8	1	,,	,,	99.
THE PARTY		NE TO I	51.4	1	,,	,,	37705
La la California			50.7	1	,,	,,	15.

IRIDIUM-continued.

Aı	c Spectrum		Spark Spe	ectrum	Reduct		
Wave-	ength	Intensity	Wave-length	Intensity	Vacı	ıam	Oscillation Frequency
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ Η	$\frac{1}{\lambda}$ -	in Vacuo
2650.584		0	2650.5	1	0.76	11.0	37716.5
		P STELLIST	50·2 49·7	ln	"	"	29.
			48.7	1	"	"	43.
		THE REAL PROPERTY.	48.4	i	"	"	48.
			47.3	ln	"	"	63.
		1	46.8	î	"	"	70.
46.334	2646.35	1	100		"	"	77.0
10 001	2010 00	1	46.1	1	,,	,,	80.
			45.8	1	"	,,	85.
			45.7	1	,,	"	86.
			45.3	1	22	,,	92.
			44.5	1	99	,,	37803
44.279	44.28	2			"	,,	06.4
			44.1	1	"	"	09.
		1000	43.5	ln	"	,,	18.
			43.3	ln	,,	, ,,	. 20.
		NO.	41.5	1	"	,,,	46.
			41.0	1	,,	,,	53.
40.462	40.45	1	40.4	1	,,	22	62.2
	39.80	4	39.8	4	,,	,,	70.7
39.510	39.51	2	39.4	1	,,	,,	74.8
39.073	39.06	1		Na market	"	27	81.2
			38.7	1	,,	,,	86.
			38.3	1	,,	,,,	92.
			.37.8	1	"	,,	99.
			37.5	1	"	,,,	37904
37.407		0			,,	,,	05.0
	Sale Bass	Part	37.3	1	,,	,,	07.
36.967		0			,,	,,	11.4
			36.7	1	,,	"	15.
			36.4	1	7	,,	20.
			35.7	1	99	"	30.
35.353	35.35	2			,,,	99	34.6
		Fa Edit	35.1	1	"	,,	38.
34.513		0			"	,,	46.7
34.340	34.33	3	34.2	2	"	"	55.2
	10 11 17 12	TO THE S	33.1	1	,,	11:1	67.
			30.5	1	"	11.1	38004
			30.0	1	,,	"	12.
29.498	29.49	1	29.4	1	,,	,,	19.0
			29.1	1	,,	"	25.
			28.7	1	"	,,	31.
28.271		0	20.0		"	,,	36.7
		A FIRE	28.0	1	"	29	54.
20.011	60.00		27.1	1	99	"	57.4
26.844	26.85	2	0 0		"	97	76.
	64.6		25.6	1	"	>>	78.1
25.396	25.43	2	210		"	"	90.
	TO	1000	24.6	1	,,,	"	97.
20 700	20.55		24.1	1	"	29	38102.4
23.736	23.75	ln	23.5	1	"		06.
					77	99	

IRIDIUM—continued.

Aı	c Spectrum		Spark Spe	ectrum	Reduc	tion to	
Wave-l	ength	Intensity	Wave-length	Intensity	Vacı	uum	Oscillation Frequency
- TO THE REAL PROPERTY.	73 3	and	70 1	and		1	in Vacuo
Kayser	Exner and Haschek	Character	Exner and Haschek	Character	λ+	$\frac{1}{\lambda}$	
2622.203		0			0.76	11.1	38124.8
21.610		0	2621.6	1			33.4
21 010			21.1	î	"	"	41.
THE RELET	THE STREET		20.6	î	"	39	48.
20.102	2620.00	2	200	1	"	"	56.1
19.967		2	19.9	1	22	"	57.3
The second second		10000	18.7	. ib			76.
18:352		0	Suran Ballian		"	"	80.5
17.872	17.86	3	17.8	1	"	,,	87.8
17.514		0			"	,,	93.1
17.177		0	17.1	2	,,	,,	98.0
TARREST STATE		1	16.3	1	,,	,,	38211
		DATE OF THE	16.2	1	"	,,	12.
16.090	16.08	1			"	,,	14.0
Supplied to	16.00	1	15.8	1	22	22	15.2
	S. Maria		15.5	1	,,	"	23.
15.064	15.06 -	2	15.1	1	"	27	28.9
Charles Till Carlo			14.9	1	"	,,,	31.
14.287	14.27	1	14.1	1	,,	23	40.4
			13.7	1	22	22	49.
12.344	12.35	1	12.2	1	"	22	68.6
12.136	12.13	1	12.2	1	,,	"	71.8
To the second of the second		N 80 86 8	11.8	1	,,	"	77.
11.384	11.40	3	11.4	2	299	,,	82.7
THE PARK		FAEL SE	10.5	ln	,,,	,, .	96.
10.198		0	10.0	1	0.75	,,	38300.2
09.996		0		100	,,,	"	03.1
	The state public		09.8	1	"	22	06.
08.314	08.30	3		1	"	11.2	27.8
			08.1	2	"	"	31.
07.608	07.60	2	Jenny C. T. W.		"		38.2
			07.3	1	>>	"	43.
100000			07.0	1	"	"	47.
06.668		0	00.4		"	"	51.9
00.007	The same		06.4	2	"	"	56.
06.081	04.04	0	The state of the s	LE COLL IN	",,	,,	60.5
04.645	04.64	1	04.5	1	>>	"	81·7 84·
1		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	04·5 04·1	1	"	97	90.
	DESCRIPTION OF	The state of the s	03.8	ln ln	"	"	94.
THE PROPERTY OF		Boots and La	02.8	1	""	"	38409
02.122	02.15	1	02.6	1 -12	"	"	18.8
02 122	02 10	1/4/50/18	02.0	1	"	,,	21.
		HO HIE	00.9	1	"	. 99	37.
	NE CO	1 30 0	00.7	i	"	, ,,	40.
2599.224	1000	0	2599.4	2	"	,,	61.8
99.129	2599.15	2		1	"	"	63.1
		THE STATE	99.0	2	77	"	65.
	- B	With the	98.3	2	27	99	76.
400			97.5	1	"	,,	86.
95.914	95.93	ln			,,,	,,	38510.8
THE RESERVE	Wat - Char	- A	95.7	4	"	,,	14.
95.188		0	95.2	1	,,	,,	21.7
			94.6	1	22	**	30.

IRIDIUM—continued.

A	rc Spectrum		Spark Spo	Spark Spectrum		tion to	
Wave-	length	Intensity	Wave-length	Intensity		uum	Oscillation
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	$\frac{1}{\lambda}$	in Vacuo
0700 004							
2593.224		1	2593.0	1	0.75	11.2	38550.8
			92.7	1	"	"	54· 59
92.146	2592-15	3	92.0	2	"	"	668
91.927		1			"	"	70.1
			91.5	1	,,	"	76.
91.129		1			**	,,	82.0
			91.0	2	"	,,	84.
90.296		0	90.5	1	"	"	91.
30 230		0	90.1	1	27	"	94.4
			89.6	i	"	99	38605
89.470	A SCHOOL	0	HERMAN STATE		"	"	06.7
89.231		0		- 4	,,	"	10.3
89.057		0	89.1	1	,,	,,	12.9
			88.5	1	,,	11.3	21.
			87.5	1	"	>>	36.
86.146	86.14	1	87·1 86·0	1 8	"	"	42.
84.867	00 14	0	84.8	1	"	"	56·3 75·4
01001	DAY LESSE		83.6	i	"	"	94.
83.261	83.26	1	83.0	î	"	"	99.5
	7.25		81.8	1	"	"	38721
81.523		0			"	,,	25.5
81.019		0	81.2	1	,,	,,	33.1
79.860		0 2	E0.0	0	"	"	50.5
79.573		2	79.6	6	"	"	54.8
79.008	79.00	2	79.4	0	"	"	57· 63·4
78.794	78.78	2	78.8	1	"	"	66.6
			78.6	ī	"	,,	69.
			78.2	1	"	,,	75.
77.622		0	77.8	•1	,,,	,,,	84.1
	77.35	3		10.	"	>>	88.2
		E.Feire	75.2	1	29	12	38821
	THE REPAIR		74·5 74·2	1	. "	59	31.
73.338		0	73.5	1	"	>>	48.7
72.784	72.79	2	72.7	2	"	"	57.0
72.459	72.47	1	72.5	1	"	,,	61.9
72.156	72.16	1	72.2	1	,,	,,	67.6
	70.70	7.	71.9	1	"	,,,	70.
	70.70	1	70.5		"	,,	88.6
69.962	69.97	2	70.5	1.	"	"	91.6
68.407	00.01	0	68.6	1	"	"	38923.3
			68.1	î	"	"	28.
	E STATE OF		67.6	î	"	"	35.
			67.0	1	"	"	45.
00.446			66.7	1	"	"	49.
66.442		0	000		"	,,	53.1
	1 14.245	The state of	66.2	ln ln	"	"	57.
64.922		0	65.3	ln	0.74	"	70· 76·1

IRIDIUM—continued.

Ar	e Spectrum		Spark Spe	ectrum	Reduction to		
Wave-l	ength	Intensity	Wave-length	Intensity	Vae	uum	Oscillation Frequency
Kayser	Exner and Haschek	and Character	Exner and Hasehek	and Character	λ+	$\frac{1}{\lambda}$	in Vacuo
MANAGE :			2564.4	1	0.74	11.3	38984.1
2564.253	2564.27	2			,,	,,	86.5
09.907	60.06		64.0	2	"	,,	90.
63·365 62·999	63.36	1 0	63.3	ln	"	"	39005·3
02 333		0	62.8	2	"	"	08.
			62.5	ī	"	"	13.
THE LINE BY			61.8	1	,,	"	24.
			61.7	1	"	"	25.
		200	61.1	2	"	79	34.
50.642		0	60.1	ln	"	"	50.
59.643		0	59-2	1	"	"	56·5 63·
58-821		0	59.7	1	"	"	69.1
00 021			58.3	4	"	"	77.
			57.7	1	"	"	86.
57.285		0	57.2	1	,,	,,	92.6
56.860		1			,,	,,	99.1
			56.5	1	"	"	39104.6
55.955	55.95	1	~~ 0		"	"	13.0
55.425		2	55.6	1	"	"	18· 21·0
30 420		2	55.1	1	"	"	26.
54.480	54.47	2	001	TO SEE SEE	19	"	35.6
			54.1	4	"	"	41.
		W. B	53.6	1	,,	,,	49.
51.475	51.50	2			"	,,	81.4
×0.00×			51.2	1	"	"	86.
50.987		0	49.4	1	"	,,	89·1 39214·
	Linesiti		49.3	1	"	"	15.
	T. (A. 1)		49.0	1	"	11.5	20.
			48.0	i	"	,,	35.
and the state of	47.76	i	47.6	1	,,	,,	38.7
19109			47.5	1	"	,,	41.
47.278	47.26	1	47.2	ln	,,	,,	46.2
45·868 45·620	45.62	0 1	45.9	1	"	"	67·8 71·7
45.020	45.02	1	44.4	1	"	"	91.
44.059	44.08	4	77.7	7 30	"	"	95.6
22.000	-100		43.9	2	"	"	98.
BALL DE BE		The state of	43.5	1	"	,,	39304
		- Charles	43.2	1	"	"	09.
40.000	40.77		42.7	1	"	"	17.
42.097	42.11	2	47.79		"	"	26.0
41.556	41.56	1	41.7	1	"	"	32· 34·6
41.000	41.90	1	41.3	1	,,,	"	38.
	/ 18 TO 18 T	- The line	40.8	i	',,	"	46.
40.483	40.49	1	40.5	1	,,	"	51.1
HELDER	- 90	199	40.3	1	"	"	54.
00.011	The Wall		39.6	1	,,	,,	65.
38.949	CONTRACTOR ST	0		100-81-4	,,	,,	74.9

IRIDIUM-continued.

	Reduction to		ectrum	Spark Spe		c Spectrum	Ar
Oscillatio Frequenc	ium	Vacu	Intensity	Wave-length	Intensity	ength	Wave-l
in Vacuo	$\frac{1}{\lambda}$	λ+	and Character	Exner and Haschek	and Character	Exner and Haschek	Kayser
39381.1	11.5	0.74	1	2538.2	0		2538-548
86· 93·1	"	"			1	2537.78	37.770
96· 39400·4	"	"	1	37.6	2	37.30	37.309
04.	"	,,	1	37.1			0.0 0.00
08.9	,,	"	1	36·7 36·2	0		36.760
18.	,,	"	1	36.0			
32.	"	"	ln	35.3			
50.2	"	"	2	34.2	0		34.103
56.	"	,,	1	33.7			
61.	"	"	1	33.4			
63.6	"	,,			3	33.24	
67.	,,	,,	2	33.0			
73.1	,,	,,			1	32.63	
78.4	,,	"	1	32.3	ln	32.29	32.290
83.	,,	,,	1	32.0			
88.	,,	"	1	31.7		41 5 5 5	
97.	"	"	1	31.1			20.700
39502.1	"	"	1 2	30.8	0		30·786 30·498
06·4 11·0	11.6	,,	2	30.4	0		30.498
16.1		"			0		29.870
21.0	"	"	1	29.6	2	29.56	29.559
23.	"	"	i	29.4		2000	20 000
39.	"	"	2	28.4			
45.1	"	. ,,	TO HE WAS		0		28.011
47.4	,,	,,	1	27.7	0		27.868
55.	"	,,	1	27.4		Division of the second	
63.1	"	,,	1	26.7	0		26.856
69.	"	,,	1	26.5			
81.	,,	"	4	25.7		En Windle	
88.	"	"	1	25.3		24.10	
89.8	,,	"	1 1	25.1	1	25.16	24.953
93·1 39610·	"	"	1	24·9 23·9	1	24.99	24.993
39010	"	"	1	23.7			
19.1	"	"	1	201	0		23.290
27.	22	"	1	22.8		35 3 BE 1/2	20 200
44.	27.	"	î	21.7			
52.4	,,	"	2	21.2	0		21.175
73.	,,	,,	1	19.9		88.74	
79.	,,	"	1	19.5	STATE OF STATE		
85.	"	,,	1	19.1	A PALL		
93.	,,	"	1	18.6	- Sec. 18	The state of	
39701	,,	0.73	2	18.1	E. 1733	ADDITION OF THE PARTY.	
06.	,,		2	17.8	1	15.45	15,440
42.7	"	"	1	15.4	$\frac{1}{2}$	15.45	15.448
69·8 72·	"	"	1	13.6	2	13.80	13.799
78.	"	"	1	13.2		E B E I	
86.8	"	"	8	12.5	2	12.66	12.665
94.3	"	"		120	0	12 00	12.191

IRIDIUM—continued.

Aı	c Spectrum	100	Spark Spe	ectrum		tion to	
Wave-l	ength	Intensity	Wave-length	Intensity	Vac	uum	Oscillation Frequency
BENEWSAN	Exner and	and	Exner and	and		1	in Vacuo
Kayser	Haschek	Character	Haschek	Character	λ+	$\frac{1}{\lambda}$	
2512.096	2512.02	1	2512.0	4	0.73	11.6	39797.0
09.798	09.80	1	09.7	1	,,,	11.7	39832.1
08.434	08.42	1	08.3	1	"	"	53·9 65·4
07.712	07.70	1	07·6 07·0	i	"	"	76.
-400 (3 W22)	06.70	1		1	"	"	81.4
Alexander State			06.5	1	"	,,	85.
			06.2	1	,,	,,	89.
05.814	05.82	1			,,	,,	95.4
05.308	01.44	0		A STATE OF	,,	,,	39903.5
04.446	04.44	1 3		179 1891	99	"	17·3 39·2
02.710	03.08	2	02.7	1	"	99	44.9
02.110	02 12	-	01.0	i	"	"	72.
00.357	00.36	1	00.2	1	"	,,	82.6
7.85			2499.5	ln	,,	,,	96.
	2499.36			131.6	"	,,,	98.5
1000		1,58	98.4	1 2	,,,	22	40014
FUSION STATE	N PO YES		97·9 97·0	ln 2	"	"	36.
2496-360		2	96.3	1	"	"	46.6
95.951		o o	303	Marin de	"	"	53.2
1		The wall	94.9	1	,,	22	70.
JESEN FEB.		1350	94.4	1	,,,	,,,	78.
	Aut and	100	94.2	1	"	,,,	82.
00 100	09.10	2	93·6 93·2	1 1	99	11.8	91.
93·163 92·406	93.16	0	92.3	1	"	"	40110.1
91.778		0	020		"	"	20.2
01110			89.6	1	"	,,	55.
DATE OF THE PARTY OF			89.4	1	,,	,,	58.
89.293	1	0	89.2	1	,,,	,,	60.2
88.325	1 3 3 3 1	0n	88.4	4	99	"	75·8 88·
ALC: NO	B. Sterne		87·6 87·1"	1	39	"	96.
86.826		0	01.1	1	"	"	40200.1
86.463		0	86.3	1	,,	,,	06.0
	A Part		85.9	1	,,	,,,	15.
1000	85.46	1		1 1 1	"	"	22.2
The party .			85.3	1	,,	"	25.
		- Carried	84·7 84·5	1 1	,,	"	35· 37·
		1 318/15 \$11	84.3	1	99	,,	41.
100		100	83.0	î	"	"	62.
82.383		0	7-13		,,	,,	72.1
81.262	81.27	3	81.2	2	,,,	,,,	90.2
80.685		0			"	"	99.6
70.055		0	79·8 79·4	1 1	"	"	40314
79.255	Manual Manual	U	79.4	1	"	"	28.
	THE STATE OF		78.6	1	"	"	34.
78.190	78.20	1	78.2	1	,,	39	40.1
5 (70 S 2 S 1)	11 11 11		77.7	1	,,	"	48.
A Company of the Comp		0 2 2 2	77.3	1	,,	10	55.

IRIDIUM—continued.

Aı	re Spectrum		Spark Spe	ectrum	Reduc		
Wave-	length	Intensity	Wave-length	Intensity	Vacı	uum	Oscillation Frequency in Vacuo
	Exner and	and	Exner and	and		1_	in Vacuo
Kayser	Haschek	Character	Haschek	Character	λ+	λ	
This is the	A CANA		2476.0	1	0.73	11.9	40376
2475.209	2475.19	3	75.1	1	**	,,	89.0
74.170		1	74.3	1	,,	,,	40405.7
H-100		0 1 2	73.3	1	,,	,,,	20.
72.709		0	72.6	2	,,,	99	29.6
FO COF		0	71.6	1	"	,,	48.
70·607 70·143		0	70.7	1	0.72	"	64.0
69.848		0				"	71.6
69.594		0	69.5	2	,,	,,	76·4 80·6
00 001			69.0	i	2>	"	90.
68.705		1	000		"	"	95.2
68.263		0	68.4	1	"	"	40502.4
00 200	67.45	1 Pt ?	67.5	i	"	"	15.8
67:382	67.37	2	67.3	ī	27	"	17.0
	111		66.7	1	,,	,,	28.
		Market S	66.1	1	,,	"	38.
			65.5	1	,,	,,	48.
	65.16	1	65.0	1	,,	,,	53.4
	64.96	1			,,	,,	56.7
64.462					,,	,,	64.9
63.118	63.10	1	63.2	1	,,	,,	87.2
			62.8	1	,,	99	92.
62.454	62.47	1	62.3	1	,,	,,	97.9
		[] E 2 2 THI	61.8	1	,,	"	40609
		R SAFET	58.0	1	,,	12.0	71.
57.312	57.31	1			,,,	,,,	82.9
57.123	57.12	1	56.5	2	- 99	"	86.6
56·882 55·949	55.95	1			,,	99	90.0
55.691	55.69	2	55.5	2n	"	",	40705·4 09·7
54.945	99.09	-	54.9	2	"	,,	22.1
94 940	54.67	1n	94 9	2	"	"	26.7
	94.01	Lin	54.5	1	29	"	29.
54.212	54.20	1	54.1	î	"	"	34.4
	0120		53.7	i	"	,,	43.
52.893	52.89	2	52.7	i	99	,,	56.2
		19 16 12	52.5	1	"	,,	63.
			52.2	1	"	12	68.
		NEW TEE	51.7	ln	' "	,,	76.
		to the state of	50.8	1	,,	"	91.
		E SESSE	50.4	1	,,	,,	98.
49.916		0		THE STATE OF	,,	,,	40805.8
40.110	40.70	100	49.5	1	,,	99	13.
49.112	49.10	ln	48.8	1	,,	,,	19.1
40.010	40.00	PICK WAY	48.6	1	,,	,,	28.
48.316	48.30	1	Bar & 63 B	A STATE OF	"	"	32.4
47.850	47·84 47·53	1			"	,,	40.3
	41.93	1	47:3	1	"	,,	45.5
46.926	Side of the	0	4/3	1	"	,,	55.6
40 920	THE PERSON NAMED IN	U	45.5	1	"	27	79.
	45.39	1	100		22	>>	81.3
45.184	10 00	1	45.2	1	"	"	84.7

IRIDIUM—continued.

-	Ar	c Spectrum		Spark Spe	ctrum	Reduct		
-	Wave-l	ength	Intensity	Wave-length	Intensity	Vacu	ıum	Oscillation Frequency
-		Exner and	and	Exner and	and		1	Frequency in Vacuo
	Kayser	Haschek	Character	Haschek	Character	λ+	λ-	
-				2444.5	1	0.72	12.0	40896
			Paral Lil	44.1	1	,,	12.1	40903
				43·3 42·6	2	,,		16· 28·
1				41.8	1	"	,,	41.
				41.3	1	"	"	50.
1				40.8	î	"	"	58.
	e de la company		6 10 10 10	40.3	2	"	,,	67.
1	TOTAL			39.7	1	,,	,,	77.
1			1	39.3	1	,,	,,	83.
			B B B	37.3	1	22	,,	41017
1	2436.513	2436.50	ln	20.0		"	,,	30.3
		Market Street		36·2 35·1	l ln	"	"	35· 54·
-			410	34.5	1	"	"	64.
	34.107		0	34.1	i	"	"	70.7
	33.433		0	33.6	1	,,,	,,	82.1
1				33.0	1	,,	,,	89.
1		32.64	1	S. A. WILLIAM		,,,	,,,	95.5
1	32.439	32.41	1	32.5	1	99	"	99.1
1	32.021	32.04	2			"	"	41105.8
1	31.331	31.34	2	31.3	2	"	"	17·6 28·
				30·7 30·5	1	"	"	32.
1			THE STATE OF	30.0	1	"	"	40.
1	29.830		0	29.7	ln	"	,,	43.0
	20 000	The same		29.0	1	"	"	57.
1	27.878		2	27.8	2	,,	12.2	76.0
	27.694	27.71	2			,,	99	79.0
1	27.189		0	The same		,,	,,	87.7
	26.875		0			,,	,,	93.0
1	26.622	26.61	1	26.5	1	,,	"	97.4
-	05.744	25.75	1	26·2 25·8	1 1	"	,,	41205
	25·744 25·069	25.07	1	20.0	1	"	"	23.7
-	24.971	25.01	1	24.9	2	"	"	25.1
-	24.741	24.74	i	24.7	2	,,	,,	29.3
	24.406	24.40	1	24.3	1	,,	,,	.55.1
	22.286	R THEST	0	7 441000 3			,,	71.2
-	21.306	2 2 11 3	0	I A SHEET STREET		0.71	77	87.8
	40.000			19.2	1	,,	,,	41324
	18.657	18.18	0 2	18·5 18·1	1	,,	,,	33·0 41·1
	18.190		2	18.0	1	,,	"	41.1
	7.00	•	The state of	17.3	1	,,	"	56.
	16.672	A THE REAL PROPERTY.	0	16.8	î	"	"	67.0
-	16.334		0			,,	,,	72.8
-	15.950	15:95	1	16.0	2 Rh ?	,,	,,	79.4
The Assessment	14.473	6 200	0		Harrie .	,,	,,	41405.7
		FIF	F-46	13.3	1	,,	,,	24.8
	Single tests	R LANGE		13.2	1	,,	10.9	27· 33·
	7.2			12·8 12·5	2 1n	"	12.3	38.
	THE REAL PROPERTY.	10 10 10 10		11.9	ln ln	"	,,	49.

IRIDIUM-continued.

	Arc Spectrum		Spark Spe	ectrum	Reduc		
Wa	ve-length	Intensity	Wave-length	Intensity	Vacı		Oscillation Frequency in Vacuo
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	$\frac{1}{\lambda}$	in Vacuo
			2411.0	1	0.71	12.3	41464
2410.81		1			,,	,,	67.4
10.26	4 10.26	2			,,,	,,	77.0
09.46	5 09.46	1	10.1	2	"	"	80· 90·7
09.40	09.40	1	09.1	1	"	"	97.
			08.5	2	"	"	41507
		and the second	08.0	1	"	"	16.
	07.66	1			"	,,	21.8
	Harris Control		07.1	1	"	,,	31.
06.11		0	05 011		,,	>>	48.5
05.95	9	0	05.8"	In 1	,,	"	51·2 68·
	是 一	Tac I	03.6	l i	"	99	92.
03.11	3	0	03.1	1	"	"	41600.4
00 11			02.8	i	,,	,,	06.
02.37	9	1			,,	,,,	13.1
[01.86	6 01.86	2	01.7	1	,,	,,	22.0
1 1			01.2	1	,,	,,	34.
国际	TA TA		00.4	1	,,,	"	47.
		0	2399·2 98·7	1 6	"	"	68· 74·8
2398.82	1	0	97.2	1	"	12.4	41703
	Market Street		96.1	i	"	,,	22.
95.97	4	0		100	"	,,	24.3
CONT.			95.4	1	,,	,,	34.
94.40	4 2394.41	In		tall li	,,	,,	51.6
			94.1	1	• • • • • • • • • • • • • • • • • • • •	"	57.
			93.1	1	"	, ,,	74.
91.28	91.29	3	92·9 91·2	1 2	"	"	41806.1
90.70		2	90.5	2	"	"	16.2
30 10	30 11	-	89.7	ĩ	,,	"	34.
			89.4	1	"	,,	39.
			89.0	1	,,,	,,,	46.
		E STEEL	88.6	1	"	"	53.
000			87.8	1	"	"	67· 81·5
86.98		2	86.7	2	"	,,	86.9
86.66	86.67		86.4	2 2	22	"	92.
			84.8	6	"	"	41920
83.84	10	0	0.0		"	,,	36.7
			83.1	In	,,	12.5	50.
82.2		1	1 1 3 8 8 3 E H		99	"	64.3
	31.86	1	81.8	6	"	,,	71.5
81.7	14 81.72	1	00.0	1	"	"	74·0 88·
	BIT BERT		80.9	1	,,	"	99.
	79.45	1	79.5	1	"	"	14.0
	19.40	1	78.0	2	"	"	40.
	and the last of		77.2	ī	"	,,	54.
	STATE OF THE PARTY OF		76.5	ln	"	,,	66.
			75.8	1	,,	,,	79.

IRIDIUM—continued.

Aı	c Spectrum		Spark Spe	ectrum	Reduct		
Wave-l	ength	Intensity	Wave-length	Intensity	Vacu	um	Oscillation Frequency
	Exner and	and	T7	and		1_	Frequency in Vacuo
Kayser	Haschek	Character	Exner and Haschek	Character	λ+	λ	
2375·195	2375.21	1	2375.2	1	0.71	12.5	41989-2
			74.8	1	0.70	,,,	96.
	70.00		73.8	1	0.70	"	42114.
72.856	73·23 72·86	ln 3	73.3	ln 2	"	99	24·2 30·8
70.462	12.00	2	72:8	2	"	"	73.4
10 102		-	69.2	1	"	99	96.
68.486	all to the same	0	00 2		"	12.6	42208.5
68.120	Berg Transfer	4	68.2	1	"	,,	15.0
	68.11	2	68.1	8	,,	,,	15.2
67.469		0			,,	,,,	26.7
	67.12	ln			,,	99	32.8
		Day M	66.1	1	99	"	51.0
65.849		1			,,	"	55.5
00 104	69.14		64.0	1	,,	,,,	89.
63.134	63.14	2	63.2	2	,,	>>	42304.0
	BLE BLEE	200	62·7 61·7	1	,,	,,	31.
60.790	60.80	1	60.6	1	"	"	45.9
59.668	00 80	0	00 0	1	"	"	66.2
93 000		-	59.4	2	"	"	71.
			58.8	2	,,	27	82.
	58.25	1		- 9	,,	22	91.7
			58.0	2	,,	,,	96.
57.623		0			,,	"	42403.0
			57.3	1	,,	,,,	09.
56.674	56.68	1	56.7	1	,,	,,	20.0
56.388		0			"	"	25.2
56.122		0	55.9	1	"	,,	30·0 34·
			55.5	1	,,	"	41.
55.082	55.11	1	99.9	1	"	"	48.5
99 002	00 11	1	53.1	2	"	12.7	84.
			50.5	2	"	,,	31.
52.705		1			,,	,,	91.6
		10 10	52.0	1	,,	,,	42504
51.492		1	51.4	ln ln	,,	,,	13.5
			50.5	2	,,	,,	31.
50.136		0			"	,,	38.0
49.790		0	40.0		,,	,,,	44.3
		The state of	48.2	1	,,	,,	73.
47:329		1	47·9 47·4	1	"	,,	79· 88·9
41'329		1	46.8	1	"	,,	99.
		1 15 5 10	46.5	1	"	99	42604
		128.7	46.2	i	"	99	09.
		1 7 3	45.3	î	,,	,,	26.
43.684	43.68	2	43.6	1	,,	,,	55.2
43.255	43.25	2 2 0	43.3	2	"	,,	63.0
43.062	The Still Still			MARKET BE	,,	,,	66.5
42.763		1			"	,,	71.9
42.573		0	42.5	1	,,	99	75.4
The second		The second second second	41.6	2	,,		93.

IRIDIUM-continued.

Ar	c Spectrum		Spark Spe	ectrum		tion to	
Wave-l	ength	Intensity	Wave length	Intensity	Vac	uum	Oscillation Frequency
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	$\frac{1}{\lambda}$	in Vacuo
. Briefins			2340.0	2	0.70	12.8	42722
000H 000			39.2	1	,,	"	37.
2337.628	THE PARTY	0	96.0	,	"	"	65.6
34.575	2334.57	1	36·8 34·5	1	"	"	81· 42821·6
34.406	2001 01	0	34.3	i	"	"	24.6
33.917	33.95	i	33.8	î	"	"	33.3
33.372	33.37	1			,,	,,	43.7
* ***			32.7	1	,,	,,	56.
			32.3	1	"	,,,	63.
			31.8	1	"	"	73.
00 400			30.5	1	,,	,,	96.
29.469		0	29.5	2	"	,,,	42915.4
28.790		0	29.0	1	"	"	24· 27·9
28.598		0			"	"	31.5
28.324		0			"	"	36.5
			28.1	1n	"	"	41.
28.046		0	more done		"	"	41.7
			27.2	2	"	12.9	57.
			26.0	1	,,	,,	79.
SE III		100	25.8	1	,,,	,,	83.
			25.5	1	,,	,,	89.
25.029		1			,,	,,	97.3
24.754		0			,,	"	43002.4
24.006		0	24.1	1	,,,	"	16.2
			23.7	2	"	"	22.
			22·7 22·3	1	0.69	"	40· 48·
21.622	21.61	1	21.5	i		"	60.5
21.481	21.49	î	210		"	"	63.0
			20.0	1	"	"	91.
- Columnia in		1 2 1 2	18.3	i	"	"	43122
			17.4	2	"	"	39.
07			16.8	1	,,	,,	50.
March 1884	15.46				,,	,,	75.1
		5 18 L	14.9	4	,,	,,,	86.
	-11		14.1	1	"	13.0	43200
			12.5	1	99	"	30.
			12·0 11·6	1 1	"	"	40· 47·
			10.9	1	"	"	60.
			10.4	î	99	>>	70.
			10.1	î	"	"	75.
		700	09.6	î	"	"	84.
180		22 16	09.4	1	"	"	88.
	09.00	1	The state of the s	100	"	"	95.8
NA STATE			08.8	1	"	"	43300
Strawn .		0 8 8 8	06.7	1	,,	,,	39.
CHIEF CO.	05.54	1	05.5	ln	"	,,	60-8
BATE ST	04.20	2	04.6	ln	"	"	78.
	04.30	Z	04.0	1	"	"	84.1
The second second			04.0	1	,,	99	90.

IRIDIUM—continued.

A	arc Spectrum		Spark Spe	ectrum	Reduc		
Wave	-length	Intensity	Wave-length	Intensity	Vac	uum	Oscillation Frequency
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	$\frac{1}{\lambda}$	in Vacuo
			2300.8	1	0.69	13.1	43450
	2300.11	1	00.3	1	"	"	56· 63·1
	2000 11	Shirt Dal	2299.8	1	"	"	69.
			97.3	2	,,	"	43516
	0207.10		96.3	1	,,	"	35.
	2295.19	1	95·2 94·5	1 1	"	"	56.3
		1	93.7	1	,,	"	69· 85·
			92.5	i	"	"	43607
	1291		91.8	1	"	"	21.
	On SPETE	1 - 11 - 5	91.0	4	,,	,,	36.
	The state of		89.5	2	,,	"	65.
		1 - 1 - 1 - 1	88·3 87·0	2 2	,,	13.2	87.
			85.7	1	"	"	43712.
			84.6	i	"	"	58.
		1.21-1	81.7	2	"	99	43814
			81.2	2	"	,,,	23.
			80.6	2	,,	,,,	35.
		67	78.5	1	,,	,,	75.
	THE STATE OF THE S		77.7	1	0.68	,,,	91.
			77·3 77·1	1	"	"	98· 43902·
			76.3	i	"	"	18.
			75.6	î	"	13.3	31.
		The state of the s	72.5	ln	,,	"	91.
	Para Carlo		71.4	2	,,	,,	44012
		LAB IS	68.9	2	,,	,,	61.
	1 to 1/2 160		68·5 68·1	2	,,	"	69.
			67.8	1	"	"	76· 82·
		Par Par	65.3	2	"	"	44131
	64.73	1	64.7	ln	"	"	42.1
	THE PARTY OF THE P		63.0	ln	"	13.4	76.
	THE RESERVE		62.4	ln	,,	,,	87.
	1 1/2 1/2	11115	62.2	1 2	"	"	91.
	59.00	1	59.3	Z	"	"	44248· 54·0
	55 00	1 - 1 - 1	58.8	1	"	"	58.
		A KAL	58.4	2	"	"	66.
		O Defection	57.5	2	,,	"	83.
		THE STATE OF	57.1	2	,,	" "	91.
	THE RESERVE	1 - 2 1 7 4	56.5	1	,,	"	44303
	14 3 14	14 5 3	56.0	1 1	"	"	13· 23·
	55.22	1	55·5 55·3	1	"	"	28.2
	53.60	ln	30.0		"	"	60.0
	00 00	1 1 1 1	53.3	1	"	29	66.
		THE B	52.0	1	,,	"	92.
	7.00	Jan Sall	51.5	1	,,	99	44401
	Section,	THE REAL PROPERTY.	50.7	1	,,	13.5	17.
	BOOK AND	TO BE	49.4	1	"	,,	43.
			48.8	1	99	39	55.

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IRIDIUM-continued.

Ar	c Spectrum		Spark Spe	ectrum	Reduc		
Wave-l	ength	Intensity	Wave-length	Intensity	Vacu	ıum	Oscillation Frequency
Kayser	Exner and Haschek	and Character	Exner and . Haschek	and Character	λ+	$\frac{1}{\lambda}$	in Vacuo
		2012/01/20	2247.7	1	0.68	13:5	44476
			46.7	2		Sala Maria	96.
STEEL VIEW			45.5	9	"	99	44520
	STATE OF THE PARTY		43.8	2	"	99	54.
	2242.80	2	42.6	4	"	"	73.6
	2212 00		40.5	i	99	>>	44610
			38.7	i	"	13.6	55.
			38.3	2	"		63.
		-110	38.1	ĩ	"	"	67.
		1000	37.1	2	"	"	87.
		774 - 29	36.3	ī	"	"	44703
			34.3	î	"	"	43.
	R 3 TELL		34.0	î	"	"	49.
		(SOLIVE)	33.2	î	. "	"	65.
TO THE PARTY OF THE		1	32.0	î	,,	"	89.
	3 - 192101	THE REAL PROPERTY.	24.2	i	0.67	13.7	44946
			20.6	ln ln		"	45019
			19.3	1	,,	,,	46.
			18.9	1	"	"	54.
			12.4	1	"	13.8	45186
THE STATE OF THE	A STATE OF THE STA		11.2	1	"	,,	45211
	EN CENTRE	25	10.2	ln	"	"	31.
			08.7	ln	,,	"	62.
			05.0	2	"	"	45338
	MATTER THE STREET	212 13 70	2197.5	1	"	13.9	45492
The second second	DE MELLEY.		96.1	1	"	"	45521
		22312	92.2	1	,,	14.0	45602
			90.3	2	,,	,,	42.
S- SIDE OF ST			87.0	1	"	"	45711
	De Consti	128 128 1	78.5	1	0.66	14.1	45889
	and the same	-01	69.3	1	,,	14.2	46184
	WATER TO BE	THE PAS	52.6	ī	"	14.3	46441
De suite de la constitución de l		TO VICE	51.7	ī	"	,,	61.

S 68

OSMIUM.

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	Arc Specti	rum		Spark Spe	ectrum	Reduct		
1	Wave-length		Inten-	Wave- length	Inten- sity	Vacu	ium	Oscillation Frequency
Kayser	Rowland and Tatnall	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	λ+	$\frac{1}{\lambda}$	in Vacuo
5728.735	The Paris of the		2			1.56	4.7	17451-2
5523.786			2	C (Trace)	CONTRACT	1.51	4.9	18098.6
02.789			3		B 70 B	1.50	5.0	67.6
5149.895			2		The state of the s	1.41	5.3	19412.7
03.670	A PER SER		2		NEW LOND	1.40	5.4	19588.3
5031.988	1		1			1.38	,,	19867.5
4937.522			0		O She	1.35	5.6	20248.1
12.771			1			1.34	,,	20349.5
4899-386	WAS TO		0	TOUT BE DE		,,	,,	20405.1
65.759	The same	Charles - Line	2		P Real	1.33	,,	20546.2
16.105	attention of		2	THE RESERVE		1.32	5.7	20758.0
4794.177			5			1.31		20852.9
63.263			0	100		1.30	5.8	20983.8
55.332			1	Wat to the	13.2	"	,,	21023.2
44.050			2		1 2 10	"	,,	73.2
38.508			2			,,	,,	97.9
38.215			1	1 1 2 1		,,	,,	99.2
			1 8 8 8 8	4696.8	ln	1.29	5.9	21285
4692-220		4692-20	2	92.2	ln	1.28	,,	21306.0
100000		No.		70.6	ln	,,	"	21405
ATELIANS.			-	67.5	ln	,,	"	419.
Will Land			PAUL THE	64.1	1	,,	"	434.
63.977		63.99	3	The Carlo		"	,,	435.0
42.010			0		1	1.27	"	21536.5
34.930		34.94	1n			,,	6.0	569.3
32.000		32.01	4	32.0	1	,,	,,	582.9
16.948	4616.944	16.94	3	16.9	1	1.26	,,	21653.3
4597.321		4597.35	2	4597.3	ln	"	"	21745.7
95.206		95.22	ln	95.2	ln	,,	99	755·8 790·
			1	88.1	1	1.25	"	21831
				72.9	1		"	862
		10139-19	1	66.6	1	"	"	892
				57.7	ln	"	6.1	21935
			1 3 4	56.9	1	"		939
51.461	4551.463	51.50	4	51.5	2	"	"	964.8
50.584	50.571	50.59	8	50.58	8	"	"	969.1
48.836	48.827	48.85	3	48.8	1	"	"	977.5
40 030	10 021	10 00		46.2	ln	"	"	990-
		(C 3/10	149	45.2	i	,,,	"	995.
40.093	40.087	40.10	2	40.1	î	1.24	"	22019-9
10 000	20 03.	-	1 30 1	37.8	i.	,,	"	031.
29.848	29.842	29.88	1 *	29.9	1	,,	"	069.7
25.035	25.035	25.03	1	25.1	1	,,	,,	093.2

OSMIUM-continued.

	Arc Spect	rum	94074	Spark Spo	ctrum	2		
<u>eumotou</u>						Reduc	tion to	
SON UNE	Wave-length	- Santa	Inten- sity	Wave- length	Inten- sity			Oscillation
ALTA TITLE	Rowland	Exner	and		and		1_	Frequency in Vacuo
Kayser	and	and	Cha-	Exner and	Cha-	λ+	λ	
	Tatnall	Haschek	racter	Haschek	racter	THE STREET		
				4523.5	1b	1.24	6.1	22101
			130-2	20.06	10	,,	"	14.6
				20.5	1	99	>>	15.
4519.050		NAME OF THE PARTY	0	20·2 19·1	1	"	23	17· 22·4
14.445			0	101		"	• • • • • • • • • • • • • • • • • • • •	45.0
11 110				11.0	16	"	"	62.
07.590			0	2.000		"	"	78.7
03.474			0		MARKET TO	1.23	,,	99.0
			12.5	01.1	1	,,	"	22211
		1	10 10 10	4490.3	ln	,,	6.2	64.
4488.771	4488.766	4488.75	1	88.7	1	"	"	71.7
84.935	84.930	84.94	3	84.9	2	, ,,	"	90.7
70.074	MO.OMC	70.00	0	84.3	1	"	"	94.
79·974 66·134		79.98	2	80·0 66·2	l ln	1.22	"	22315·4 84·6
62.473	62.470	1 3250 157	1	62.5	1		"	22402.9
59.790		59.80	1	02 0	1	"	"	16.4
59.646		59.68	î	59.7	2	"	22	17.0
00 010		00 00	1	58.5	ī	"	"	23.
47.535	47.520	47.52	4	47.5	2	"	"	78.3
45.854	45.850		1	45.8	1	. ,,	,,	86.7
45.582	A STATE OF THE PARTY OF THE PAR		1			. ·	,,	88.0
39.808	39.810	39.80	2	39.8	1	,,	,,,	22517.3
37.258	37.257	37.26	1	37.3	1	,,	,,	30.2
36.490	36.488	36.48	5	36.5	2	,,	"	34.2
32.584	32.582	32.59	3	36·0 32·6	1 2	"	"	37· 54·0
28.059	32.582	32.99	1	32.0	Z	"	6.3	77.0
20 000	The same		1	24.7	1b	1.21		94.
				23.7	1	,,	"	99.
20.639	20.633	20.64	12	20.66	10	,,	,,	22614.9
11.298		11.30	1			"	"	62.8
10.899			1	05.0	1	"	"	64.8
04.375	04.378	04.40	2	04.3	1	"	11	98.3
02.901	02.904	02.92	3	00 1	N. VIII	,,	"	22706.0
00.751	00.747	00.75	2	00.7	ln	"	"	17.1
1397·424 95·040	4397.427	4397.45	8	4397·5 95·08	2 8	"	"	34·2 46·6
91.251	95·042 91·242	95·05 91·30	2	91.3	2	1.20	"	66.2
90.406	31 242	31 30	0	31 3		1 1000	"	70.6
00 100				90.0	In	22	"	73.
86.485	Text Binner		1	86.5	1	"	6.4	90.9
85.068	P. S. S. S.		0	85.1	ln	"	,,	98.3
77.070	77.068	77.05	ln	77.0	1	,,	,,	22840.0
70.826	70.824	70.84	3	70.8	2	"	,,	72.6
65.835	65.837	65.85	5	65.83	4	"	,,,	98.7
61.126		W	0	61.2	ln	"	,,	22923.5
58.318	58.304	58.31	1	58.3"	2n	""	"	22938.3
58.157	58.153	58.16	1	500	,	1,10	"	39.1
54.691	54.000	54.64	1	56·6 54·6	1 1	1.19	"	47.6
54.631	54.626	54.64	1	53.7	1	"	"	57·6 63·
						99	99	

S

OSMIUM—continued.

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	Arc Spectr	rum		Spark Spe	ectrum	Reduct	ion to	
1	Wave-length	1	Inten-	Wave-	Inten-	Vacu	um	Oscillation
	wave-length		sity	length	sity			Frequency
	Dld	Exner	and	8	and		- 10-	in Vacuo
77	Rowland and	and	Cha-	Exner and	Cha-	λ+	1_	III vacao
Kayser	Tatnall	Haschek	racter	Haschek	racter	AT	λ	THE SECTION
	Launan			Transcrion				
		4345.75	1			1.19	6.4	23000
THE PARTY OF		44.83	1			,,	,,	09.
4342.681	4342.678	42.70	2			,,	,,	20.8
38.913	38.919	38.91	3	4338.9	2	,,	,,	40.8
		33.11	1		1910	99	,,	71.7
28.838	28.840	28.85	5	28.83	6	"	,,	94.5
26.413	26.416	26.41	4	26.4	2	"	,,	23107.4
	200			22.9	1	99	,,	26.
19.513	19.502	19.50	2		1 3	,,	,,	44.4
		18.15	ln		100	1.18	"	51.7
17.754	17.743	17.73	1		10000	,,	"	53.8
	15.12.11		BE.	12.4	1	"	"	83.
11.561	11.560	11.57	7	11.55	8	,,	,,	87.0
09.041	09.041	09.05	3	09.1	1	"	,,	23200.6
				07.9	1	,,,	6.5	07.
	05.440	05.45	1	05.5	1	,,	,,	19.9
MEDICA I	THE PERSON		A C	00.0"	1	,,	,,	49.
4299.870	4299.856	4299.87	1		10.60	19	"	50.1
		15	1000	4298.6	ln	,,,	,,	57.
97.556	97.538	97.56	1	97.6	ln	99	,,	62.6
96.381	96.383	96.40	3	96.4	1	,,	,,	68.9
94.105	94.113	94.14	10	94.05	10	. ,,	,,	81.2
		93.10	1	93.1	ln	,,	,,,	86.7
			I Manage	92.0	ln	,,	,,	93.
	7 7 7 7 7 7	88.13	1		The same	,,	,,	23313.7
86.056	86.056	86.05	3	86.1	2	,,,	,,,	25.0
		84.44	1	84.6	ln .	,,	,,	33.8
81.535	81.529	81.54	1	81.5	1	,,,	,,	49.6
77.315	77.302	77.30	2	77.4	1	1.17	,,	72.7
75.074	75.064	75.10	2n	75.2	1	,,	"	84.9
73.984	110000		-			,,	99	90.9
			1	72.0	1	,,	,,	23402
70.952	70.945	70.95	2	71.0	1	,,,	,,,	07.5
			HEET.	69.9	1	,,	,,	13.
69.767	69.767	69.78	3	69.7	1	,,	,,	13.9
69.526	69.521	69.53	2	The water		"	,,	15.3
64.893	64.903	64.91	3	65.0	2	"	,,	40.7
		1	13/2	64.6	1	,,	,,	42.
61.011	60.993	61.01	15	60.98	10	,,	99	62.1
52.718	52.690	52.73	2	52.7	1	"	6.6	23507.8
51.321	51.331	51.40	2	51.4	ln	,,	**	15.3
	The state of	47.69	ln		1 194	"	,,	35.6
1900		43.32	ln		1	1.16	19	59.9
41.682	41.679	41.70	2	00.0	1	"	"	68.9
		37.31	1	33.6	2	,,	"	93.3
33.630	33.613	33.65	4			"	,,	23613.8
	1	32.20	1	A PARTY	1 1 2 3 1	"	"	21.8
29.531		29.51	1	1 12 12 3		"	,,	36.
	26.675	26.72	2			"	,,	52.6
	THE STATE OF THE S	19.84	1	19.9	ln	"	"	91.0
19.005	18.991	19.02	1	19.0	ln	,,	,,	95.
	F CHEST SE	15.33	3	15.4	1	"	"	23716.3
	THE STAR	14.06		14.0	2	,,	"	23.5
12.028	12.007	12.06	15	12.02	10		1 19	34.9

OSMIUM-continued.

	Arc Spect	rum	624	Spark Spe	ectrum			1 9 9 9
					-	Vac	tion to uum	
TOTAL PROPERTY.	Wave-length		Inten-	Wave- length	Inten-			Oscillation
	Rowland	Exner	sity	lengun	sity			Frequency in Vacuo
Kayser	and	and	Cha-	Exner and	Cha-	λ+	1	In vacuo
Rayser	Tatnall	Haschek	racter	Haschek	racter	^'	λ	
Table 1				4208.1	ln	1.16	6.6	23757
100 HT 130 T		4205.40	2	05.4	ln	1.15	,,	72.3
		04.76	2	04.8	ln	,,	,,	76.0
	The Views	02.25	5		11-10-1	,,	"	90.2
4201.541	4201.528	01.59	4	01.5	2	,,		94.1
	A H SOLD TO	4195.31	2	4195.4	1	,,	6.7	23829.4
N NEXT (Ball St	94.37	1	94.5	1	,,	,,	34.8
estate in the Asia		93.06	1	93.0	ln	,,	,,	42.2
		92.80	2		1	,,	,,	43.7
		92.35	2	92.5	1	"	"	46.3
4190.059	4190.052	90.07	5	90.1	2	,,	"	59.3
		86.50	1	Nr. Freeze	Wille.	,,	,,,	79.6
		85.18	1		THE REAL PROPERTY.	"	,,	87.1
24224		84.30	3	84.4	2	"	,,	92.2
		82.64	2	82.6	ln	"	,,	23901.6
H = 00				80.4	ln .	",	"	14.
75.783	75.781	75.78	6	75.78	8	"	"	40.9
WD 001	HO DOG	74.77	1	75.0	1	"	,,,	46.7
73.391	73.386	73.40	8	73.35	8	"	"	54.6
72.708	72.710	72.71	8	72.7	2	,,,	"	58.6
		70.97	1	00 =	TV. CIII	1.14	"	68.5
				66.5	1	1.14	"	94.
	THE REAL PROPERTY.			66.0	1 1	"	"	24003
		61.09	1	65·0 61·1	1	"	, ,,	25.5
		60.45	2n	60.5	1	"	"	29.2
	THE RESERVE	60.15	2	60.2	i	"	"	30.9
	58.948	58.98	3	59.0	2	>>	"	37.7
30000	00 010	53.80	1	0.70	-	"	"	67.6
		53.53	2	A NAS		"	"	69.2
200000		52.79	ī			"	,,	73.5
52.448	52.455		5			"	"	75.5
		50.90	2	51.0	1	,,	"	84.5
			BUR I	48.4	1	,,	"	99.0
STEEDS .		47.50	2	47.5	1	,,	6.8	24104.1
CHARLES SE	THE LEWIS	44.74	1	THE THE	\$1 THE 1	,,	,,	20.2
A NO LETTE		43.33	1	38.9	1	,,	"	28.4
38.021	38.013	38.00	4	38.0	2	,,	"	59.4
35.955	35.945	35.96	16	35.93	10	,,	"	71.4
	-0 - 00 -	35.20	2	35.0	1	"	"	75.8
		01.00		32.3	1b	,,	"	93.
90.114	90.194	31.20	2	31.2	1b	1.10	"	99.2
29.114	29.124	29.12	3	29.2	2	1.13	"	24211.4
	SE STEE	27.45	1	29.1	1 Rh ?	"	"	12.
		26.26	1	27.5	1	"	"	21·2 28·2
2.1		25.44	1	26·2 25·5	1	"	"	33.0
24.760	24.762	24.76	3	23.3	2	"	"	37.0
24 100	24 102	16.71	ln	24.0	4	"	"	84.4
		16.40	ln	15.0	1b	"	"	86.3
12.177	12.185	12.19	12	12.12	8	"	"	24311.2
12111	12 100	11.19	2	12 12		"	"	17.1
		09.22	ī	09.3	ln	22-	"	28.7
CLEAN.		08.14	2	08.0	ln	22	",	35.1

OSMIUM -continued.

	Arc Spect	rum		Spark Spe	ectrum	Reduct		
	Wave-length	H CALLERY	Inten-	Wave-	Inten-	Vacu	ium	Oscillation
			sity	length	sity			Frequency
	Rowland	Exner	and	6	and		1642	in Vacuo
Kayser	and	and	Cha-	Exner and	Cha-	λ+	1_	111 (4000)
1200,001	Tatnall	Haschek	racter	Haschek	racter		λ	
Hanta.	La lan			4106.3	1	1.13	6.8	24346
1.48		4105.60	2	10. 10. 10		,,	,,	50.2
The Volume	The ball of	03.80	3	00.5	2	,,,	,,	60.9
4100.436	4100.446	00.46	3			,,	,,,	80.8
4098.233	4098.264	4098-29	3	4098.3	1	,,	6.9	93.7
97.087	97.090		2			,,,	,,	24400.8
AUGUST ALL	97.004	The state of	2		WE THE	,,	,,	00.8
775 AL		96.26	1	100	THE STATE OF	,,	29	05.6
91.980	91.977	91.99	6	91.98	4	1.12	,,	31.1
Diffe Marie		91.18	1n	ALC: MAIL		,,	,,	35.9
THE PARTY OF	90.922	90.99	1n	91.0	1	,,	"	37.3
88.598	88.593	88.58	3	88.6	1	,,	,,	51.4
1016			1-1-1	84.8	In	,,	,,	84.
5-88 37.1		76.85	1		AND HOME	,,	,,	24521.8
A PROPERTY I		75.02	1			99	,,	32.9
74.829	74.834	74.83	4	74.9	2	,,	,,	34.0
73.768	73.763	73.78	4	73.8	1	,,	97	40.4
-	71.716	71.71	3	71.7	1	,,	,,,	52.8
71.169	71.162	71.15	2n	71.2	2	,,	,,	56.1
.71.020	71.008	71.01	4		1700T	,,,	,,	57.0
66.862	66.848	66.85	10	66.82	10	,,	,,	82.1
66.460	66.464	66.47	2			,,	- ,,	84.5
- 10 MILES			1	62.8	ln	"	,,,	24607
120014		61.78	Mary 13	DI TUETON	HATE I	,,	,,,	12.8
		60.85	1	60.9	1	79	22	18.5
7 10 10		56.49	ln	Till salting	THE PARTY OF	"	,,,	44.9
55.859			0			"	,,,	48.8
55.646	55.641	55.65	2	55.6	1	,,,	"	50.1
No the		53.96	ln	53.9	1	1.11	,,	60.3
53.417	53.407	53.40	1	53.4	1	,,	,,	63.7
51.584	51.580	51.59	2	51.6	1	,,	,,	84.8
		50.72	1	50.7	1	,,	7.0	80.0
100			The same	50.3	1	,,,	,,	83.
48.216	48.197	48.20	3	48.3	1	,,	,,,	95.3
		42.95	1		THE PARTY	,,	,,	24727.4
42.081	42.073	42.09	4	42.1	2	,,	,,	33.2
Este de la constitución de la co			9999	39.6	1	29	,,,	48.
38.813			0		-	,,	,,	52.7
38.809		38.80	1	38.8	1	,,	,,	52.8
WHITE LAND	38.782		2		THE RES	,,	,,	52.9
74	38.017	38.00	2	37.9	1	,,	,,	57.7
36.640	36.634	36.61	1	36.6	1	,,	,,	66.1
35.249	35.250	35.26	1	35.3	1	,,	,,	74.6
	33.095	33.12	1 Ga ?	33.0	1	,,	,,,	87.8
	- 12	17 93 3	LETTE !	30.8	ln	"	,,	24802
200	THE RESERVE		-0.35	29.7	ln	,,	,,	09.
1000 - 911	S COLUMN		1,0000	24.0	ln	"	"	44.
Charles of the			836	22.9	1n	"	,,	51.
A ROLL OF THE REAL PROPERTY.		20.56	1	20.6	ln	"	,,	65.2
18.425	18.430	18.38	4	18.4	2	,,	,,	78.5
15.203	15.211	15.18	2	15.2	1	1.10	,,	98.4
COMPERE	STATE OF THE STATE	E TETRE	100	15.1	1	,,	,,	99.
Port Col		12.60	1 Ti?	12.6	1b	,,	,,	24914
The state of the s		11.14	1	11.0	1	,,	,,	23.6

OSMIUM-continued.

	Arc Spect	rum		Spark Spe	ectrum	Reduct	tion to	
The state of	Wave-length	13,01	Inten-	Wave- length	Inten-	Vac	uum	Oscillation
Kayser	Rowland and	Exner	and Cha-	Exner and	and Cha-	λ+	1	Frequency in Vacuo
	Tatnall	Haschek	racter	Haschek	racter		λ	
	4005-327	4005.29	5			1.10	7.0	24959.9
4004.184	04.193	04.18	3	4004.2	2	,,,	,,	66.9
03.652	03.652	03.64	4	03.6	2	"	7.1	70.1
0000 110	0000 100	01.50	1	01.4	1b	"	,,	83.5
3999-110	3999.103	3999.10	2	3999.2	1	***	"	98.5
96.979	96.972	96.99	2	98.2	1n	"	"	25004
95.103	95.096	95.10	2	1		"	"	11.8
99.103	91.640	91.66	2			"	"	12.3
88.785		88.76	1			,,	"	32.9
	88.783	88.32	2	00.9	1	"	"	63.2
88.340	88:343	00.97	4	88·3 85·6	1	"	"	66.0
79.524	70.501	79.53	1	79.5	ln	99	"	83.2
77.389	79·521 77·391	77.39	10	77.33	4	"	"	25121.5
75.596	75.598	75.59	3	75.5	1	1.09	"	35.0
19.990	19.999	74.00	1	10.0	1	31	"	46·4 56·5
		14 00	-	71.5	1	,,	"	72.
		0	Ben !	71.6	1	"	"	72.
69.832	69.835	69.82	4	69.8	1	"	"	83.1
03 632	03 033	03 02	-	66.6	1	"	"	25203
65.106	65.112	65.08	3	65.1	1	"	"	12.9
63.774	63.777	63.80	10	63.80	6	"	99	21.3
09 114	05 111	63.48	1	00 00	0	"	"	23.3
61.159	61.163	05 40	-	61.2	2	"	"	38.0
60.656	60.653	60.65	3	60.6	1	"	"	41.3
00 000	00 000	00 00		58.0	i	,,	,,	58.
		57.80	ln	000	The state of	"	"	59.5
RES TOTAL		55.53	2			"	7.2	73.9
		54.72	ln			"	,,	79.0
			Bartie.	53.5	1	"	"	87.
52.904	52.911	52.91	2	53.0	1	, ,,	"	90.6
49.925	49.921	49.93	3	49.9	1	,,	"	25309.7
100			The same	49.3	ln	,,	"	14.
SHIP OF		40.20	1		(AU 23	"	"	72.2
39.704	39.708	39.71	3	39.7	1	,,	"	75.4
38.739	38.739	38.74	1	38.7	2		,,	81.6
				36.6	1	1.08	,,	95.
		35.67	1	35.7	1b	,,	,,	25401.4
31.660	31.660	31.70	2	31.7	1	,,	,,	27.3
30.148	30.138	30.14	4	30.1	1	,,	,,	37.2
28.691	28.681	28.68	3	28.6	ln	,,	,,	46.6
28.557	28.554	28.57	2	A 1880 1751		,,	,,	47.4
THE REAL PROPERTY.		28.31	1		Mark Co.	99	,,	49.0
		27.40	1		16-10-	,,	,,	54.9
26.923	26.916	26.93	2	26.9	1	,,	,,	58.0
25.253	25.244	25.25	2	25.2	1	"	,,	68.9
THE TOTAL	100	22.15	2	22.2	1	,,	,,	89.0
		21.00	2	21.0	1	,,	,,	96.5
HAT LET	19.107	19.09	1		THE REAL	,,	,,	25508.9
	18.888	18.85	2	CHICAGO TO		"	"	10.4
15.543		11.05	0			"	,,,	32.0
THE STATE OF		11.95	2	10.5	BUTUNES	,,	,,	55.5
137	130 30 31	OH HO	1	10.7	1	,,,	7.3	64.
CHARLES OF THE PARTY OF THE PAR		07.78	1	7-5-10-1	WE POOL	"	1.3	82.7

OSMIUM—continued.

	Arc Spect	rum		Spark Spe	ectrum	Reduc	tion to	
	Wave-length		Inten- sity	Wave- length	Inten- sity	Vaci	uum	Oscillation Frequency
Kayser	Rowland and Tatnall	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	λ+	$\frac{1}{\lambda}$	in Vacuo
nountries de	Tax Infa	3906.28	1	3906.2	1b	1.08	7.3	25592.5
		05.65	1 Si?	00002		,,	,,	96.6
			- Bore	05.2	1b	"	,,	25600
			TYALL.	03.2	1b	,,	"	13.
0001 071	0007.010			•02.0	1b	,,	,,	21.
3901.851	3901.843	01.87	5 2	01.8	2	,,	"	21.5
00.541	00.527	01.16"	4	01.1	1	99	"	$\frac{26 \cdot 1}{30 \cdot 2}$
00.941	00-521	00·54 3899·18	1	00.3	1	"	"	39.1
		97.30	i			"	"	51.5
3895.331	3895.305	95.34	2	3895.3	1	1.07	"	64.5
	95.023	95.05	1	95.0	2	"	,,	66.4
		94.83	1	The Car		,,	,,	67.8
		93.40	ln	92.1	1b	"	,,	77.2
		92.99	1	10. 15. 1	MARIE	"	,,	79.9
		91.75	1			"	"	88.1
		88.97	1	000		"	"	25706.5
		86.91	2 2	86.9	1	"	"	20.1
		85·90 84·75	1	85.9	1	99	"	26·8 34·4
		84.19	1	83.5	ln.	"	"	43.
		82.02	4	82.0	2	"	"	52.5
		80.93	2	80.9	ī	"	"	59.7
		78.65	3	000		"	"	74.9
	. Facility	78.05	3	E. Saline		"	,,	78.9
		77.45	2	77.5	1	,,	,,	82.8
	76.971	76.91	8	76.95	4	,,	,,	86.2
		75.82	ln		9798	. 99	"	93.7
EAST OF		75.26	1			,,	,,	97.4
		79.00	0	74.2	ln	"	"	25804
		73.86	2	73.8	1n	,,	"	06.7
		73.17	1	71.1	1	"	"	25.
		69.15	1	111	- 2	"	,,	38.2
		68.83	2	68.8	1	"	"	40.3
		66.65	2	300	Can.	"	,,	54.9
	3 7 7 8 9	66.19	1		-	"	,,	58.0
	- 8 - L	65.59	6	Mars car	THE BEAT	,,	,,	62.0
	THE PERSON	65.19	2	22.5	1	"	,,	64.7
	A A IS A	40.07		62.7	1b	,,	,,	81.
	NOTE OF THE PARTY	60.95	1	50.0	1	"	,,	93·1 25901·
	THE THE	57.24	10	59·8 57·2	2	"	"	25901
		54.86	2	54.8	1	1.06	"	34.0
	15 3 50	53.75	2n	010			"	41.4
		53.60	3	53.6	1	,,,	,,	42.5
		50.11	10			,",	"	66.0
		48.94	1	49.0	1	,,	,,	73.9
	7.33	47.71	1	1 10 9 0	Dens House	,,	"	82.2
	76-11-34	WE SE	-	47.4	1	"	,,	84.
	THE LONG	47.01	1	The state of		,,	"	86.9
	000	46.55	2	46.6	ln	,,	"	90·0 95·0
	200	45.81	1					

OSMIUM—continued.

	Arc Spect	rum		Spark Spe	ectrum		tion to	
Wa	ve-length		Inten-	Wave-	Inten-	- 200		Oscillation
			sity	length	sity			Frequency
ME IN COLUMN	Rowland	Exner	and		and	HI HU	1	in Vacuo
Kayser	and	and	Cha-	Exner and	Cha-	λ+	$\frac{1}{\lambda}$	7725
	Tatnall	Haschek	racter	Haschek	racter		^	
el Elokari .	AV PATON	3843.77	3	3843.7	1	1.06	7.3	26008.8
DE LE		42.40	1		water.	,,	,,	18.1
		41.80	1	The state of the s		,,,	"	. 22.2
		41.41	5	41.4	2	. ,,	"	24.8
		40.44	10	40.4	2	,,,	,,	31.4
		36.18	10	36.2	2	,,,	,,	60.3
			may be	32.5	1	,,	,,	85.
STATE OF THE PARTY	Control to	32.33	2	32.3	1 Pd ?	"	,,	86.5
		31.55	1		BANK .	,,	,,	91.8
		30.26	1		1720	,,,	,,	26100.6
	Z into	29.20	1		11.00	"	"	07.8
BE LEVEL	Town on	27.30	3	27.2	1	,,	"	20.8
	P. HERRY	26.78	2	26.7	1	,,	"	24.3
		20.		26.5	1	"	"	26.2
E. 27-31	5 S S S S S S S S S S S S S S S S S S S	23.47	1		HART N	,,	"	47.0
		22.06	2	22.1	ln	"	"	56.6
28 97 2		21.80	2	21.8	ln	"	,,	58.4
		18.80	2 Pt ?		THE CALL	"	,,	78.9
	S. Maria			18.7	1	,,	"	80.
		18.21	2	70.0	11.	"	7.4	82.9
	MATERIAL STREET	15 50	0	18.0	1b	"	"	84.
		17.78	2 2	14.4	1	1.05	"	85·8 26208·9
100		14.42	1	14.4	1		""	10.4
		14.20	2	12.4	1	"	"	22.5
		12.45	4	11.1	i	"	"	32.
		10.59	1	10.6	i	"	"	35.3
	I NEEDLY	09.80	1	09.7	î	"	"	40.7
1		03 00		07.8	î	"	"	54.
		04.27	1	0.0	-	"	"	78.9
2076		02.77	2	02.7	1	The same of		89.2
The second		01.75	2	01.7	î	"	"	96.3
		01.40	ln		No.	,,	"	98.7
The same of	a lite of	01.23	1		TOTAL .	",	"	99.9
	STATE OF THE STATE	00.90	î		BRIES	"	"	26302.2
	A WEST	00.58	3	00.6	1	"	"	04.4
		00.06	1		10 1 E	"	,,	08.0
ALC: NO.		3797.86	1		-	"	"	23.2
		95.83	3	3795.8	1	"	"	37.3
			The state of	95.2	1	"	"	42.
		94.84	3	94.9	1	,,,	"	44.2
	3794.054	94.08	10	94.1	4	,,	,,	49.5
450 12 -				94.02	4	,,	"	49.9
Land B		92.18	1		The Day	,,	**	62.7
	- 1 - 6	91.23	1			"	,,	69.3
\$15 TO 1		90.90	4	90.9	2	"	,,	71.6
	90.244	90.29	6	90.26	4	"	"	76.0
		89.25	3	89.2	1	"	"	83.0
		89.04	1	00.		,,	"	84.5
A PARTY OF THE PAR	IN HE SE	86.14	1 Ti?	86.1	1	"	,,,	26404.7
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	25	85.88	1	85.8	ln	"	99	06.5
		85.82	1	04.6		>>	"	07.0
	6-1-15		19:02	84.6	1	>>	"	15.
The second secon	STATE OF THE PARTY		1	84.3	1	99	,,	18.

OSMIUM-continued.

	Arc Spect	rum		Spark Sp	ectrum	Reduc		
Tarana T	Wave-length		Inten-	Wave- length	Inten-	Vacu	ıum	Oscillation
	Rowland	Exner	sity	Tengun	sity			Frequency in Vacuo
Kayser	and	and	Cha-	Exner and	Cha-	λ+	1	III Vacuo
Rayser	Tatnall	Haschek	racter	Haschek	racter	N Bel	$\frac{1}{\lambda}$	
Shall Barri		3783.82	2	3783.8	1	1.05	7.4	26420.9
TIRL		82.90	1	Plant	parts in	,,	,,	27.4
		82.34	20	82.34	8	,,	,,	31.3
No.		81.99	ln		BT 20 '	,,	,,	33.7
THE REAL PROPERTY.	THE REAL PROPERTY.	80.74	1	80.7	1	,,	,,	42.5
	18 2 12	80.37	2	80.3	1	"	,,	45.0
73				79.6	1	22	,,	50.
\$19 E-19		77.13	5	77.1	1	"	,,	67.7
	- F- 1	76.40	3	76.4	1	1.04	"	72.8
	H COLUMN	76.16	1	76.2	1	27	"	74.5
		76.10	1	84.8		"	"	75.0
	400	74.77	3	74.7	1	"	,,	84.3
1 100		74.55	1	74.5	1	"	"	85.8
100	1 8 0	74.30	2		1 × 1	, ",	,,	87·6 90·0
		73·95 72·09	2	72.0	1	"	7.5	26503.0
		71.78	2	71.7	1	"		05.2
Aug .	3771.040	71.00	2	71.1	116	"	,,	10.7
1.00	3771 040	70.48	1	11.1	10	"	"	14.3
aven .		69.44	1		La Sec.	"	,,	21.6
- Valore V		68.27	4	68.3	1	"	,,	29.9
AND THE RESERVE		66.43	4	66.4	1	"	,,	42.8
June Piter		64.83	i	64.8	În	"	"	54.1
THE PARTY OF THE P		0.1.00	1	64.1	1	"	,,,	59.
			1 1/165	60.9	i	"	"	82.
		60.40	2	60.4	1	"	,,	85.4
2 2	457 7 11	58.25	1		1	22	"	26600.6
		57.21	3	57.2	1	,,	,,	08.0
		56.91	1			"	,,	10.1
11.57			-	56.8	1	"	,,	11.
5.48		56.70	1	F1 7002.00		"	,,	11.6
		54.65	ln	54.6	2	27	,,	26.1
5000		53.99	1	AN IN		,,	,,	30.8
(B)(1)		52.69"	20	52.68	10	,,	,,	40.1
A LOUR E		52.06	2	52.1	1	"	,,	44.5
				51.9	1	,,	,,	46.
11 11		51.45	2	51.4	1	,,	,,	48.8
The state of the s		50.95	2	Water Land		"	"	52.4
		50.72	2	PACTOR		"	"	54.0
		49.99	2		13 15	,,	"	59·2 65·0
		49.18	Z	48.4	1	"	"	71.
10.00		47.18	1	40.4	-	"	,,	79.2
3746-612		46.60	4	46.5	2	"	"	83.3
0140 012		44.52	1	200		,,	"	98.2
-10-50 2 2 2 3		44.00	î	S Little &	I I Colecto	"	"	26701.9
78-118-11 128		43.80	î	3 + 34 3	12 1	"		03.3
9158 3		41.66	2	41.7	ln	"	"	18.6
THE PARTY OF	1	41.22	2	41.2	1	"	"	21.7
THE REAL PROPERTY.		40.39	1	9,357	HANGE L	"	,,	27.7
200	14/2	.40.20	1		DVA S	,,	12	29.0
10-91	Table Park		4	37.1	1	1.03	,,	51.
- 06 - 18		35.66	2	35.6"	1	,,	"	61.5
1000	THE PARTY NAMED IN	35.36	1	The state of		,,	,,	63.7

OSMIUM—continued.

	Are Spect	rum		Spark Spe	Reduction to			
The state of	Wave-length		Inten-	Wave-	Inten-	Vac	uum	Oscillation
		1	sity	length	sity	1000	1	Frequency
-	Rowland	Exner	and	777	and		1	in Vacuo
Kayser	and	and	Cha-	Exner and	Cha-	λ+	λ-	
	Tatnall	Haschek	racter	Haschek	racter		1	
		3734.70	1			1.03	7.5	26768.4
		33.50	1			,,	,,	77.0
		32.99	1	3732.9	ln	,,	,,	80.7
THE REAL PROPERTY.		31.95	2	31.9	1	,,,	"	88.1
		30.88	3	30.9	1	,,,	,,	95.8
		29.37	3	and the same of		,,	,,	26806.7
		28.85	1	90 #	100	,,	,,,	10.4
		28.52	2	28.5	1	, ,,	,,,	12.8
400000		26.13	1	07.4		"	7.6	29.9
BESSES FO		25·45 22·11	2 2	25.4	1	"	"	34.8
		20.27		22.1	1	"	"	58.9
0		20.21	10	20.3	2	,,	"	72.2
MATE IN		19.64	10	20·1 19·6	2 2	"	"	73.
	DE TON	18.87	10	19.0	2	"	• • • • • • • • • • • • • • • • • • • •	76.7
		18.49	3	18.5		"	"	82.3
		18.06	2	18.1	1 1	2,9	"	85.0
		17.54	ī	10.1	1	"	"	88.1
Bar Harris		17.00	i	Tile kalle	10000	"	"	91.9
1		16.48	2	San All Tol		"	"	95.8
		16.38	3	16.4	1n	"	39	99.6
	BUT BELLEVI			15.2	1b	"	"	26900.2
100	W. Chillian	14.13	2n	102	10	"	"	16.6
	71	13.88	4	13.9	2	"	"	18.4
The Local	THE REAL PROPERTY.	12.99	2		MIA.	"	"	24.9
		12.60	2			"	- 11	27.7
			SHE	11.9	1	. ,,	"	32.8
		09.30	5	IN HISTORY	THE .	,,	"	51.7
	PARTY NAME	06.72	4	06.6	2	"	,,	70.4
	The same		No. of Lot	04.2	1	,,	,,	89.
3703.391	200	03.40	4	03.4	2	,,	,,	94.6
REAL PROPERTY.		02.95	2		Marca C	,,	- ,,	97.9
		01.75	2	THE MAN TO SERVICE		"	,,	27006.6
MADE -		0. 46	V DES	01.6	1	,,	21	08.
00.688		01.45	1	01.4	1	,,	"	08.8
00.088		00.45	1		With the	"	99	14.4
		00.45	2	00.4	1	,,	"	16.1
THE REAL PROPERTY.	E - 12-17-1	3698-98	2	3698.9	1	",	"	26.9
35		95.80	1	95.9	ln	1.02	,,	49.
TREE		95.35	1	95.4	1-	"	"	50.1
1997	WALLEY OF	94.53	1	99.4	ln	"	"	53.4
	Later las	91 99	1	94.4	ln	"	"	59.4
				93.8	ln ln	"	"	60.
E	1 September 1	93.15	1	000	111	"	"	65.
	or sileni	92.80	î	92.75	4	"	"	69·5 72·1
	335 5 5	92.41	i		1-75	"	"	75.0
691.750	4 1 1 1 1 1		ō			"	"	79.8
	ALL STREET	90.88	2	1 - 1 - 1	0.00	"	"	86.2
	2000	EVILLEY	THE SALE	89.5	1	"	"	96.
89.191	TO A DESTRICT	89.21	5	89.1	2	"	"	98.5
THE REAL PROPERTY.		88.05	1		Design	"	"	27107.0
HERE TO STATE OF THE PARTY OF T		87.40	.1		NATE OF	"	"	11.8
The second secon	THE RESERVE TO SERVE	87.19	1	87.1	1	1577		13.3

OSMIUM-continued.

	Arc Spec	trum		Spark Spe	ectrum		tion to	
	Wave-length		Inten- sity	Wave- length	Inten- sity	Vacuum		Oscillation Frequency
Kayser	Rowland and Tatnall	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	λ+	$\frac{1}{\lambda}$	in Vacuo
	Lathan	Haschek	140001				2	
		3685.55	1	3686.2	1	1.02	7.6	27121· 25·4
		84.70	2			"	"	31.6
				84.5	1	,,	,,	33.
2001.702		84.00	1	84·2 81·7	1	"	7.7	36.8
3681.705		81·74 78·40	3	91.1	1	"		53·5 78·0
		78.15	2	78.2	1	"	"	79.9
75.599	100	75.60	4	75.5	1	"	"	98.7
		74.67	1			,,	"	27205.6
		70.01	100	73.3	1b	"	"	16.
		73.01	1	72-1	1	"	"	17·9 25·
		71.60	1	121	1	"	"	28.4
71.040	3671.040	71.05	6	71.1	2	"	"	32.5
		69.85	1		Was 1	,,	,,	41.4
		69.63	1			,,	,,	43.0
		69.25	1 1	68.4	2	"	"	45·8 52·6
		68·34 66·48	4	66.4	2 2	"	"	66.4
		00 40	-	65.1	2	"	" "	77.
		61.40	2	61.4	ī	"	"	27304.3
		60.92	1		2	1.01	,,	07.8
ALC: UN			a por	59.8	ln	,,	,,	16.
		57.57	1	FF 1	0	,,	"	32.9
57.048	57.053	57·05 56·55	6	57.1	2	"	"	36·7 40·5
FQ '. 18	10000	54.95	1			"	"	52.5
54.631	54.639	54.64	5	54.6	2	"	"	54.8
53.873		53.86	3	53.9	1	,,	,,	60.6
18 2		53.35	2		616	,,	,,	64.4
		50.52	2	50.4		,,	"	85.7
48.962	2.0	48.94	3	48.9	1 1	"	"	87· 97·4
40 902	Em TEM	48.45	2	48.4	i	"	"	27401.2
1000		45.28	1	hi-lib a		"	"	25.0
36.03	4	42.65	2			,,	,,	44.8
			\$ Ja 18	42.6	1	,,	,,	41
all the	The still	41.40	2	42·3 41·4	1 1	"	"	47· 54·3
18		41.40	2	40.8	2	"	"	59.
40.487	40.484	40.50	8	40.48	4	"	"	61.1
			6.00	39.73	8	,,	"	66.9
The same		39.44	1	4	N POPUL	,,	7.8	74.4
(Marie 14)	Terre sug	38.72	1	38.1	1b	,,		78.3
98	A STATE OF	38·20 35·40	l ln	99.1	10	"	"	79· 99·5
PLANT.	AL THURSDAY	99.40	. 111	32.2	In	"	,,	27524
	- STATE .	31.95	1	W 18 5 18	Block	"	"	25.6
		30.95	1	No.		,,	,,	33.2
00.000	THE STATE	30.56	1	20.7	L VIDOS	,,	,,	36.2
30.099	4 1 35	30.12	3	30.1	1	,,	"	39.6
		27·39 26·05	1 1		THE PERSON NAMED IN	"	"	60·2 70·4

-		Arc Spect	rum		Spark Spe	ectrum	Reduction to		
	SCHOOL SCHOOL	Wave-length		Inten-	Wave-	T	Vacı	um	
			To Manual 19	sity	length	Inten- sity			Oscillation
		Rowland	Exner	and		and	SI (Frequency in Vacuo
	Kayser	and	and	Cha-	Exner and	Cha-	λ+	1_	III vacuo
		Tatnall	Haschek	racter	Haschek	racter		λ	•
			3625.53	1	Carried States		1.01	7.8	07574.4
		CHARLES THE	THE STATE OF THE S		3621.7	1			27574.4
1		State of the	21.26	1	21.2	î	"	"	27604
		1 5 T 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	20.40	2	20.4	î	"	"	13.5
			19.59	3	19.5	1	"	"	19.6
-					17.1	1	1.00	"	39.
	3616.726		16.73	8	16.7	2	,,		41.5
			15.77	1			"	"	48.8
-			13.50	3	13.4	1	,,	"	66.2
1					12.9	1	,,	"	71.
1				200	12.4	1	,,	,,	75.
					10.5	1n	,,	,,	89.
1			09.83	1		LA N	,,	,,	94.3
1			09.30	3	09.3	1	,,	,,	98.4
					09.0	1	,,	,,	27701
1		EXECUTE OF	07.54	1			,,	,,	11.9
	04.624		05.97	1	0.4.00		,,	,,,	24.0
	04.024		04.65	2	04.62	4	,,	,,	34.2
1			04.50	ln			,,	,,	35.3
1			04.02	1	00.0	7 3 70	***	,,,	39.0
			a usialli.		03.9	1	"	,,	40.
			02.99	,	03.2	1	,,	,,,	45.
	15/1			1 2	00.5	LAST P	,,,	,,	46.9
1	01.984		02·64 02·00	4	02.5	1	99	"	49.6
1	3598.266	3598-264	3598.25	10	02·0 3598·2	1	,,	22	54.5
1	0000 200	0000 204	97.66	2	97.6	2	,,	"	83.4
	THE THE PERSON		95.96	1 .	310	1	,,,	,,	88.1
			20 20		93.8	In	"	"	27801.2
		() () () () () () () ()			93.0	ln	"	7.9	18.
1		STALE TO STATE	92.49	3	92.4	1	"	"	24.
-			91.77	1	021	-	"	"	27.9
1	design of				91.6	1	"	"	33.5
1	ROBERT ST			PHE	91.3	i	"	"	35.
1			90.28	3	90.2	i	"	"	45.1
-	the later of	BUSINE -	89.48	1			"	"	51.3
	EBELFIE		88.11	1			"	,,	61.9
1			87.48	4	87.4	2	"	,,	66.8
1	The last		86.65	3		2-1	"	"	73.3
1	E CARLON			1436	86.5	1	"	,,	74.
1	3,55		84.56	2	84.5	2	39	,,	89.5
			83.55	2	83.4	1	"	,,	97.4
1	J-SVATEN		83.21	2	83.2	1	,,	"	27900.0
1	1881		82.95	1	82.9	1	,,	"	02.1
-	THE				82.3	1	,,,	,,	07.
			00.00		82.2	1	,,	"	08.
-	TORREST AND LE		80.68	1	77.0	E FEG.	,,	,,	25.0
	A CUIDAR C		80.01	1	77.8	1	"	,,	42.
		THE PROPERTY.	77.65	1	74.9	-	0:99	,,	43.4
			74.25	9		1	"	,,	65.
	THE THE	1.5.	72.93	3	74.2	1	"	***	70.0
1	The state of the s		12.93		72.6	1	,,,	,,	80.3
1	100000000000000000000000000000000000000	50 50		The second second	140	ln	,,	,,	83.
		and the same of	71.70	1			"	"	90.0

OSMIUM-continued.

		Arc Spect	rum		Spark Spe	ectrum	Reduction to		
		Wave-length		Inten-	Wave-	Inten-	Vacu	um	Oscillation
1.				sity	length	sity			Frequency
		Rowland	Exner	and		and	and a		in Vacuo
	Kayser	and	and	Cha-	Exner and	Cha-	λ+	1_	111
	120,001	Tatnall	Haschek	racter	Haschek	racter		λ	
-			3569.94	4	3569.9	2	0.99	7.9	28003.8
			69.17	li	69.2	ln	,,		09.8
			68.75	1			"	"	13.1
			67.23	1	E TE		"	"	25.1
1		THE THE PARTY			65.3	1	"	,,	40.
			64.25	2	64.2	1n	"	,,	48.5
-		W			63.4	In	,,	,,	55.
F		Half Feb. Dr.		V. C. S.	63.1	ln	"	,,	58.
	2 1		62.51	4	62.4	1	,,	22	62.2
1			61.55	1			"	,,,	69.8
			61.03	10	61.08	8	"	,,	73.9
			60.61	1	5.00	1	"	,,	77.2
-			13	13.79	60.02	6	,,	,,	81.8
			59.97	10	59.8	6	,,	,,	82.2
			58.96	1			"	,,	90.2
	and the		58.10	1		1000	"	,,	97.0
					57.4	In	"	,,	28103
			56.11	2		1	"	"	12.7
			55.85	2	100	25/4	,,	,,	14.8
			54.70	1		11300	29	"	23.9
			54.20	1	54.1	1	"	,,	27.8
			51.09	1	51.0	1	"	"	52.4
			50.86	1	50.8	1	>>	8.0	54.2
			49.81	1			"	"	62.5
	San San		49.65	2			"	"	63.8
	- 1761		49.17	1	49.0	Control of	99	97	67.6
			48.87	1	49.0	ln	"	"	70.0
	THE PARTY		48.03	1		-	"	"	76.6
	AND PARTY		40 00	10.0	47.7	1	,,	"	79.
	100		46.25	1	46.1	ln	"	"	90.8
			10 20	1	45.6	ln	"	"	96.
	1012-1119		44.70	2	44.6	1	"	"	28203.1
	HIERO COL		43.85	2	43.7	i	"	"	09.9
			43.43	ī	43.3	î	"	"	13.2
	188		42.85	5	42.6	2	"	"	17.9
			42.03	2	42.0	ĩ	"	,,	24.4
			41.68	1			,,	"	27.2
	195		40.35	1	2 1		"	"	37.8
			40.01	1	THE STATE OF LEE		"	,,	40.5
	S 1 25 1			11.36	38.4	1	,,	,,	53.
			38.13	1		10000	"	,,	55.5
			TA ESAS	1000	37.8	1	0.98	,,	58.
1			37.64	1		AL ST	"	,,	59.4
1			37.20	1	37.2	1	,,,	,,	62.9
	STATE OF		33.55	4	33.4	1	"	,,	92.1
1			32.98	8	92.0		,,	,,	96.7
1			01.63	0	32.8	2	,,	,,	98.
	SER COL		31.26	2	31.2	1	,,	"	28310.5
	Pet la		30.20	3	00.7		,,	"	19.0
	0700 710		00 55	10	30.1	2	"	"	20.7
1	3528.743		28.75	10	28.80	6	"	"	30.7
	The second secon		A STATE OF STREET	PARTY OF	28.6	6	,,	"	32.



		0	SMIUM-	-continued				
	Arc Spect	rum		Spark Spectrum		Reduction to		
7	Wave-length		Inten- sity	Wave- length	Inten-	Vac	uum	Oscillation
Kayser	Rowland	Exner and	and Cha-	Exner and	sity and Cha-	λ+	$\frac{1}{\lambda}$	Frequency in Vacuo
	Tatnall	Haschek	racter	Haschek	racter		λ	
		3525·45 23·78	1 5	3523.87	4	0.98	8.0	28357.2
		23 13	3	23.6	4	"	,,	70·6 72·
		23.34	1	200		"	"	74.2
		22.12	2	22.1	1	"	,,	84.0
		00.15		21.2	ln	"	,,	91.
		20·15 19·32	3 2	20.1	1	"	,,	99.9
		19.08	1			* >>	,,	28406.6
		18.87	3	18.7	2	"	"	08·5 10·2
				17.9	ī	"	"	18.
		17.41	2			"	,,	22.0
		17.30	2	17.3	1	"	,,	22.9
		16.75	3	16.6	1	"	,,	27.3
3513.791		13.91	2	15·4 13·9	1b 1Fe	"	,,	38.
13.145		13.15	5	13.1	2	"	,,	50.8
		10 10	1	11.5	1	"	"	56·5 70·
		11.38	2			",	,,	70.8
				11.2	1	,,	,,	72.
		20.00		10.5	1	"	8.1	77.9
		09.00	1			,,	"	90.1
		07.21	1 .	06.9	1	. "	22	28504.6
		05.14	1 Ti?	00.9	ln	"	"	07.
				05.0	1n	"	"	21·4 23·
04.811	2504.815	04.81	6	04.85	4	"	"	24.1
A SE		03.61	1			"	,,	33.9
		01.05	A SEC	03.5	ln	94	,,	35.
		01.85	1	01.0		,,	,,	48.2
01.314		01.33	4	01·6 01·2	ln 2Ba	,,	,,	50.
		3499.70	1	3499.6	1	"	**	52·5 65·8
		99.43	î	99.4	î	"	"	68.0
3498.686		98.69	3	98.6	2	0.97	"	74.0
		98.24	1	98.3	1	. ,,	,,	77.7
				98.0	1	,,	,,	80.
		95.99	1	97.2	2	"	"	86.
		95.77	2	95.7	1b	,,	"	96.1
		91.65	2	91.6	1	"	"	97·9 28631·7
		91.24	1			"	"	35.0
90.464		90.46	2	90.4	2	,,	,,	41.4
00.01=		89.01	1			**	,,	53.3
88·915 87·610		88.91	2	88.9	2	.,,	,,	54.1
87.387		87·62 87·40	3	87·6 87·4	2	,,	,,	64.8
0.007		01 40	0	84.1	ln	"	,,	66·6 94·
82.380		82.38	3	82.3	2	"	"	28707.9
82.269		82.28	3			"	"	31.7
E0.0E-			3 (3 %)	79.5	2	"	,,	39.
78.670		78.67	3	78.6	2	"	. ,,	45.9
77.798		77.76	1	77.8	16Rh	"	,,	52.5
	THE RESERVE	76.98	1	76.7"	1b	31	,,	54.8

	Arc Spect	rum		Spark Spe	ectrum	Reduction to			
	Wave-length		Inten-	Wave-	Inten-	Vacuum		Oscillation	
	D 1 1	· T	sity	length	sity			Frequency	
77	Rowland	Exner	and Cha-	77	and Cha-		1_	in Vacuo	
Kayser	and Tatnall	and Haschek	racter	Exner and Haschek	racter	χ+	λ		
Rotter L	Ten die			3475.5	1	0.97	8.1	28765	
		3474.25	1		1	,,	,,	75.1	
			+888	73.2	1	,,	,,	84.	
				72.9	1	,,	,,	86-	
				70.8	2	,,	8.2	28804	
				69.7	ln ·	,,	,,	13.	
3469.517		69.51	1			,,	,,	14.3	
				68.8	ln	,,	,,	20.	
AND DESCRIPTION OF THE PERSON				66.1	1	"	,,	43.	
65.585		65.59	3	65.6	2	,,	,,,	46.9	
		65.03	1	64.9	1n	,,	,,	51.6	
						,,	,,	53.	
62.335	THE THE PERSON	62.35	1	62.3	2	,,	,,	74.0	
				61.7	In	,,	,,	79.	
59.163		59.15	2	59.2	2	,,	,,	28900.6	
		58.54	4	58.5	2	0.96	,,	05.7	
			13.	57.5	1b	,,	,,	14.	
		56.27	1	56.2	1b	,,	"	24.7	
55.172		55.16	2	55.2	2	,,	,,	34.0	
		53.17	1	53.1	ln	. ,,	99	50.7	
			Markey.	52.5	1	,,	. ,,	56.	
				51.5	ln	,,	,,	65.	
	0110 010	50.54	1	50.5	ln	,,	,,	72.8	
49.352	3449.346	49.36	5	49.3	2	,,	"	82.7	
				48.2	1	,,	,,,	92.	
45 005	45 000	1 00		46.1	1	,,	,,	29010	
45.695	45.699	45.69	3	45.6	2	,,	99	13.6	
44.616		44.60	3	44.6	1	,,	,,	22.7	
				44.1	1	,,,	,,	27.	
				41.2	1 Pd ?	,,	"	51.	
				40.6	1	,,	"	56.	
		39.97	1	40.4	ln	"	"	58.	
39.639			2	20.5	1	"	"	61.8	
38.792		39·63 38·76	1	39.5	ln	"	"	64.5	
37.642		99.10	0			,,	"	81.5	
37.150			2			99	"	85.7	
01 100		35.40	i	35.5	ln	"	"	29100.5	
The same of		35.04	1	000	111	,,	"	03.5	
34.023		00 01	4	34.0	ln	,,	"	12.1	
01 020			Print C	32.2	ln	"	8.3	28.	
WATER TO BE		30.20	1	02.2	-11	,,		44.5	
100		30.10	î	30.0	ln	"	"	45.4	
			1220	28.7	1	"	"	57.	
27.816		27.79	3	27.8	î	"	"	64.9	
27.590		27.56	1	27.6	i	"	"	66.8	
A PERE			Francisco .	26.6	ī	"	"	75.	
				25.1	1	,,	,,	88.	
				24.8	1	,,	"	90.	
				23.5	2	,,	,,	29202	
22.800			1			,,	,,	07.5	
	2.00	22.43	1	22.4	1.	"	"	10.7	
21.837		21.85	2	21.8	1	"	"	15.7	
21.558			1981			"	12	18.2	

OSMIUM-continued.

		US	MIUM-	-continued.				
	Arc Spectr	rum		Spark Spe	ectrum	Reduction to Vacuum		
7	Wave-length		Inten- sity	Wave- length	Inten- sity	Vacı	uum	Oscillation Frequency
Kayser	Rowland and Tatnall	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	λ+	$\frac{1}{\lambda}$	in Vacuo
			_				-0.016	
		3421.34	1		NO.	0.96	8.3	29220.0
				3420.4	1b	,,	• • • •	28.
				20·3 18·8	ln 1b	"	"	29· 42·
				17.5	1	0.95	"	53.
		15.36	1	11.0			, ,,	71.2
	C TRAINS	10 00		14.9	1	"	"	75.
3414.390		14.38	2n	14.4	ī	"	"	79.5
12.946			0			,,	"	91.9
12.908		12.91	2	12.8	1	"	"	92.2
08.906		08.90	2	08.8	2	22	,,	29326.2
06.816		06.83	2			,,	,,	44.5
PARTY AND				06.7	1	"	,,	46.
06.423		06.45	2	000		"	"	47.9
00.077				06.3	1	"	,,	49.
02.855	9409 674	00.00	0	00.0	0	"	,,	78.8
02.643	3402·654 02·001	02·66 02·01	6	02.6	2 4	"	32	80·5 86·1
01.315	02.001	01.31	2	01.3	2	"	99	92.1
01 313		01.31	4	00.6	1	"	"	98.
00.264		00.26	1	00.2	i	"	"	29401.2
3398.713		3398.71	i	3398.7	î	"	"	14.6
97.910		97.90	i	0000	a la	"	"	21.6
				97.6	In	,,	"	24.
				97.12	4	,,	,,	28.4
96.973			2		MED.	"	"	29.7
95.862		95.85	2	95.8	1	"	8.4	39.3
	API MESTA	A A SHARE	100	95.2	ln	"	"	45.
		94.72	2	94.6	1	"	,,,	49.1
		P. C. T.	Page 1	93.0	1	"	99	64.
91.401		07.47	1	92.6	1	"	99	68· 77·9
91.401		91·41 89·64	1		POSS-	"	"	93.3
83.794		88.79	1	88.6	In	,,,	,,	29500.7
00 104		88.46	î	00 0	111	"	"	03.5
87.970		88.00	6	87.9	2	,,	"	07.7
		1		87.0	ln	"	"	16.
		86.76	1		1	,,,	,,	18.3
86.277	The State of State of	86.27	2		100 B	,,,	,,	22.6
86.077		86.06	2	86.1	ln	,,,	,,	24 4
04 800			1	86.0	2	,,	"	25.
84.732	PE. Down	84.74	2	84.7	1	,,,	"	39.0
		84.16	5	84.1	2	"	99	41.0
83.042	Marie Co.		2	83.8	ln 1	"	99	50.8
81.814	The same of the sa	81.81	2	81.7	1	"	,,,	61.6
01 014		01 01	4	81.3	ln	"	"	66.
80.674			0	80.7	1	"	"	71.5
1000	The least of	1000		79.5	În	"	"	82.
	-	78.80	2	78.8	1	. 19	, ,,	87.9
ME E ST		77.75	1	Total Cons		0.94	,,,	97.1
77.088		77.10	1	THE PARTY		,,	"	29602-8
108		76.80				,,	"	05.4
75.268		75.28	1			,,,	, ,,	18.8

i					-continued	•			1
		Arc Specti	rum		Spark Spe	ectrum	Reduction to Vacuum		
1	The state of the s	Wave-length		Inten- sity	Wave- length	Inten- sity	vacuum		Oscillation Frequency
-	ALE TO A	Rowland	Exner	and		and		1	in Vacuo
-	Kayser	and Tatnall	and Haschek	Cha- racter	Exner and Haschek	Cha- racter	λ+	$\frac{1}{\lambda}$	
			3374.35	1			0.94	8.4	29626-9
-			00,100	18.	3374.0	1	"	,,	30.
	3373-337		73.35	1			"	,,	35.8
			73.21	1			,,	,,	36.9
	72.929		72.70	1			"	,,	39.4
	~		72.21	3	72.2	2	"	22	41·4 45·7
	71.602		71.69	1			"	"	50.7
	70.725	3370.730	70.74	8	70.70	6	"	"	58.7
	70.340		70.37	. 3	70.3	1	,,	99	62.1
					69.7	1	,,	,,	68.
	68.617			2	00.0	1	,,	,,	77.4
			66.04	2	66.3	ln	,,,	,,	98· 29700·1
-	64.486		64.50	ĩ	64.5	1	"	"	13.8
	64.250		64.29	3	64.3	î	"	"	15.7
			63.09	1			,,	- ,,	26.2
	62.716		62.72	1	1000		,,	,,	29.4
d	61.905		07.07	0	1000		,,	,,	36.6
	61.280		61·31 59·90	3	61.2	2	"	8.5	42·0 54·4
	59.876		58.11	1 3	58.1	2	"	-	70.2
	58.095		57.69	1	00 1	-	"	"	73.9
	54.042		54.05	3			,,	,,,	29806.2
	51.853		51.90	3			,,,	"	25.6
	48.791		48.79	1			,,	,,	53.0
	42.018		42.05	1			,,,	"	29913.4
	40.851		40.85	1 0	1 5 5		"	"	24·0 35·2
	39.601		37.28	1	DE LES CONTRACTOR DE LA		0.93	"	56.0
	36.282	36.301	36.30	8	36.3	2	,,	"	64.9
	0.00		35.62	1			,,	,,	70.9
	34.295		34.30	1			,,	,,	82.8
	33.986		34.00	1			"	"	85.5
	00.050		29.35	1			"	,,,	30027·4 28·3
	29·252 27·562		29·26 27·59	4	27.6	2	"	"	43.4
	21.302		26.65	1	26.6	1b	"	"	51.8
			26.55	i			,,	"	52.7
1	25.644			0	25.6	1b	,,	"	60.9
	25.518		123	2			"	"	62.0
	24.876		24.89	1	04.5		,,	8.6	67.7
	24.486		24·51 23·30	3 ln	24·5 23·5	2 2	,,	"	71·1 82·0
	22.734		20 00	1	200	2	"	99	87.1
	22.175		22.20	î	22.2	ln	"	"	92.0
	(01)		20.58	ln	20.8	1b	,,	,,	30106.6
		1 A 13	20.05	ln	A GIEL	100	"	,,	11.4
i	18.724	· Editor Str	18.74	ln	18.8	1b	"	"	23.4
1	18.284		18.31	ln ln			"	"	27·3 30·0
	17·998 17·420		18·01 17·40	ln ln			"	"	35.4
	16.822		16.81	2	16.8	1	99	"	40.8
1	15.816		15.83	2	15.9	î	**	"	49.8
	. 15.555	B B B E	15.56	2	15.7	1	:,	- 12	52.2

OSMIUM—continued.

	Arc Spect			Spark Spe		Reduction to			
	Wave-length		Inten-	Wave-	Inten-		uum	Oscillation	
			sity	length	sity			Frequency	
77	Rowland	Exner	and Cha-		and		1	in Vacuo	
Kayser	and Tatnall	and Haschek	racter	Exner and Haschek	Cha- racter	λ+	λ		
		3314.88	1)	3314·1	2 {	0.93	8.6	30158-4	
		13.60	1 }	93141	4	,,,	,,,	70.1	
3312.178		12.18	1			,,	99	83.0	
11.035		11.05	4	11.1	2	"	,,	93.4	
00.953		09.83	1			"	,,	30204.4	
06.352		06.34	3			99	"	36.3	
05·501 04·980		05.21	1 0			99	"	44.0	
01.990			1			"	"	48.8	
01.692	3301.708	01.70	10	01.7	2	99	"	76·2 78·8	
3298.374	3301 700	01 70	0	3297.3	2	0.92	"	30309.4	
9290 91±		3293-29	1	3237 3	-		"	56.2	
91.259		91.25	i			"	"	74.9	
01 200		90.40	4	90.5	2	"	"	82.8	
89.387		00 10	4	000	-	"	"	92.2	
88.960		88.96	2			22	8.7	96.0	
88.616		88.57	1			"	,,,	99.4	
		86.81	1			,,	,,	30415.9	
84.680		84.68	1			,,	,,	35.7	
81.028		81.06	2			,,,	"	69.4	
79.590		79.55	1			,,	,,	83.1	
78.086		78.09	4			,,	,,	96.9	
76.533		76.54	1	75.5	1	,,	"	30511.3	
75.320		75.31	4	75:3	2	"	22	22.7	
73.513		73.54	1	74.2	2	>>	"	39.4	
72.607		72.63	î	112	-	"	"	47.9	
72.301		72.30	2	72.3	1	22	"	50.8	
72.118		72.12	1			,,	,,,	52.5	
				72.0	1	,,	,,	54.	
71.320			0			"	99	60.0	
71.002		71.02	1			"	,,	62.9	
70.025		70.05	1	20.00		99	29	72.0	
69·340 68·080	3268.078	69·36 68·10	5 10	69.38	4	""	,,,	78·4 90·2	
67.338	3200 010	67.34	1	68·10 67·40	8	"	"	97.2	
66.890		66.89	1	07 40	0	"	"	30601.4	
66.565		50.00	2			"	"	04.5	
64.820		64.85	ī	64.8	ln	"	"	20.7	
62.880		62.89	4	63.00	4	"	,,	39.0	
62.428		62.44	8	62.48	8	"	,,	. 43.3	
				61.2	1	,,	,,	54.9	
60.683		60.70	1	60.7	1	"	,,.	59.6	
60.420		60.43	3	60.5	2	"	>>>	62.1	
59.530	ACTUAL DE	59.56	ln	pr ber a	0	0.91	"	70.4	
57·051 55·414		57·05 55·41	3	57.1	2	"	"	93.9	
55.139		99.41	0			"	"	30709.4	
55.038		55.04	3	55.1	2	"	"	12.9	
23 000	E. C. L. S. L.	30 01		54.4	În	"	"	18.9	
STILL BE IN			Page 1	53.4	ln	9,3	177	28.4	
	THE RESIDENCE	52.14	2		833	911	8.8	40.2	
	During but	51.03	1	DETAILS.		,,	"	50.7	
50.974	100 3 5	100 000	0			,,,	,,,	51.2	

OSMIUM-continued.

	Arc Spect	rum		Spark Spe	ectrum	Reduc		
V	Wave-length		Inten-	Wave-	Inten-	Vacı	ıum	Oscillation
		1	sity	length	sity			Frequency
	Rowland	Exner	and		and	1770.3		in Vacuo
Kayser	and	and	Cha-	Exper and	Cha-	λ+	$\frac{1}{\lambda}$	
Truy Ser	Tatnall	Haschek	racter	Haschek	racter		λ	
3250-695		3250.50	1	3250.7	2	0.91	8.8	30754.7
48.106		48.14	2n	48.1	ī			78.1
10 100		10 11		47.80	4	"	"	82.2
		45.79	ln	7,00	-	"	"	30800.3
		40 10	111	• 45.3	2	"	"	
49.700			0	40.9	2	"	"	05.0
43.700		10.11	0			,,	22	20.2
42.108		42.11	1	FIG. 115 F		,,,	,,	35.3
				42.0	1b	,,	,,	36.4
41.933		41.94	1	41.2	2	,,	,,	37.0
41.642		41.56	1			,,	,,	40.1
41.159		41.18	3	I FE WAR		,,	,,	44.2
39.398			0	The side of		,,	,,	61.1
38.751		38.75	3					67.3
00 101		38.30	1	38.3	In	"	"	71.6
		30 30	1			"	. 22	1
		The same of		37.0	1	"	"	84.0
				36.6	1	"	,,	87.8
THE REAL PROPERTY.			100	36.2	ln	,,	,,,	91.6
34.858		34.86	1	34.8	1	,,	,,	30904.4
34.651		34.81	1			,,	,,	05.7
34.318		34.34	1	34.3	1	,,	,,	09.5
32.672		32.67	1	32.6	1	"	,,	25.4
32.196	3232-195	32.19	8	32.20	10			29.9
32.072	0202 100	02 10	2	02 20	10	27	"	31.1
31.543		31.56	1	31.5	1	"	"	36.1
			1	91.9	1	"	"	
31.410		31.45		00.0		"	"	37.2
30.525		30.53	1	30.6	ln	, ,,	,,	45.9
1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1			100	30.0	ln	"	,,	51.
29.336		29.35	1			"	,,,	57.2
		The Paris		29.1	ln	,,	,,	60.
				28.8	1	,,,	,,	62.
27.409		27.41	2	27.4	1	,,,	,,	75.8
				27.0	1	22	,,	81.
26.579			0	26.5	1	39	,,	83.8
23.987		23.99	1	24.0	1	"	,,	31008.7
20 001		-00		22.5	î	,,	,,	23.
		21.53	In	21.5	În			32.3
21.444	- T. 18	21 00	4	210	III	"	"	33.1
						0.90	,,	38.5
20.895		The same and	0	90.4	,		"	
20.408		00.001	1	20.4	1	"	,,	43.2
20.318		20.36		1 1000000000000000000000000000000000000	The state of	"	,,,	43.8
19.260		19.26	1	19.3	1	,,	,,,	54.2
18.153		18.15	1	10000		,,	,,	64.9
1		I THE		17.4	1	,,	,,	72:
17.177		17.17	1	17.2	1	,,	,,	74.4
				16.8	1	,,	,,	78.
The Later Co.		VESTILE DE	100	16.6	1	,,		80.
16:340			0		1	Aller all	8.9	82.3
10010		1		15.8	In	"		88.
				13.8	2n	,,	"	31107
		19.50	1			"	"	
		13.59	1	13.50	10	"	"	08.9
10, 110			the state of the s			,,	"	10.5
13.418		13.44		100		77	"	
13·418 12·840		12.85	i	12.9	1	"	"	16.2
				12·9 12·6	1 1			

OSMIUM—continued.

				1	-			
	Arc Spect	rum		Spark Spe	ectrum		ction to	
	Wave-length		Inten- sity	Wave- length	Inten- sity	vac	dum	Oscillation Frequency
	Rowland	Exner	and		and	1026		in Vacuo
Kayser	and	and	Cha-	Exner and	Cha-	λ+	1_	III Vacao
	Tatnall	Haschek	racter	Haschek	racter		$\frac{1}{\lambda}$	
The Alexander				3209.4	1	0.90	8.9	31150-
				08.1	2	,,		62.
3205.909		3205.90	1	05.9	ln	"	"	83.5
BEI EVEL				05.3	ln	"	,,	89.
04.646		04.64	1	04.6	ln	"	,,	95.8
04.755	Late Vision			04.3	1	"	,,,	99.
04.155	See Marie	00.11	2	00 4	HIE-	"	"	31200.6
02.076		03.44	1	03.5	ln	"	,,	07.5
02.956	the state of	02.95	2	03.0	1	"	"	11.9
				01.0	1	"	22	28.
		00.89	1	01.0	ln	"	199	31.
	ED [1]	3198.26	1	3198.3	ln	"	. "	32·4 58·1
3197.310	1000000	97.30	1	97.3	111	"	"	67.2
96.152		96.11"	3°	96.2	2	"	"	78.9
96.082	THE REAL PROPERTY.	30 11	0	002	-	"	"	79.4
95.494		95.50	3	95.5	2	"	"	85.1
94.805		94.80	2	94.8	ĩ	"	"	92.0
94.350		94.37	3	94.4	2	"	"	96.3
93.986		93.99	2	94.0	1	"	"	99.9
		91.31	1			"	,,	31326-2
				90.9	ln	,,	,,,	30.2
89.566		89.56	3	89.6	2	"	,,	43.4
87.443		87.45	2	87.5	1	,,	,,	64.2
27.000				87.2	2	,,	22.	67.
87.096		87.08	3			,,	"	67.7
00.049		86.65"	1			"	,,	72.0
86·643 86·516			2 2	86.50		"	,,,	72.1
85.439		85.42	3	85.4"	4	"	"	73·3 84·0
85.304		00.42	0	69.4		"	"	85.3
84.458		84.46	1			"	"	93.6
83.905		0110	ō			"	"	98.2
83.661			1		363	"	"	31401.5
				83.5	1	"	"	03.
83.341			0	1-350		,,	,,	04.6
		82.92	1	83.0"	1	"	,,	09.
	and the second	82.68	2	82.7	2	r,	"	11.2
01.00	ON THE PARTY IN	82.35	1	00.0		"	"	14.4
81.907		81.99	3	82.0	2	0.89	"	18.4
80.237		80.23	1	80.3	1	"	9.0	35.2
78.357		79·37 78·36	1	79·6 78·3	1b 2	39	"	43.8
78.184		78.18	5	10.9	4	"	"	53·8 55·5
77.522		77.51	1			"	"	62.1
75.781		75.77	î	75.7	ln	"	••	79.4
				75.0	ln	"	"	87.1
74.284			1	The second		"	"	94.2
74.037	The state of	74.05	1	74.03	8	,,	,,	96.6
73.609			0			"	,,	31500.9
73.306		73.31	2	73.4	1	22	,,	03.9
REPLECIES !	St. I was	72.96	1	-0.0	. 3	,,	,,	07.3
SCHOOL		W1 MM		72.6	1	"	"	10.9
-325	404	71.75	1			99	"	19.3

	Arc Spect	rum		Spark Spe	ectrum	Reduc	tion to		
1	Wave-length	A Section	Inten-	Wave-	Inten-	Vacu	ıum	Oscillation	
			sity	length	sity			Frequency	
County and	Rowland	Exner	and		and		1_	in Vacuo	
Kayser	and	and	Cha-	Exner and	Cha-	λ+	λ		
	Tatnall	Haschek	racter	Haschek	racter				
3171.249			0			0.89	9.0	31524.3	
				3170.6	1	"	,,	31.	
				68.9	In	,,	,,	48.	
				68.5	2	,,	,,	52.	
68.390		3168.39	2			,,	99	52.8	
				68.2	ln	,,	,,,	55.	
66.611		66.62	3	66.65	4	,,,	"	70.5	
65.772			. 2	65.82	8	,,	,,	78.9	
				64.8	1	- ,,	"	89.	
64.718		64.75	2	64.7	1	"	,,	89.2	
64.550		61.00	0 2	61.0	To and	,,	"	91.1	
61.837		61.86	2 2	61·8 61·6	1 1	,,	"	31618.1	
61.547		60.57	2	01.0	1	"	"	21·1 31·1	
60.397		60.44	1	60.4	1	"	"	32.4	
59.477		59.48	î	00 4	1	"	,,	41.8	
09 411		00 40	1	58.6	1	"	"	51.	
and the state of the				58.2	î	"	"	55.	
57.342		57.35	2	57.3	1	"	"	63.2	
57.102		57.11	1	57.1	1	27	"	65.6	
56.878	in the	56.89	3	56.9	2	,,	"	67.8	
56.365	3156.384	56.38	8	56.35	10	,,	,,	72.9	
55.450		55.45	1			,,	,,	82.2	
54.666			0	54.5	16	,,,	,,	90.1	
53.727		53.72	3	53.7	2	,,	,,	99.6	
52.806		52.80	3	52.8	2	"	,,	31708.8	
52.181		52.19	2	52.1	2	,,	,,	15.0	
51.005			0 0n	50.7	1	99	,,	26·9 29·7	
50·730 50·260			0	20.1	1	"	,,	34.4	
49.927		49.93	ln	49.9	1	"	"	37.8	
49.365		10 00	0	100	200	29	,,	43.4	
47.601						"	",	61.2	
46.843			0			"	9.1	68.8	
	1	F. CEC	1000	46.5	1	,,	,,	72.	
46.074	1 1 1 1 1 H	46.08	1	46.1	1	,,	"	76.5	
			1 3 % b	45.4	ln	"	,,	83.	
44.471		44.50	2	44.5	2	,,	,,	92.6	
43.169		43.19	1	43.2	1	",	"	31805.8	
41.056	2	41.06	1	41.1	1	0.88	"	27.3	
40.431		40.44	1	40.5	1	***	"	33.6	
39.745		1000	0	38.2	1	"	,,,	40·6 56·7	
38.157		37.65	1	38.2	1	"	",	62.0	
37·636 37·421		21.03	0	31.1	1	"	"	64.2	
36.785		13 6	0		1154	"	"	70.7	
36.334			0			"	"	75.2	
35.126	1		0	THE HELL	133	"	",	87.5	
34.805	THE RESERVE		0		Tay.	"	,,	90.8	
33.953			0	34.0	1	,,	1,	99.1	
1 1 1 B W 15		1 1 1 1 1 1		32.8	1b	"	,,	31911.	
31.995	La Silve		0		THE REAL PROPERTY.	,,	"	19.4	
1	1	31.62				"	"	23.3	
31.027	1 100 100	31.23	3	31.3	2	"	"	27.2	

Osmium-continued.

The state of	Arc Spect	rum	Half-Bay	Spark Spe	ectrum		tion to	
The state of	Wave-length	FALLE	Inten-	Wave-	Inten-	Vacuum		Oscillation
Mark Sta	8		sity	length	sity			Frequenc
	Rowland	Exner	and	0	and			in Vacuo
Kayser	and	and	Cha-	Exner and	Cha-	λ+	$\frac{1}{\lambda}$	III vacuo
11ay ser	Tatnall	Haschek	racter	Haschek	racter	АТ	λ	
3131.021	TOTAL STREET		0			0.88	9.1	31929.4
0101 021				3130.5	1			35.
30.125		3130.14	1	30.2	î	"	"	38.4
29.348		29.35	î	29.3	î	"	"	46.4
20 010		20 00	18 10	29.0	i	"	"	50.
28.677		28.55	ln	28.6	î	"	"	
27.620		20 00	0	200		2,2	"	53.9
21 020		415.054	0	27.0	1	"	"	64.1
25.643			0	25.6	În	"	"	70.
20 040		25.05	ln	200	111	"	"	84.3
		20.00	111	24.4	1	"	, ,,	90.4
94.149		04.14	10	24.4	In	"	19	97.
24.142		24.14	ln	99.5	1	"	"	99.7
For John				23.5	ln	"	"	32006
91.509			0	22.8	ln	"	"	13.
21.592			0			,,	"	25.8
21.307		20.55	0	00.0	788	. ,,	"	28.8
20.777		20.77	1	20.8	1	"	"	34.2
20.016		20.00	1	20.0	1	"	,,	42.0
19.196			0	19.2	ln	"	"	50.4
				18.5	2	,,	,,	58.
18.450		18.44	2			,,	"	58.2
18.242		18.24	1	18.3	2n	,,	22	60.3
18.014		18.00	1			,,	,,	62.7
17.215			0			- 99	,, .	70.8
16.593		16.59	1	16.6	1	,,	,,	77.6
15.838						,,	,,	85.0
			0	15.6	ln	,,	,,	87.4
15.150		15.13	1	15.1	1	,,	,,	92.2
14.932		14.92	1	15.0	1	"	,,	94.4
13.405			0	13.5	1	,,	9.2	32110.0
12.630			0			,,	"	18.0
11.196		11.20	2	11.3	2	,,	• ,,	32.8
10.743		10.75	1	10.7	1	,,	,,	37:4
10.538			1	10.5	1	22.	,,	39.6
09.800		09.79	1	09.8	2	,,	,,	47.2
09.504		09.50	3	09.5	2	,,	,, -	50.3
09.102		09.09	3	09.1	2	,,	"	54.5
08.846			0	08.9	1	,,	"	57.1
08.098		08.08	1	08.2	1	,,	,,	64.9
07.989		08.00	1	THE PARTY		,,	,,,	65.9
07.495		07.49	1	07.5	1	,,	,,	71.1
07.119			0.			,,	,,	75.0
06.762			0	06.8	ln	,,	,,	78.7
06.114		06.10	3	06.2	2	,,	,,	85.4
THE PARTY OF				05.7	1	"	,,	90.
				05.5	1	,,	,,	92.
05.098		05.09	2	05.2	1	"	,,	95.9
			FUR I	04.0	1	"	"	32207
03.412		03.53	1n	. 03.5	1	"	"	12.8
02.835			2	02.9	î	"		19.4
02.503		02.50	1	02.5	i	,,	"	22.7
		01.64	3	01.7	2	0.87		31.8
			E RIBLE	01.3	1	,,	"	35.
		3099-38	1	3099.4	i	77	1 77	55.3

OSMIUM—continued.

		Arc Spect	rum		Spark Spe	ectrum	Reduc	tion to	
-		Wave-length		Inten-	Wave-	Inten-	. Vacı		Oscillation
-				sity	length	sity	-		Frequency
		Rowland	Exner	and		and		1	in Vacuo
	Kayser	and	and	Cha-	Exner and	Cha-	λ+	$\frac{1}{\lambda}$	
		Tatnall	Haschek	racter	Haschek	racter			
	Control of	-	The same		3098.7	1	0.87	9.2	32262
					95.2	1b	,,	22	99.
	3094.192		3094.20	1			,,	,,	32309.4
	93.704		93.70	2	93.8	2	,,	,,	14.5
					92.8	In	,,	,,	24.
	92.613			0			,,,	,,	25.9
	The same of				91.5	2	,,,	,,	38.
	91.368		91.38	1	KIES IN		,,	,,	38.9
	90.613		90.62	1	90.7	1	"	,,	46.8
	90.416		90.42	1	90.5	1	"	22	48.9
	90.205		90.21	2	90.3	2	,,	22	51.1
					89.5	ln	,,	,,	58.
	88.545		STATE OF	0	88.5	1	,,	,,	68.5
	88.385		88.37	1			,,,	,,	70.2
			Free Sal		88.0	1	,,,	"	74.
	87.868			2			"	"	75.6
				1 62	87.3	1	,,	"	82.
	87.125	Patriculation	- 3	0	THE PARTY		,,	"	83.4
	86.394		86.40	1	86.5	1	"	,,	91.0
	85.982	Fig. B. St.	-32	0			,,	"	95.4
		HE EST		1 10	85.2	2	"	"	32404
	85.004			2	85.0	1	,,,	"	05.7
	84.715		84.72	1	ALC: NOT	1	,,	"	08.7
					84.0	1	,,,	"	16.
	00 805				83.7	1	99	9.3	19.
	83.565			0	000	1	,,,	" "	20.7
		Ch. 1913	E HEAD	138 148	82.9	1	"	"	28.
	01.010				82.6	1	"	"	31.
	81.313			0			"	"	44.4
	80.907			0	00.7	1	"	"	48.7
	80.614		TO SHEET	0	80.7	ln	"	"	51· 51·8
	80.014		70.07		70.7	1	,,	"	
			79.67	1	79.7	1	"	"	61·7 65·
	78.496		78.48	2	79·4 78·6	1	"	"	74.2
	78.227		78.48	3	78.3	2	"	"	77.1
	77.834	3077.841	77.82	4	77.82	4	99	"	81.1
	77.557	0011 041	77.55	2	77.6	2	"	"	84.0
	77.167	100	77.16	2	77.2	2	"	"	88.2
	76.845	See a large	76.86	În	76.8	1	23	"	91.4
	.0010	100000	,000	211	76.5	2	"		95.
	75.074		75.06	2	75.2*	2	"	"	32510.3
	74.771	Company of the last	10 00	ō	.02		"	"	020130
	74.192		74.21	3	74.3	2	"	"	13.4
	125				73.3	2	"	"	29.
	72.681	R. T. T. S.		0	18 8 8 8	1 7 5 5	"	"	35.6
	71.974			1		0.3	,,	,,	34.1
	70.374	100	70.38	1	70.5	1	22	"	60.0
	70.049		70.05	2	70.1	2	,,	"	63.5
	Carrie als		69.25	1	To die	1341	,,	,,	71.9
	66.945		66.97	1	67.1	1	,,	"	96.3
	66.715		66.71	1	66.6	1	,,	,,	98.9
	66.225		66.25	2	66.3	1	"	22	32604.0
	65.783			0	E CHILDRE		,,	,,,	08.8

^{* 3076.0 (10)} Zn? possibly belongs to Osmium.

	Arc Spect.	Spark Spe	ectrum		tion to			
1	Wave-length		Inten-	Wave-	Inten-	Vac	uum	Oscillation
			sity	length	sity		7	Frequency
	Rowland	Exner	and		and			in Vacuo
Kayser	and	and		Exner and	Cha-	λ+	1_	1 3 3 1 1 W
	Tatnall	Haschek	racter	Haschek	racter		λ	
3065:391			0			0.87	9.3	32613.0
63.480			ì					33.3
62.803		3062.80	1			0.86	"	40.5
62.584		62.59	1		100	"	,,	42.8
62.297		62.31	3	3062.23	4	,,	,,	45.8
62.039			0			,,	,,	48.7
61.814		20.11	1			"	,,	51.1
60·412 60·248		60.44	2	60.5	2	"	"	65.9
58.782	3058.766	58.80	0 8	58.76	10	"	99	67.8
00 102	3038 700	99.90	0	58.4	1	"	"	83·4 88·
			1	58.2	i	"	"	90.
57.014	STAND TO	57.03	1	57.0	i	"	"	32702.3
56.315	E', 15	100	ō			"	"	09.8
55.726			0		DIX .	"	"	16.2
55.326		55.33	1	55.4	2	,,	,,	20.4
BUM ST				55.2	1	,,	"	22.
55.086		55.09	1			"	,,	23.0
54.780			0			,,	"	26.3
54.620			1			"	"	28.0
54·091 53·743			2 0			93	9.4	33.6
99.149			0	53.5	1	"	"	37·3 40·
53.004			0	53.0	1	"	"	45.2
52.540		52.55	1	52.5	i	39	"	50.2
				51.4	î	11	"	62.
51.280		51.29	1		ESTA T	39	,,	63.7
50.517		50.53	2	50.6	2	34"	"	71.9
49.580		49.58	2	49.6	1	47	"	82.0
49.172		49.17	1	49.2	2	"	"	86.4
47.574 46.200			1 0	47.6	In Fe	"	"	32803·6 17·
40 200	THE PARTY NAMED IN		U	46.3	1	"	"	18.4
45.898		45.90	1	46.0	1	"	"	21.6
45.430		45.43	î	45.4	i	"	"	26.7
45.031		45.04	1	45.1	1	"	,,	31.0
44.525	CHARLES AND	44.54	1	44.6	1	"	"	36.4
44.191		44.20	1	44.2	1	,,	"	40.0
44.040		49.70	9	400	2	,,	"	41.7
43.793	B-11-16	43·78 43·62	2 2	43.8	1	,,,	"	44:4
42.860		42.85	1	43.7	8 Ti ?	"	"	54.5
41.021	41.023	41.03	4	41.00	8	99	"	74.2
40.184			1	11.00		"	"	83.4
36.668			2			"	"	32921.4
				35.3	1	,,	,,	36.
33.843	10000		0	0.5		"	"	52.1
33.331		92.04	2	33.4	2	"	"	57.6
32.924	100	32.94	1	33.0	1	"	"	62.0
31·828 31·418		31.41	1 1	31.5	1	"	"	74·0 78·5
31.122	Sharp and	31.13	1	31.2	1	"	"	81.6
30.817		30.83	4	30.82	8	"	"	84.9
29.496	THE PARTY		2			",	"	99.4

	Arc Spects		Spark Spectrum		Reduction to			
	Wave-length		Inten-	Wave-	Inten-	Vacu	ıum	Oscillation
			sity	length	sity			Frequenc
	Rowland	Exner	and		and	1000		in Vacuo
Kayser	and	and	Cha-	Exner and	Cha-	λ+	$\frac{1}{\lambda}$	III THOUGH
	Tatnall	Haschek	racter	Haschek	racter		λ	
	SE THE	3029.03	1	3029.1	1	0.86	9.4	33004.5
		0020 00	180	28.8	î			07.
3028.032			2	200	•	"	"	15.3
27.790			ō			"	"	18.1
27.659			1	27.6	2	"	"	19.4
2, 000				25.5	ĩ	22	"	43.
24.434			0	200	1	99	9.5	54.5
21 101			U	23.7	1b	"		63.
				22.9		0.85	"	
22.382			0	22.9	ln		"	71.
			0	TO STATE OF		"	"	77.0
21.226			U	01.7	250	"	"	89.6
			1337	21.1	1	"	"	91.
20 400				20.9	1	"	"	93.2
20.782			3			,,	,,	94.
		20.63	2 3			,,,	"	96.2
19.498		19.50	3	19.6	2	22	,,	33108-0
18.744			0	- 11528		,,	,,	16.9
18.440			0		E-196	"	,,	20.2
18.169	3018-155	18.16	4			,,,	"	23:3
			113	18.13	8	"	"	24.
17.380		17.38	3	17.4	2	,,	,,	31.8
15.772		15.77	1	15.8	1	"	"	49.
			13300	15.4	1n	"	"	54.
15.158			0	- 100	112	"	"	56:
			10000	14.4	1	,,	,,	65.
14.068			2	14.00	4			68.2
13.194		13.22	3	13.3	2	"	"	77.7
12.902			1	100		22	"	81.
12 002		12.52	î		PAR !	"	"	85:
		10.05	i	10.1	1b	"	>>	33212-8
		10 05		08.7	1	"	"	27.
08.022		08.05	1	08.0	1	"	"	34.8
00 022		07.00	1	08.0	1	"	22	
05.070		07.00	0	L CONTRACTOR	The same	"	"	46.2
05.878			0.		Bully St.	"	"	58.6
05.064					The lates	"	"	67.
04.872		00.00	0	00.0		"	"	69.8
03.605		03.62	1	03.6	2	"	99	83.7
				02.8	1	"	"	93.
			1 35000	02.0	1	",	"	33302
00.001				01.1	1	,,	,,	12.
00.234			1	00.2	1	"	"	21.9
				2999.2	1	,,	,,	• 33.
2997.777		2997.75	2	97.8	2	99	,,	48.
96.385			0		1000	,,,	9.6	63.9
95.762			2	95.7	1	,,	,,	70.9
95.298			0	THE STREET	13 , 60	79	,,	75:
94.908			0	94.9	1	"	"	80.4
93.698		93.70	1	93.7	1	"	,,	93.9
			1520	92.5	1	,,	,,	33407
92.240		92.24	1	92.3	1	"	,,	10.5
90.763			i	No. of the last of	BURE !	,,	"	26-
		bone all the	Ō		TEST !	,,	"	35.6
89.963					A CONTRACTOR OF THE PARTY OF TH	37	77	
89.963		THE STREET	1808	89.8	ln	"	,,,	37.

OSMIUM-continued.

		Arc Spect	rum		Spark Spe	ctrum	Reduct	tion to	
	V	Vave-length		Inten-	Wave- length	Inten-	Vacı	ıum	Oscillation
		2 1 1		sity	length	sity			Frequency
	17	Rowland	Exner	and Cha-	13	and Cha-		1	in Vacuo
	Kayser	and Tatnall	and Haschek	racter	Exner and Haschek	racter	λ+	λ	
	2989-253	He Ba	2989-25	1	2989.2	1	0.85	9.6	33443.6
	88.396		88.37	1	88.5	1	,,	,,	53.3
			87.76	1			,,	,,	60.3
					86.2	1 .	,,	,,,	78.
	85.752		85.75	1	85.7	1	,,	,,	82.8
-	85.084			0	85.0	1	,,	,,	90.3
	84.751			0	THE WALL		,,	,,	93.8
1	84.419		84.43	ln			,,	,,	97.7
-					, 83.6	2	,,	,,	33507
1	00 000		00.05		83.2	1	,,	,,,	11.
	83.032		83.05	2		FRE	,,,	,,	13.2
1	82·680 82·252	St.	82.70	1		-	0.84	,,	17.2
	82.252		82.25	1	01.7	11.	2,9	,,,	22.1
F	80.453			0	81.7	1b	29	99	28.
ŀ	79.802			0	80.5	1	99	"	42.3
ļ	79.555		79.54	1	79.5	1	""	,,	52.5
1	78.645		78.63	1	78.7	1	"	"	62.7
ł	78.338		78.31	1	78.4	1	"	" "	66.3
1	77.757		77.75	2	77.7	2	99	"	72.8
	11 101		11 10	-	77.5	ī	, ,,	,,,	76.
1	76.470		THE PARTY NAMED IN	0	110		"	"	87.2
1	75.461		75.45	1	75.5	1	,,	"	98.7
	.0 101		70 10	1	75.3	i	"	"	33600
-			72:36	1	72.3	În	"	,,	33.7
	71.098		71.10	3	71.10	4	"	"	48.0
	70.825		70.80	1		The state	"	9.7	51.1
	69.938			0			,,	,,	61.0
			68.55	1	68.5	16	,,	,,	76.8
1	67.860			0		1	,,	,,	84:6
1				and the	67.0	1	.,	,,	94.
1	66.685			0		1	1	,,	97.9
	66.428			0	66.4	1	25	,,,	33700.9
	66.217			0			1 ,.	5.9	03.3
				188	65.6	1	92	,,,	10.
	65.215			1	65.3	1	,,	*,,	14.7
	64.890		0.5	0	0.1 =		"	,,	18.4
	04 100		64.75	1	64.7	1	,,	,,,	20.0
	64.190		64.21	3	64.2	2	,,	,,	26.2
	63.178			0	63.1	1	"	,,	37.8
	63·005 62·819			1 0	The same of the		,,	"	39.8
	62.465		62.45	2			. ,,	, ,,	41.9
	62.272		62.49	2 2	62.3	2	99	"	46.1
	61.526		02 29	0	02'3	1	"	"	48·1 56·7
	61.140		61.15	2	61.1	2 Cu	, ,,	"	61.1
	58.467		58.48	1	01.1	2 Cu	1	"	91.5
	57.774		20 30	0			,,	"	99.5
	57.214		57.20	1	57.2	1	,,,	"	33806.0
	56.629		56.62	î	56.6	1	"	"	12.6
			THE VIEW	The L	56.3	i	"	"	16
	55.128		55.13	1	55.1	1	"	,,	29.8
	The same			FILE.	54.7	1	"	,,	35.
			3 3		53.7	1	,,	21	46.

OSMIUM—continued.

	Arc Spect	rum		Spark Spectrum		Reduction to			
			1	777	1	Vaci			
	Wave-length		Inten-	Wave- length	Inten-			Oscillation	
1	Rowland	Exner	sity	lengun	sity			Frequency in Vacuo	
Kayser	and	and	Cha-	Exner and	Cha-	λ+	1_	III Vactio	
rayser	Tatnall	Haschek	racter	Haschek	racter	N.	λ		
2952-412	gre in Milit	2952.45	1	2952.4	1	0.84	9.7	33860.7	
				51.7	1	,,	,,	69.	
51.357			1	51.3	1	,,	,,	73.0	
50.986		~~ ~~	1	50.9	1	,,	,,	77.3	
10.000		50.00	1			,,	, ,,	88.6	
49.930		49.93	1	40.0	-	,,	,,	89.4	
49.635	TARLE BY		3	49.8	1	"	"	91.	
49.635		49.63	3	49.62	6	"	"	92·8 92·8	
48.328		48.33	4	48.30	4	"	"	33907.8	
47.277		10 00	0	10 00	-	"	,,	19.9	
46.705	The state of		0			"	"	26.5	
45.437			0	45.5	1	"	9.8	41.0	
			TO BE	44.2	1n	,,	,,	55.	
43.756			1			,,	,,	60.4	
43.291			2			,,	,,	65.8	
42.981		42.96	2	43.03	4	0.83	,,	69.5	
42.692		10.00	0			,,	,,	72.7	
42.348		42.32	ln ln			"	,,	76.8	
42.267			1			,,	,,	77.6	
41.989			0	41.0	11.	"	,,	80.8	
40.873			0	41.0	1b	"	"	92.7	
40.694			0			",	"	93·7 95·8	
40.208			0			"	97	34001.4	
39.519			0			"	- ''	09.4	
38.590			0			"	"	20.1	
38.491			0	38.4	1n	"	"	21.3	
37.111			0	37.0	2n	"	,,	37.3	
36.817			2	1-12		"	,,	40.7	
		E Maria		35.6	lb Zn?	,,	,,	55.	
35.083		04 77	0	0.4 =	-1-14	,,	"	60.8	
34.779		34.75	2	34.7	1	"	,,	64.5	
34·420 34·111			0 3	34.1	1	,,	99	68.5	
32.585	The state of	OF WELL	2	32.6	1	"	"	72·1 89·8	
92 000		Real Bridge	1	32.4	1	"	"	92.	
31.879		1 4 11 11	0	02 1		"	"	98.0	
31.416		31.42	2	31.3	2	"	"	34103.4	
30.704		30.69	1	30.6	ī	,,	,,	11.8	
30.334		30.32	1	30.3	1	,,	,,	16.1	
29.646		29.62	2	29.5	2	,,	,,	24.2	
27.370		D 37 9 10	0			,,	,,	50.5	
07 500		0 - 00	-	26.0	1	,,	- ,,	67.	
25.708		25.69	2	25.6	2	,,	,,,	70.1	
25.414		25·41 24·64	1	94.6	,	"	"	73.4	
24·617 23·298		24.04	2	24.6	- 1	"	. ,,	82.6	
23.798			0	23.1	1n	"	"	98·1 34200·4	
22.818			0	201	111	,,	"	03.8	
21.193		21.20	1	21.3	1b	"	9.9	22.6	
20.974			Ō		1.0	"	,,	25.2	
20.204		1 (2)	1			,,	,,	34.3	
19.935		19.94	4	19.85	8	••	,,	37.4	

OSMIUM—continued.

	Arc Spect	rum		Spark Spe	ectrum	Reduc	tion to	
The state of	Wave-length		Inten-	Wave-	Inten-		num	Oscillation
	1	1	sity	length	sity		1	Frequency
	Rowland	Exner	and		and		1	in Vacuo
Kayser	and	and	Cha-	Exner and	Cha-	λ+	$\frac{1}{\lambda}$	
	Tatnall	Haschek	racter	Haschek	racter		^	
2919:380			0			0.83	9.9	34243.9
19.053			0			,,	,,	47.8
17.946		2917.94	2	2917.8	2	99	"	60.8
17.383		17.37	3	17.3	2	"	29	67.5
16.193			0	100		,,	,,,	81.4
15.586			0	15.7	1	,,	"	88.5
15.382		14.04	0	14.77		"	,,	90.9
14.841		14.84	1	14.7	1	"	,,	97.3
14.341		10.00	1	10.0	,	,,	,,	34303.2
13.969	SHE SELFE	13.96	1	13.8	1	,,	,,	07:6
12.470		12.47	3	12.40	8	,,	99	25.2
11.939			0			99	99	31.5
11.695		3.7 AM	0			99	29	34.4
11.466		11.47	1	12.0	11.	"	99	37.2
11·269 10·801			0	11.2	1b	"	,,,	39.4
10.901			1	10.6	2	"	"	44.9
09.797	2909.79		1	10.0	2	99	"	47.
09.191	2000.10		1	09.6	10	,,	"	56.8
09.185		09.20	8	09.05	ln 10	"	99	59· 63·9
		09.20		09.03	10	"	,,	
08·468 08·150		08.15	0	08-1	1	,,	99	72.5
03.130		09.19	1	07.1	ln	"	,,	76·2 89·
06.909			0	07.1	111	"	"	90.9
00 203			0	06.7	1	"	"	94.
06.103		06.09	1	06.0	î	"	"	34400.5
05.862		05.85	1	05.8	i	"	"	03.4
03.354		03.34	î	03.2	2	0.82	"	33.1
03.193		03.21	i	002			"	34.8
01.455		01.45	i		10.8	"	37	55.6
01.308		02.20	ō				"	57.3
02000				01.2	1	"	,,	59.
				00.3	i	,,	37	69.
2899.372			0	2899.3	2	,,	"	80.3
98.023			0		HAR W	,,	,,	96.4
96.183		2896.19	2	96.2	2	,,	10.0	34518.2
	EL BUSIN	95.19	1	95.3	1	,,	,,	30.0
93.014			0	LE ESTATE		,,	,,	56.0
92.466		92.47	1	92.4	1	,,	,,	62.6
91.961		91.98	1			,,	,,	68.5
90.970		91.00	1	90.9	1	,,,	,,	80.3
89.654			0	F STEEL C		,,	,,	96.2
89.280		ALC: NO.	1	Establish .		97	,,	34600.7
86.622		86.65	ln	000		,,	,,	32.4
86.368			0	86.3	2	,,	,,	35.4
86.182			0		0	,,	,,	37.8
85.295			0	85.2	2	,,	??	48.5
84.967		04.55	0	04.4	11 77 0	,,	,,	52.4
84.537		84.55	1	84.4	1b Zn?	,,,	"	57.5
84.064		Part Service	1	00.4	1-	"	,,	63.3
			1-3-	83.4	ln	"	"	71.
		-01-81-81	102 3	82.6	1b	,,,	"	81.
90.477		1 == ==	0	81.8	ln	"	,,,	91.
80.477			0			99	19	34706.5

	ion to	Reduction to		Spark Spectrum		Arc Spectrum		
Oscillation	ıum	Vacu	Inten-	Wave-	Inten-		Wave-length	Help if
Frequenc		4	sity	length	sity		-	
Frequence in Vacuo			and		and	Exner	Rowland	
	$\frac{1}{\lambda}$	λ+	Cha-	Exner and	Cha-	and	and	Kayser
	λ		racter	Haschek	racter	Haschek	Tatnall	
34708-3	10.0	0.82	2	2880.3	2			2880-327
12.7	,,	"			0			79.956
19.	,,	,,	2	79.4	E 124			
23.1	"	"	ST B	a light of	0			79.095
30.1	,,	"			2	2878-52		78.524
32.	,,	,,	2	78.4				
40.	,,	,,	1	77-7	100.7			
42.8	,,,	,,	1	77.4	2	77.46		77.464
53.2	,,	,,			0			76.602
61.4	,,	,,			0			75.930
68	,,	,,	2	75.4				
71.7	,,	,,	2	75.0	3	75.07		75.083
75.4	,,	,,	1	74.7	1	74.73		74.700
82.	,,	"	1	74.2	1			
90.4	,,	,,			3			73.534
95.3	,,	,,			0			73.126
34802.5	10.1	,,			2	72.52		72.529
04.	,,	,,	1	72.4	No.			
17.	,,	,,	2	71.3				
45.	,,	,,	ln	69.0	A STATE OF THE PARTY OF THE PAR			
64.	,,	,,	1b	67.5	100 m			
66.8	"	99			1			67.216
83.0	,,	,,			0			65.892
84.3	,,	2,9	1	65.7	1	65.80		65.802
92.3	,,	.,			0			65.131
34901-0	,,	0.81	ln	64.3	2			64.366
13.	,,	,,	2	63.4				
30.	,,	"	1	62.0	and the			
31.8	,,	,,			0			61.895
41.7	,,	,,	4	61.00	3	61.09	4. 1. 4	61.075
52.8	,,	,,	1	60.1	1	60.17		60.184
70.4	29	,,			. 0			58.733
76.8	19	,,			0			58.210
83.6	,,	,,			1	57.65		57.659
90.2	,,	,,			0			57.117
92.	,,	,,	1	57.0				
94.	,,	,,	1	56.8	The same of			
35010-6	"	59			1	55.45		55.455
13.	,,	,,	1	55.3				
26.0	,,,	,,		710	0			53.971
29.	,,	,,,	ln	54.2				HARVE TO THE
35.3	"	99	ln	53.5	0			53.441
52.	19	29	ln	52.1	17.5			- P. 18 7 50
63.	, ,,	"	1	51.2		F0.00		
66.7	"	"	4	50.82	3	50.89		50.877
84.8	"	,,		40.9	In	49.40		49.427
86.	"	,,	1	49.3		40.10		10.
87.9	10.2	"	1	49.1	1	49.15		49.175
97.8		,,	2	48.3	2	48.35		48.360
35109-2	,,	"			0	40.0*		47.408
184	,,,	"			1	46.65		46.707
20·7 22·	17	"	2	10.1	2	46.50		46.507
77.	"	"	ln	46·4 45·5	V10008			

		Reduct	ctrum	Spark Spe	Arc Spectrum Spark Spectrum						
Oscillatio	um	Vacu	Inten-	Wave-	Inten-		Wave-length	1			
Frequenc		1	sity	length	sity						
in Vacuo	1	788	and		and	Exner	Rowland	HIO I			
	$\frac{1}{\lambda}$	λ+	Cha-	Exner and	Cha-	and	and	Kayser			
	٨		racter	Haschek	racter	Haschek	Tatnall				
35138-4	10.2	0.81		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0	THE BOOK		2845.067			
41.7	,,	,,			1	2844.80		44.802			
45.3	"	"			3	44.51		44.501			
46.4	,,	"	6	2844.42							
64.	,,	,,	1	43.0							
79.9	,,,	,,			2	41.70		41.711			
82.	,,	,,	1	41.5				S ESTITUTE !			
94.2	,,	,,	DIN		2			40.557			
35201	- ,,	"	1	40.0		- PARTE					
03.7	,,	,,	1	39.7	0	5 6		39.792			
16.6	"	"	8	38.70	4	38.74		38.751			
22.4	,,	,,	2	38.2	2	38.28		38.283			
31.0	"	"			2	37.53		37.542			
33.	,,	,,	ln	37.4							
48.	"	,,	1	36.2		STATE OF THE PARTY					
72.	,,	,,	1	34.3							
93.	,,	,,	1	32.6		The Mark					
96.2	"	"	1	32.3	1	32.35	STATE OF THE PARTY	32.345			
35304.3	"	"	DO LOT		2			31.693			
07.	"	,,	1	31.5	G.F.			THE PER I			
09.	,,	"	1	31.3	200			Cycle Park			
27.	"	"	1	29.9				The state of the s			
32.5	,,	,,			2	29.40		29.468			
33.1	,,	,,	1	29.3	2			29.390			
36.2	,,	"			0			29-138			
45.	,,	,,	1	28.4	100			- 110 11 1			
54.6	,,	,,			0			27.670			
62:5	,,	"			0			27.038			
82.5	,,	"			0			25.437			
84.	"	,,	1	25.3	E STAL			Supplied in			
87.9	,,		and L	12 40 12	1			25.013			
89.0	,,	0.80	S. Salaria		0			24.918			
91.	,,	,,	1	24.8							
97.0	,,	"	1	24.2	1	24.27		24.283			
99.9	. ,,	,,			0			24.051			
35404.4	10.3	,,		THE REAL PROPERTY.	0			23.687			
33.5	• • •	"	10 P		1	21.37		21.367			
36.	,,	"	2	21.2	- 33-			BARRETTE !			
42.3	,,	,,	E. S		1	20.66		20.682			
44.	,,	,,	1	20.5	1			DE LA			
47.3	,,	,,	2	20.2	1	20.30		20.298			
55.7	59	,,	SETT.		0			19.601			
58.9	,,	"	- FIRE	9. R. T.	1			19.349			
64.6	"	,,	1	18.8	0			18.897			
75.	,,	,,	1	18.1	The state of	I have been	SERVICE TO				
86.	,,	,,	1	17.2	211		Established States				
92.	**	,,	2	16.7							
97.	,,	,,	1	16.3	To the second						
35502.4	"	"	2	15.8	2	15.90		15.895			
08.8	,,	,,,	1.53	10000	ln	15.40		15.380			
14.0	,,	"			ln	19.98	7-50-6	14.962			
18.	,,	,,			0			14.602			
22.	,,	,,	457	10 19 1	2	14.34		14.318			
24.	,,	,,	2	14.2	1 3 15						

OSMIUM—continued.

		Reducti	ctrum	Spark Spe		Arc Spectrum				
Oscillation	um	Vacu	Inten-	Wave-	Inten-		Vave-length	V		
Frequenc		T ST	sity	length	sity	_				
in Vacuo	1	1	and Cha-		and	Exner	Rowland	22 00 47 00		
THE RES	$\bar{\lambda}^-$	λ+	racter	Exner and Haschek	Cha- racter	and Haschek	and Tatnall	Kayser		
02207			TWO UCI	Lascher			Taunan			
35527·3 29·	10.3	0.80	2	2813.8	2	2813.94		2813.904		
37.3	"	"		20100	0		TO SHEET SE	13.130		
55.6	"	"			2			11.683		
68.3	"	"	1b	10.7	0			10.680		
71.0	,,	,,			0			10.468		
79.2	,,	"		E CALLO	0			09.815		
89.0	,,	,,		OR LESSON	3	09.04		09.045		
92.	,,	,,	2	08.8	THE STATE OF THE S			No. of the last of		
97.7	"	,,			0			08.357		
35603.4	,,	,,	0,710	E HE TO	0			07.910		
14.6	,,	"			4	07.03		07.025		
16.	,,	,,	2	06.9			7 4 4 5	DES BOOK		
33.0	,,	,,			0	1-7-3	10 2 10	05.576		
50.7	,,	,,			2	04.19		04.185		
52.3	,,	,,	0.77	000	0	MANUAL DE	101011	04.055		
78.0	,,	99	2 Pb	02.0	1	THE STATE OF		02.039		
35707-9	"	"			1	250001	200	2799.692		
44.3	10.4	22			2	2796.84	The second	96.833		
52.2	,,	99	01	07070	0		1.47.4	96.221		
56· 64·3	,,,	"	2b	2795.9		BEN HER		02.022		
76.7	99	"	1 D4	04.0	1	04.00		95.275		
79.3	"	"	In Pt	94.2	1 1	94.30		94.309		
95.4	"	"			0	94.10		94.091		
35805	"	"	ln	92.1	0	1		92.844		
19.0	"	"	111	32 1	2			91.007		
36.8	"	"		The same of	0			89.620		
68.	"	"			i	DESER		87.153		
71.	"	"			î	86.90		86.904		
73.	"	,,	1	86.8	1 10	0000		00 001		
78.	"	"	2	86.4	3	86.41		86.414		
82.	,,	,,			1		7.30	86.061		
94:	"	"	1 Ba	85.2	2		Sale Alegan	85.147		
99.	22	"	ln	84.8						
35909	,,	,,	2	84.0		100000	Bulletin			
26.	,,	0.79	2	82.7	2	82.69		82.658		
35:	"	"			1 486	The state of		81.972		
45.	"	"	ln	81.2				THE REST		
48.	"	"			0			80.970		
57	"	"			0	The state of	The second	80.269		
66:	"	"	THE REAL PROPERTY.	HI HE	0.			79.584		
99.	"	"	A. D. T.		1	MH-OT	No. in the	79.197		
36025	10.5	"		A CETT	1 1	77.01		77.011		
32.		"	120	1 18.4	1	75·01 74·50		75·004 74·488		
35.	"	,,		Marie P	i	74.30		74.488		
36.	"	"	1	No.	Î	74.13		74.125		
43.	"	"	TE CIE	1 30	ō	17 10		73.592		
49.	"	"	DELT'S	The Aller	ì	73.18	1	73.176		
66.	,,	,,	100	I at a	Ō	10.10		71.869		
75.	.,,	"	LE TO	The state of the s	1	1		71.150		
79.	"	>>	STATE OF	and and	4		LA SECTION	70.825		
87.	,,	"		A DESCRIPTION OF THE PERSON OF	1	70.22	Calle III	70.213		

OSMIUM—continued.

	Arc Spect	rum		Spark Spe	ectrum		tion to	
V	Vave-length	Take by	Inten-	Wave- length	Inten- sity	Vacuum		Oscillatio Frequenc
Kayser	Rowland and Tatnall	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	λ+	$\frac{1}{\lambda}$	in Vacuo
2769-975	Des Tan	2770-00	1			0.79	10.5	36090-7
69.385			3	STATE OF THE STATE	4	"	,,	98.6
68.369			0			,,	,,	36111.8
67.236		67.25	1			"	"	26.
66.650			1	0000		"	"	34.3
65.541		65.55	1	2765.5	1	"	"	48.
65.143			2	65.2	2	"	"	54.0
64.637		0.000	0	04.7		,,	,,,	60.6
64.032		64:15	2 2	64.1	1	"	"	67.0
04.032		64.05	2			"	"	68.
63.371		63.39	1 2	63.4	2	"	"	68:
62.745	1 1 W	03.39	0	03.4	2	"	"	77.
61.530		61.54	2	61.6	2	"	"	36201:
61.184		61.21	1	01.0	2	59	"	05:
60.168		01.21	0			"	"	19:
58.923		58.95	1			"	"	35:
58.775		00 90	0			"	"	37.
57.902		57.91	1			"	"	48.
56.095		01 01	0		10 500	"	"	73.
55.680			0		2 11	"	"	78.
54.780			Ö		1	"	"	90-
53.792		53.83	i			99	"	36302
51.875		00 00	0	P TO SEE		"	,,	28.
51.246		51.25	1	51.3	1	"	10.6	36.
50.970			Ō	020	15	"	"	40.
				50.6	1	"	"	45.
		No.	Trail	50.4	1	"	,,	48.
PERM		18 8 1	100	49.4	2	"	,,	61.
		49.30	1			"	,,	62:
			2 17	49.1	1	99	,,	65.
48.964		48.97	1			"	,,,	66.
48.003		48.01	1	48.1	2	,,,	,,,	79.
45.632			1	B		,,	99	36410
44.981			0			,,	,,	19:
			la media	44.6	ln	99	29	25.
40.001				44.2	1	"	"	30.
42.801	The of the		0	42.6		"	"	48.
				42.3	1	"	"	51.
		41.50	1	41.5	1	0.78	"	55· 65·
40.862		40.84	1	41.0	1	170	"	74.
40.701		40.70	1	40.7	2	"	"	76.
40.414		40.42	1	40.4	2	"	"	80-
38.636		40 42	2	38.6	În	"	"	36503
38.427			ő	90 0	111	99	"	06.
00 12.			THE REAL PROPERTY.	37.8	1	"	"	15.
		Constitution of the last	10.50	37.5	î	"	"	19.
Et. Cal			1 TO 4.	37.1	î	"	"	24.
			THE SE	36.7	ln	"	"	30.
36.479			1		La maria	"	"	32.
35.848		Total State	0			"	",	41.
32.905		32.90	3	32.9	2	,,	,,	80.
31.931		10 100	0	The state of the s		"	"	93:

	Arc Speci	trum		Spark Spe	ectrum	Reduc		
1	Wave-length		Inten-	Wave-	Inten-	Vacı	ıum	Oscillation
		1	sity	length	sity			Frequency
PICTURY BE	Rowland	Exner	and		and		1	in Vacuo
Kayser	and	and	Cha-	Exner and	Cha-	λ+	$\frac{1}{\lambda}$	
	Tatnall	Haschek	racter	Haschek	racter		,	
2731.467			1		10000	0.78	10.6	36599.8
			MERCH.	2731.38	4	,,	. ,,	36600.9
30.782			4	30.8	2	,,	,,,	08.9
29.093			0	MARKET N		,,	,,	31.6
		2728.63	1	•		"	"	37.8
28.364			2		19.51 T. 17.33	,,	,,	41.4
				28.2	2n	,,	,,	44.
27.357			0	000	10.994	,,	"	54.9
				23.8	ì	,,	10.7	36703
22.867			0	22.9	ln	"	,,,	15.3
22.700		03.05	0	000		,,	,,,	17.5
21.959		21.97	3	22.0	2	"	"	27.5
00			84.03	21.1	1	,,	"	39.
20.578		00.75	1	20.0		"	, ,,	46.2
20.130	7001 0430	20.15	3	20.2	2	99	99	52.2
	100 10 64			19.2	1 Pt?	,,	99	65.
	AND THE REAL PROPERTY.		The same	19.0	1	" "	"	68.
18.796	3.11		1	100	10.000	"	"	70.3
1= 000				18.6	1	"	"	73.
17.839	THE RESERVE		0			"	"	83.2
17.488		OF SALES	0			"	"	88.0
17.162	THE STATE OF THE S		0	100		"	"	92.4
	A STATE OF			16.0	1	,,	,,	36808
12 500		15 50		15.9	1	,,	"	10.
15.726	19 - 19 - 19 - 19 - 19 - 19 - 19 - 19 -	15.72	1	35.5		,,	"	11·9 15·4
15.471	THE PARTY	15.46	2n	15.5	1	"	"	21.8
14.997	100	14.74	0 2	14.7	2	,,	,,	25.2
14.744		14.14	0	14.7	2	"	"	44.8
13·300 12·848	State of the		0		The same	"	,,	50.9
12.040	14		U	11.1	ln	"	,,,	75.
	Line was		1	10.5	1	"	"	83.
09.953		09.96	1	10.0	i	"	"	90.3
00 000	- PH - 12	09 90	1	09.2	ln	"	"	36901
08.276	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	08.27	1	08.25	4	"	"	13.2
07.519	The state of	07.51	1	07.6	1	"	,,,	23.5
0, 019		0,01	the latest	07.2	i	"	99	28.
06.804		06.80	2	06.8	2	"	"	33.3
00 00 1		06.04	ĩ	000	1 1-12	"	"	44.2
05.547		0001	0	05.6	ln	"	"	49.7
04.695	W. DEE		9	1 00 0	1	"	"	62.0
04.551		04.55	1			"	1	64.0
02 031		02.00	1000	04.2	1	"	"	69.
03.203	The same	1	0	03.2	În	"	10.8	82.3
0.00				03.0	1	,,	,,	85.
		02.92	1		To Field	,,	,,	86.2
			1440	02.7	1	"	"	89.
			7 775	02.6	1 Pt ?	"	,,	91.
	The second	02.50	1			"	"	92.0
			1 1 1 1 2	01.4	1	"	"	37007
00.840		00.82	1	00.9	î	,,	,,	14.9
Let See May	1		1 127	00.6	1	"	,,	18.
2699.688	1	2699-68	2	2699.7	2	,,	,,	30.6
	1 3 , 1		199	98.5	ln.	,,,	27	47.

OSMIUM—continued.

	Arc Spect		SMIUM-	Spark Spe		Reduc	tion to	
Barrier .	Wave-length		Inten-	Wave-	Inten-		uum	Oscillation
Kayser	Rowland and Tatnall	Exner and Haschek	sity and Cha- racter	Exner and Haschek	sity and Cha- racter	λ+	1_\(\lambda\)	Frequency in Vacuo
2698-321			0			0.77	10.8	37049.3
	MAR PINE		USE H	2698.0	1	"	,,,	54.
05 000		2007 04	200	97.6	1	,,	,,,	59.
97.338		2697.34	1	97·4 97·0	1	"	"	62.8
96.709			0	3.0	•	"	"	71.4
			130	96.4	1	,,	"	76.
				95.0	1	,,	"	95.
94.854		94.86	1	94.7		"	"	96.9
94.615		94.61	1	94.1	1	"	"	37100.3
94 019		27.01		92.9	2	"	"	24.
92.790		92.77	1	The state of	自路 時	"	,,	25.5
92.021		Tag	0	92.1	2	,,	,,	36.0
91.483		00.00	0	91.5	2	"	99	43.4
89·904 89·447		89·89 89·44	3	89·85 89·4	4 1 Cu ?	"	"	65·3 71·6
09 441		09.44	1	89.2	ln	"	"	75.
88.174		88.18	1	88.2	1	"	"	89.1
87.277			0	87.3	1	,,	,,,	37201.6
86.777			0	86.8	ln	,,	,,,	08.5
86.624			0	86.0	1	"	"	10.6
85·973 84·497			2	80.0	1	"	"	19·7 40·1
83.974			ō			"	"	47.4
				82.8	1	"	,,,	64.
82.279		82.30	1	82.3	-1	"	99	70.9
80.806		HO.00	0	70.0		,,	,,	91.4
79·825 79·457		79.83	1n 0	79·8 79·5	1	"	"	37305·0 10·2
78.870			0	100	1	"	10.9	18.3
77.473	SSTATE		0	77.5	2	"	,,	37.8
74.969		75.00	2	75.0	2	,,	,,	72.5
74.793		F 4.00	0 2			,,	,,	75.2
74.654		74.68	2	74·7 73·7	2	"	"	76·9 90·
				73.4	1	"	"	95.
72.145			0	1010200		,,	"	37412.2
Falls II				71.9	1	,,	,,	16.
FO 040		E0.00		71.3	1b .	,,	99	24.
70.640		70.66	1n	69.9	1	,,	"	33·2 44·
69.606		69.61	1	69.6	1	"	"	47.8
69.158		00 01	Ô	000		"	"	54.1
67.593			0	67.6	2	"	"	76.1
TO AND THE PARTY OF	T.		ATEL S	67.0	1	"	,,	84.
66.90#	-N-	66.91	1-	66.8	1	,,	"	87.
66:295	al.	66.31	ln	66.2	1	,,	"	94·2 96·
66.079	.0-2	66.08	1n	002		"	"	97.4
65.370		30- 1	0			,,	,,	37507.3
64.879	1		4		HT.EX.	,,	,,	14.3
64.390			0	64.5	ln	,,,	,,	21.1
63.950	But Bell 18		0	64.0	ln	,,	,,,	27.3

OSMIUM-continued.

	Arc Spect	rum	- Nac	Spark Spe	ectrum	Reduc		Missa al
	Wave-length		Inten-	Wave-	Inten-		uum	Oscillation
Kayser	Rowland and	Exner	sity and Cha-	length Exner and	sity and Cha-	λ+	1_	Frequency in Vacuo
11ay Sei	Tatnall	Haschek	racter	Haschek	racter		λ	
2663.314		2002.00	2	2663.3	6 Pb	0.77	10.9	37536.4
62·653 62·069		2662.63	2	62·6 62·0	1	"	"	45·8 53·9
Q2 003			-	61.8	i	"	"	58.
		61.29	2	61.3	2	"	"	64.9
61.011		61.05	ī	61.1	1	"	"	68.5
59.924	OF STREET	59.91	2	60.0	2	,.	"	84.3
		59.55	2 Pt ?	59.6	1	,,	,,,	89.4
58.682	The state of	58.69	3	58.68	6 Pd?	,,	,,	37601.7
57.203			0					22.7
56.774	THE RELEASE	56.76	2	56.7	2	,,	99	28.8
EF OF	TR. 3 (1982)	EF 00		56.3	ln	,,	,,	35.
55·879 55·297		55·89 55·29	ln ln	55·9 55·6	1	"	,,,	41.3
99.291	57 26 A 78	55.29	111	55.3	1	. ,,	,,,	50.
			100	54.7	1	0.76	11.0	58.
53.860		53.86	1	53.8	î	,,	,,	70.0
53.388		0000	î	53.3	i	"	"	76.7
53.068		53.06	1	53.1	1	"	,,	81.2
				52.5	1	"	,,,	89.
52.369			0			,,,	,,	91.1
51.562	The state of		0			,,,	,,	37702.6
				51.2	1	"	,,	08.
				51.1	1	"	"	09.
50.754			0	50.7	ln	"	"	14.1
40-400		49.43	2	49.7	1n 2	,,,	"	33.0
49.428		49 43	2	48.2	1	,,	,,,	50.
47.817		47.82	2	47.8	2	"	"	55.9
1,01,		47.00	2 Pt?	47.0	2 Pt?	"	,,	67.6
		1		46.4	1	,,	,,	76.
				45.7	ln	,,,	"	86.
45.207	Lorie Land		0	45.3	ln	"	,,	93.2
44.211	100	44.23	3	44.13	4	,,,	,,	37807.2
43.727		43.74	1	43.7	1	,,	,,	14.3
43.132		The second	1	42.8	1	"	"	22·9 28·
41.700	M. Les	WHEELER CO.	2	42.8	1	"	"	43.4
41.700		41.30	ln	41.3"	1	"	"	49.4
40.625		11 00	0	40.6	2	"	"	58.8
40.079		1	0		15716	,,	,,	66.7
39.533			0	THE VED	1	,,	"	74.5
	Harris Bolos			39.2	2	"	,,	79.
38.428		1 2 2 2	0	38.4	2	,,	,,	90.4
38.081	THE REAL PROPERTY.	38.10	1	38.0	1	"	"	95.2
37.223		37.25	3	37.12	6	>>	"	37907·5 46·2
34.547		34·55 34·38	ln ln	34.4	1	,,	"	48.6
34.375		34 38	III	33.2	I	99	"	66.
32.994	1 3 S. F. B.	32.99	1	33.0	1	"	"	68.6
02 004		02 00		32.0	i	"	11	83.
Sala Sala		1 1900	1 28	31.4	î	"	11.1	91.
A SECTION OF	Bressen E		THE RES	31.2	1	,,	,,,	94.
1232 - 64			I SEE	29.5	1	,,	,,	38019

OSMIUM-continued.

	Arc Spect	trum	Shirt I	Spark Spe	ectrum		tion to	
MENT COLL	Wave-length	THE REAL PROPERTY.	Inten-	Wave-	Inten-	Vac	uum	Oscillation
	3,	DE LEGISLA	sity	length	sity			Frequency
	Rowland	Exner	and		and		1	in Vacuo
Kayser	and	and	Cha-	Exner and	Cha-	λ+	$\frac{1}{\lambda}$	
	Tatnall	Haschek	racter	Haschek	racter		λ	
			Mary 1	2628.5	1 -	0.76	11.1	38032.5
2628.377		2628.56	2	28 4	1 Fe	,,	,,	35.2
				27.8	1	,,	11	44.
			1991-11	27.3	1	,,	,,	51.
			HOTE -	26.5	1	,,	,,	62.
25.436		2	0	5000	DECEMBER 1	,,	,,	77.8
24.677			0	24.7	ln	,,	,,,	88.8
			THE THE	24.3	1	,,	,,	94.
23.711			0	STEEL STORY		,,	99	38102.8
			-	23.6	In	99	"	05.
			H. W.	23.3	1	12	,,,	09.
21.912		21.95	2	21.9	1	,,	99	28.7
21.473		21.50	1	21.5	1	,,	29	35.2
20:723		20.75	1	20.7	1	99	,,	46.1
20.035		20.05	3	20.1	1	29	99	56.2
				19.5	1	29	,,	64.
18.923	ON THE WAY		0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	William v	,,,	"	72.5
18.435			0		100	"	. ,,	79.6
17.895			0	17.8	2	"	"	87.5
17.062			0		30	"	97	38200.0
		16.05	- ln		1554	,,	99	14.5
15:122		A Surrection	0		No.	,,	"	28.0
14.158			0			"	99	42.1
13.167		13.17	3	13.1	2	99	99	56.6
12.732		12.75	2	100		"	77	62.9
77 470		***	100	12.6	1	99	"	65.
11.410		11.45	1	100			2 18	82.1
10.881		10.89	2 2	10.8	1	99	99	90.1
09.669		09.67	1			0.75	11.0	38307.9
09.303		09.30	0	E 128		22	11.2	13.2
08.342			0	05.2	1b	99	"	27·3 74·
05.051	N ALL		0	03.2	10	"	"	
04.701	TE ALEXANDER	04.70	1		LES WAY	"	91	75·8 80·9
03.554	FOR STATE	04.10	0	I British to		"	"	97.8
03.323		03.30	1		1 12	"	99	38401.2
00 020		00 00	H. Tale	03.1	1	"	99	05.
02.444		02.43	1	00 1	The state of	"	29	14.3
00.855	The second	00.86	î	183 B - 18	211	"	>>	37.7
00.560	SECTION OF SECTION	00.56	î	THE REAL PROPERTY.		22	"	42.1
00.003	MAN CONTRACTOR	00.03	î		1	"	"	50.1
	NE DES		1	2599.9	1	"	"	52.
		2599.25	1	11111111	1	"	"	61.4
2597.990	PIE RES	B TELLIS	0	97.9	1	"	"	81.4
97.664		97.69	1	LEGITA'S	680	"	,,	84.7
		The state of the		97.5	1	,,	,,	87.
		97.38	1		1	,,	99	89.1
97.319		97.32	1			,,	,,	90.0
97.092			0	The state of the		,,	"	93.4
96.783		96.81	1	96.7	1	,,	"	97.8
96.474			0			"	"	38502.6
		The state of	142	96.3	1	"	,,	05.
96.101	STATE N	96.11	1			"	39	08.0
	A PROPERTY.	Part of a	1 1-3	96.0	1	"	99	10.

OSMIUM—continued.

Rowland and Tatmall Exner and Tatmall Exner and Cha- Haschek Experiment E		Arc Spect	rum		Spark Sp	ectrum		ction to	
Royser Rowland and Haschek and Hasche	7	Wave-length					Va	cuum	Oscillation
2594:238 2594:25 1 94:2 1 " 35:7 92:082 92:10 1 92:7 1 " 59:99 90:659 90:87 2 " " 86:99 89:595 89:59 1 89:6 ln " 386:04* 89:495 89:50 1 89:6 ln " 06:3 87:575 87:56 ln 87:5 1 " 35:0 86:995 82:06 2 82:0 1 " 35:0 86:995 88:4 1 " 35:0 35:0 86:995 88:6 1 " 35:0 35:0 86:1 1 " 35:0 36:0 1 " 35:0 80:120 88:0 2 82:0 1 " 36:0 36:0 1 " 36:0 36:0 1 " 36:0 36:0 1 " 36:0	Kayser	and	and	and Cha-	Exner and	and Cha-	λ+	$\frac{1}{\lambda}$	in Vacuo
92-082 92-10 1 92-7 1 1 " " 59-3 90-859 90-87 2 " " 88-0 89-595 89-595 89-59 1 89-6 1n " " 38604-9 88-495 89-595 1 89-50 1 " " 38604-9 88-617 0 88-4 1 " " 38604-9 88-617 0 88-4 1 " " 323- 87-575 86-995 0 86-9 1 " " 38-11-3 20-9 87-575 86-995 0 86-9 1 " " 38-11-3 20-9 88-61 1 " " 38-75-8-8-9-9-8-9-8-9-8-9-8-9-8-9-8-9-8-9-8-					2595.9		0.75	11.2	38511
92-082 92-08 90-87 2 90-77 1 "" " 59-7 90-859 90-87 2 "" " 86-0 86-9 1 "" " 38604-9 89-495 89-59 1 89-6 1n " " 38604-9 89-495 89-59 1 89-6 1n " " 38604-9 89-495 89-59 1 89-6 1n " " 38604-9 88-517 0 " 11-3 20-9 88-5 1 " " 350-6 86-995 0 86-9 1 " " 35-7 86-995 0 86-9 1 " " 35-7 86-9 88-1 1 " " 35-7 86-9 88-1 1 " " 35-7 86-9 88-1 1 " " 38-7 8-7 8-7 8-7 8-7 8-7 8-7 8-7 8-7 8-7			2594.25		94.2	1	,,	,,	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	94.000			U	92.7	1			
90:859 90:87 2 90.7 2 " 88 88 88 89 89 50 1 89-6 1n " 38604·9 38604·9 88 88 88 1n " 38604·9 38604·9 38604·9 90.7 2 " 38604·9 38604·9 90.7 2 " 38604·9 90.7 38 90.7 38 90.7 38 90.7 90.7 2 88 90.7	92.082		92.10						
89:595 89:590 1 89:6 ln " 38:6049 06:3 88:517 " 06:3 38:6049 " 06:3 38:6049 " 11:3 20:9 23:7:575 86:995 86:91 " " 35:0 35:0 36:1 " " 35:0 36:0 36:1 " " 35:0 36:0 36:0 1 " " 35:0 36:0 36:0 1 " " 35:0 36:0 36:0 1 " 36:0 36:0 1 " 36:0 36:0 36:0 1 " 36:0	90.859		90.87	2	00 10				
89-495 89-50 1 ", ", ", ", ", ", ", ", ", ", ", ", ", "	80.505		80.50	1					
88-517 0 88-4 1 ", 11-3 20-9 86-995 0 86-9 1 ", 35-0 36-9 1 ", 35-0 36-9 1 ", 35-0 36-9 1 ", 35-0 36-9 1 ", 36-0 36-1 1 ", 36-0 38-0 1 ", 36-0 38-17-7 88-020 1 ", 38-17-7 88-11-1 1 1 ", 30-9 38-17-7 88-11-1 1 ", 30-9 38-17-7					00 0	111		"	
87:575 86:995 In 87:56 In 86:91 I IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII								11.3	20.9
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			0= =0				,,,	,,	
82.027 82.06 2 82.0 1 " 94. 81.154 81.17 1 81.1 1 " 38717.7 80.120 2 80.08 4 " 46.6 79.839 0 " " 50.8 78.430 78.42 1 78.4 2 " " 72.1 78.284 78.26 1 " " 72.1 <t< td=""><td></td><td></td><td>87.56</td><td></td><td></td><td></td><td></td><td></td><td></td></t<>			87.56						
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$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			78.42	1	78.4	2			
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73·601 0 0 """ 44·8 73·198 72·572 72·60 1n """ 50·8 71·878 71·90 1 71·8 1 """ 70·6 71·611 0 """ 74·8 """ 70·6 """ 70·6 71·244 71·25 1 """ 80·3 """ 80·3 68·937 68·95 1 69·0 1 """ 86·3 68·937 66·62 2 66·6 1 """ 80·3 68·95 1 69·0 1 """ 80·3 66·595 66·62 2 66·6 1 """ 70·8 65·816 0 """ 70·8 1 45· 65·816 0 """ 70·8 1 1 45· 65·816 0 """ 70·8 1 1 45· 1 1 1 1 1 1 1 45· 1 1 1 1 1 1 1 1 1 1 1 1	74.852			1	70.9	1			
$\begin{array}{cccccccccccccccccccccccccccccccccccc$									
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$								1 1 1	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$					71.0	1	"	,,	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			71.90		11.8	1			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			71.25		# TIME				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		1					"		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$			68.95		69.0	1		17.4	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	07-555			U	67:0	1			
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	66.595		66.62					1	
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$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			04.90					1	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	63.257		Barrier B	2	63.3	2		1	35000.8
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			62.78						
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$\begin{array}{cccccccccccccccccccccccccccccccccccc$	57.868	AL DESTRUCTION			15 75 5				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		St. F.C.							
55·205 55·20 1 ", ", 24·4 54·558 54·55 1 ", ", 34·4 50·873 0 ", ", 90·9 48·930 1 48·9 2 ", 11·5 39220·6		KEE E			Q 21835				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			55.20	1	S. Sala				24.4
48.930 1 48.9 2 ,, 11.5 39220.6			54.55		1 10 10				
10.4					18.0	9		11:5	
	40 000						"	"	

OSMIUM -- continued.

	Arc Spect		SMICH	Spark Sp		D.1		1.
7	Vave-length		Inten-	Wave-	Inten-	Va	ction to	Oscillation
	D 1 1		sity	length	sity	7 8 1	1	Frequency
Kayser	Rowland	Exner	and Cha-	Ermon on J	and Cha-	λ+	1	in Vacuo
Ruyser	Tatnall	and Haschek	racter	Exner and Haschek	racter	7.4	$\frac{1}{\lambda}$	
2548.196			2	2548.2	1	0.74	11.5	39231.9
47.289		2547.80	1	47.7	1	,,	""	38.0
11 200			0	47.1	1	"	99	45·9 49·
				46.9	i	"	"	52.
46.261		46.25	1	46.2	ln	,,,	,,	61.9
44.067				45.0	1 Cu ?	,,	,,	81.
43.892		43.90	4	44.1	1	"	,, .	95.4
20002		40 00	-	43.0	i	"	,,	98·3 39312·
42.592		42.60	1	42.6	2	"	"	18.4
41.545				42.2	1	,,,	,,	25.
41.747			0	41.0		"	,,	31.5
40.835		40.85	1	41.6 40.8	l ln	"	"	34.
10 000		10 00		40.4	1	"	"	45·5 52·
40.230		40.25	1	40.2	i	"	"	54.9
39.751			0			,,	"	62.4
				39.0	1	"	"	74.
38.500			0	38.8	1	,,	"	77.
38.174		38.17	1			"	"	81·8 86·9
38.087		38.10	3	38.10	4	"	"	88.1
20.101			MIES.	36.8	ln Zn?	,,	,,	39408
36·184 35·484			0	0		"	"	17.8
34.270		34.25	0	35.5	1	"	"	28.7
32.732		34 20	0			"	"	47·7 71·6
		32.53	1	32.5	1	"	"	74.7
32.083			1	32.0	2	,,	"	82.
				31.5	ln	,,	"	91.
29.047			0	29.6	1 Cu ?	"	11.6	39520
27.832			1	27.8	1	"	"	29·0 48·0
27.335			0			"	,,	55.8
27.174	100 B	27.15	1			"	,,	58.5
26.833	MEST STATE		0	26.4		"	"	63.6
100000		26.10	1	26.4	1 1	,,	"	70· 75·1
		2310	338 E.	25.4	1	"	"	86.
24.879			318.3			,,	,,	94.3
		F-1154		24.3	1	,,	"	39603
20.156			0	22.9	.1	,,	"	25.
19.886		19.86	1	19.9	1	"	"	68·5 72·9
			12.7.5	19.1	2	"	"	85.
18.533		18.52	1	18.5	2	"	"	94.1
18·006 15·140		18.00	1	18.0	1	0.73	"	39702.4
13.140		15·13 13·34	1	15.1	1 2		"	47.7
12.970		12.98	i	13.0	1	"	"	76·1 81·9
Value .			23		In Zn?	"	"	93.
10-501		The second		10.8	1	"	11.7	39816
10.591		B. W.	0	10.5	1	,,	>>	19.6

OSMIUM—continued.

	Arc Speci	trum		Spark Spectrum		Reduct		FOR S
V	Vave-length		Inten-	Wave- length	Inten-	Vac	uum	Oscillation
	Rowland	Exner	sity	Tengun	sity	- 100		Frequency in Vacuo
Kayser	and	and	Cha-	Exner and	Cha-	λ+	1	111 11000
	Tatnall	Haschek	racter	Haschek	racter		λ	
2510.024	HEEF TO THE	2510.04	1			0.73	11.7	39828.4
09.809			0		THE PARTY	"	,,	32.0
				2509.7	2	,,	,,	34.
08.707		08.71	1			,,	"	49.4
07.282			0	07.2	1	,,	"	72.1
06.767			0	00 =	1316 (2)	>>	"	80.3
06.481			0	06.5	1n	,,	,,	84.6
04.603		04.59	1			"	"	39914·8 15·0
04.486		04.49	1			,,	"	16.6
03.766		04.43	2	03.7	1	"	"	28.7
02.382		02.38	ī	00.	3 1 1 1 1	"	,,	50.2
01.963		02 00	Ô	The second		"	>>	56.9
01.016		01.00	i			"	"	72.2
00.820		00.80	î			"	"	75.3
2498.512		00.01	î			"	"	88.1
		2498.50	2			,,	,,	40012.2
DA BROOM				2497.1	2	,,	"	35.
96.425			1			"	"	45.6
380 34 45				95.1	1b	,,	,,	69.
93.935		Hills III	0			,,	11.8	85.5
93.710		93.70	1			,,	,,	89.2
		-		93.6	1	,,	"	91.
92.477		92.46	1	92.5	1	,,	,,	40109.1
		07.00		92.1	1	,,	"	15.
91.789		91.76	1			"	"	20.2
91.106		91.11	1	90.7	7	"	"	31.0
		The same of		89.7	ln 1	"	"	38· 54·
89.370			0	89.3	2	"	,,	59.6
89.113		PUT TO	0	09.3	-	"	"	63.1
88.890	12	4	0			"	"	66.8
88.640		88.64	3	88.65	4	"	"	70.8
88.415		00 01	1	00 00		**	"	74.4
00 110				88.3	1n	**	"	76.
86.326		86.33	2	86.3	4 Zn	,,	22	40208-2
				85.7	1	,,	,,	18.
85.424		PER BUR	0	1 102 1		,,	"	22.8
		THE REAL PROPERTY.		85.3	1	,,	,,	25.
1		13-13-13-13		84.3	1n	"	,,	41.
			10-	83.4	1	",	,,	56.
		60.4	1000	82.8	1	"	,,	65.
82.524		82.50	1	82.5	1	"	,,,	70.0
81.892		81.89	1	81.9	1	"	"	80.1
80.825		Was a barrie	0	70.0	1	"	"	97·4 40312·
77,100			0	79.9		"	"	58.0
77.100		76.93	1	76.9	2	"	,,	60.8
76·923 76·179		10 93	0	10 9	-	"	11.9	72.9
75.769			0			"		79.6
75.064	CAST .		0	75.1	1	"	"	91.1
10 004				74.9	1.	"	"	94.
			10000	74.1	î	,,	"	40407

OSMIUM—continued.

Kayser 2473.756	Rowland and Tatnall	Exner and	Intensity and	Wave- length	Inten-	Reduct Vac		Oscillation
Longo	and	and	and	AUANG UII	ast			Unagen
2473.756		Haschek	Cha- racter	Exner and Haschek	sity and Cha- racter	λ+	$\frac{1}{\lambda}$	Frequency in Vacuo
	THE RESERVE	OF MILES	0			0.73	11.9	40412-6
				2473.6	1	,,	"	15.
			1	73.3	1	"	,,	20.
79.970		0.470.27	1	72·9 72·4	1 1	,,	"	26· 35·0
70.925		2472:37	1 0	12.4	1	,,	"	58.8
10 320				70.8	1	"	"	61.
DEPOSIT				70.5	1	,,	,,	66.
The other			N. Carrie	70.2	1		"	71.
		Strate of the st		69.6	1	0.72	91	80.
68-209	Mary Comments	LONG BUT	0	68.92	4	99	,,	92· 40503·3
67.420		100	0			,,	21	16.3
66.535		LL PER PR	0	Past -		"	"	30.8
		112000		65.3	2	,,	,,	51.
64.577		64.59	ln	BE THE PARTY	Marie I	19	,,	62.9
-		64.11	In			"	,,	70.7
61.508		61.51	2	61.5	2	>1	12.0	40613.6
59.940		Manage 1	0	58.8	1	2%		39·4 58·
57.804			0	90.0	1	"	"	74.7
0.001				57.7	2	"	,,	76.
57.273			0		1	"	,,	83.5
56.555		56.55	1			,,,	"	95.4
55.716			0			"	"	40709.3
55.422			0	55.1	2	,,	"	14·2 20·
55.002		IN VIEW	1	99.1	4	"	"	22.2
00 002				54.7	1	"	,,	26.
54.278			0			,,	,,	33.2
53.989	Fig. 2. W.	54.00	1	54.0	1	,,	"	37.9
F0 000			0	53.5	2	"	25	46.
53·392 52·869			0			"	,,,	47·9 56·6
52.909			0	52.7	1	"	"	59.
		51.84	1	1 - 12		"	"	73.7
		TO THE WE		51.7	1	,,	,,,	76.
F1 000		Ber Sales		51.4	2	,,	"	81.
51.290	0450.00	50.05	0	E0.0	2	,,	"	82·8 90·3
50·833 50·581	2450.83	50.85	1 0	50.8	4	,,,	"	94.6
49.987		10.30	0			"	"	40804.5
				48.5	1	"	"	29.
				47.4	1	"	"	48.
		40.00		46.4	ln	,,	,,	64.
46.125		46.11	1	46.1	1	,,	"	69·1 71·4
45.980		46.00	1	45.2	ln Zn?	"	"	84.
		THE REAL PROPERTY.	FEM	44.6	1	"	"	94.
NEW MINE				44.3	î	"	"	40900
		Equivalent in	1 30	43.8	2	"	12.1	08
42.104			0			,,	. ,,	36.2
40.913		1	0	41.1	1	"	"	53· 56·2

OSMIUM—continued.

	Arc Spect	rum		Spark Spe	ectrum	Reduc	tion to	
	Wave-length		Inten-	Wave- length	Inten-	Vac	uum	Oscillation
Kayser	Rowland and Tatnall	Exner and Haschek	sity and Cha- racter	Exner and Haschek	sity and Cha- racter	λ+	1 _ \lambda	Frequency in Vacuo
a Mary F	119,245			2440.8	2	0.72	12.1	40958
				40.5	1	,,	, ,,	63.
2437.798			0	-95.57	1	,,	"	41008.5
34.731			0	•35.7	1	"	"	60.2
34.605			0			"	,,,	62.3
				32.9	2	"	"	91.
31·699 31·299		2431·70 31·30	1	31·7 31·3	1	,,	,,,	41111.4
29.801		31.30	0	313	1	"	"	43.5
29.025			0		N. W.	,,	,,,	56.7
CHECK TOWN				28.4	1	,,	1,,,	67.
27.997			0	28.0	2	"	12.2	64·0 84·4
27·386 27·280		March L	0	Part III		"	"	86.2
26.907		26.90	1	Sale Li		"	"	92.6
26.297			0			,,	,,	41202.9
una mana		25.06	1	25.1	2	,,	,,	23.9
24.820		24.82	1	24.7	1	"	"	28·0 30·7
24.655		24.67	1	24.2	2	"	"	39.
24.102			0	212		"	"	40.2
23.158			2	23.13	4	"	,,	56.3
22.106			0			0.71	"	74·2 76·9
21.949			0	21.7	ln		"	81.
21.268			0	211	111	"	"	88.5
21 200				20.7	1	,,	,,	98.
20.137			0	20.2	1	,,	,,	41307.8
10.010		18.61	1	19·8 18·6	1	**	"	33.8
18·618 18·457		19.01	0	10.0	1	"	"	36.5
18.081		18.07	1	18.1	1	"	,,	43.0
LIE DI STATE				16.8	1	,,	"	65.
15.436		14.00	0	15.5	1	"	,,	88·2 41401·9
14.639		14.63	ln 0	14.7	1	,,	"	09.4
14·198 14·042		and and	0	17.1	P BR	"	"	12.1
11.992			0			,,	12.3	47.2
11.536			1		1888	- ,,	,,	55.0
10.282			0	09.6	2n	,,	"	76·6 88·
09.476		PARTY I	0	09.0	211	"	"	90.5
09.010			1			"	,,	98.5
08.764		08.76	1	10 10 10		"	,,	41502.8
06.053		06.06	ln	100 Miles		,,,	,,	49·5 58·2
05·531 05·176		05.55	1 0			,,	"	64.7
03.170		03.95	1			"	"	86.0
02.620		30.00	0	TEN SE		,,,	,,,	41608.9
02.328		02.31	1	010		,,	,,	14.1
01·219 2398·300		01.23	1 0	01.2	2	"	"	33.1

OSMIUM—continued.

		Arc Spect	trum		Spark Sp	ectrum	Reduc	tion to	
408-81	N	Vave-length		Inten-	Wave- length	Inten-	Vac	uum	Oscillation Frequency
	1	Rowland	Exner	and	10118 011	sity		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	in Vacuo
Kayse	er	and	and	Cha-	Exner and	Cha-	λ+	1_	III vacuo
120350		Tatnall	Haschek	racter	Haschek	racter	ΑТ	λ	
2397.7	30	BALL CHIE		0			0.71	12.4	41693.7
96.8			2396.88	ln			,,,	,,	41708.7
95.9			95.99	1	2395.9	1	,,	,,	24.2
94.3			94.40	1	94.4	1	,,	,,	51.9
93.9	986			0			,,	,,	58.9
The same	501		1000	HER I	92.6	1	,,	,,	83.
01.0	140				91.9	1	"	,,	95.
91·2 87·3			07.97	0	07.4	1	"	,,	41806.8
01.9	110		87.37	1	87·4 86·1	1	"	"	74.6
84.7	115		84.71	1	84.7	ln	"	"	97· 41921·4
OI	10		04 11	1	83.2	ln	"	12.5	48.
82.5	95			0	00 4	111	,,		58.5
79.9			79.90	1n			"	"	42005.8
79.7			79.70	1n			"	"	09.3
79.4			79.46	1	79.5	1	"	"	13.6
78.8				0	78.9	1	"	,,	24.8
Rail To				Part .	78.6	1	22	"	29.
77.7			77.66	1	77.7	1	"	,,	45.3
77.1			77.11	1	77.2	2	,,	,,	55.2
76.3	198			0			,,	,,	68.0
				1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	76.2	1	"	99	71.
	385				75.2	2	"	"	89.
- 124				1 3 3 3 3	74.8	1	"	"	96.
					73.0	ln	0.70	"	42128
71.2	70		71.07	,	72.0	1	"	"	46.
70.7			71·27 70·79	1	71·3 70·7	1	"	99	59·0 67·4
69.3			69.34	1	69.3	1	"	"	93.3
67.4			67.46	1	67.40	6	"	12.6	42227.0
63.4			0, 10	î	0.10		"	14/11/11	98.9
63.1			N. William	Ô	E. 60		"	"	42304.2
62.8			62.85	1	115-146	BUL	"	,,	09.1
62.4	98		62.50	ī		CO-FEE L	"	"	15.5
W 1753	BILL			18 8 -	58.7	2	,,	"	84.
1	1		La California		57.9	1	"	,,	98.
57.3			57.35	ln			,,	,,	42408.0
56.9			57.00	ln	~~ .	-	"	,,	14.2
55.3	18		FO 10	0	55.4	2	,,	10.5	43.4
51.0	96		53.10	1	TO SHAPE		"	12.7	84.4
51·8: 51·6				0	1		"	,,,	42507.4
50.3				0	50.3	2	"	,,,	10.1
47.4			47.50	1	90.3	4	"	"	34.7
45.8			47.00	0	4 400	1000	"	"	86·0 42615·7
43.8				1	43.9	1	"	,,	52.5
42.0				ō			"	"	85.1
40.7				0	1000000		"	12.8	42708.9
38.7				1			"	,,	45.6
36.8	76		36.89	ln	HE CERT		"	,,	79.2
34.6	340			1	F 91.34		"	"	42820.4
				346	33.0	1	"	"	50.
32.2			THE WAR	1	DESIROL .		,,	"	63.5
29.3	56			0	15.00		,,	,,	42917.5

OSMIUM-continued.

	Arc Spect	trum		Spark Spe	ectrum	Reduc		
	Wave-length		Inten- sity	Wave- length	Inten- sity	Vac	uum	Oscillation Frequency
Kayser	Rowland and Tatnall	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	λ+	$\frac{1}{\lambda}$	in Vacuo
2327·081 25·636		2324·37 24·07 08·40 2283·76 82·35	0 0 1n 1n 1n	2320·4 13·9 06·2 05·0 93·7 88·2 86·6 85·6 85·0 83·3 82·41 79·2 77·4 72·6 70·8 58·5 52·2	1 2 2 1 1 1 1 1 1 1 2 2 1 1 1 1 1 2 2 1 1 1 1 2 2 1 1 1 1 1 1 2 2 1 1 1 1 1 2 2 1 1 1 1 1 2 2 1 1 1 1 1 2 2 1 1 1 1 1 2 2 1 1 1 1 1 2 2 1 1 1 1 1 1 2 2 1	0·70 0·69 ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,,	12·9 " " 13·0 " " 13·1 13·2 " " " " " 13·3 13·4 " 13·5 13·8	42959·4 86·1 43009·5 15·1 83· 43204· 43307·1 43585· 43689· 43720· 39· 50· 74·2 83· 43801· 62· 97· 43989· 44024· 44284· 44388· 44411·8 45348·

RHODIUM.

Kayser, 'Abhandl. Königl. Akad. Wissensch. Berlin,' 1897. Rowland and Tatnall, 'Astroph. Journ.,' iii. p. 286 (1896). Exner and Haschek, 'Sitzber. kais. Akad. Wissensch. Wien,' civ. p. 960, cv. p. 561.

Snyder, 'Astrophysical Journal,' xiv. p. 179 (1901). Exner and Haschek, 'Wellenlängen Tabellen der Bogenspektren der Elemente,' Leipzig und Wien, 1904, p. 126. Adeney, Photographs Ultra-violet Spark Spectra, 'Trans. Roy. Dublin Soc.' (2),

vii. p. 331.

		Arc Spect	rum		Spark Spectrum			tion to				
-	7	Wave-length			Wave-length Intensity			Wave- length	Inten-	Vacuum		Oscillation Frequency
	Kayser	Rowland and Tatnall	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	λ+	$\frac{1}{\lambda}$	in Vacuo			
	5983·830 52·791 41·743 18·698 07·478 5899·128 71·947			4 0 1 1 1 1 1			1.63 1.62 "1.61 "1.60	4·5 4·6 ,,	16707·2 94·2 16825·5 91·0 16923·1 47·1 17025·5			

RHODIUM—continued.

	Arc Spect	rum		Spark Spe	ectrum	Reduct	tion to	
7	Vave-length		Inten- sity	Wave- length	Inten-	Vacı	aum	Oscillation Frequency
Kayser	Rowland and Tatnall	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	λ+	$\frac{1}{\lambda}$	in Vacuo
5833.808	Will the second		ln			1.59	4.7	17136-8
31.730			4	F. ST.		,,	,,	42.9
21.991			2		The Real	1.58	"	71.6
07.058			4			28t A.	11	17215.7
03·482 5797·668			2 2		S TON	"	"	26·3 43·6
95.936			2			"	"	48.8
92.824			4			"	"	58.0
55.894			0			1.57	,, ,	17368.8
42.985			0			,,,	,,	17407.9
30.600			2	7 78 10 19		1.56	>>	45.5
27·466 26·875			3 1n	A A A S		"	"	55·0 56·8
18.038			0			"	4.8	83.8
13.799			ln			"	"	96.8
08.930			On		T MEN	"	"	17511.7
00.628			4n			1.55	>>	37.1
5695.823			1			>>	,,,	51.9
86.543			4		W. 15. 1	"	99	80.6
59·924 59·791			2n 4			1.54	,,,	17663.3
51.466			ln		1 30	"	"	63·7 89·7
34.847			2	Total a serie		"	"	17741.9
32.954			2		1	"	"	47.9
26.254		15 5 ST 25	2			1.53	"	69.0
08.541			4 .			"	4.9	17825.0
07.898			3			99	99	27.1
05·214 5599·620			0 6n		100 A.B.	"	"	35.6
95.043			2n			"	"	53·5 68·1
68.495			0			1.52	99	17953.3
57.364			ln			"	"	89.2
56.968			3			"	,,	90.5
55.288		2 3 3	0		1	,,,	,,	96.0
44.797			6b			1.51	"	18030.0
42·260 35·235			0 5n			"	,.	38·2 61·2
34.074			ln			"	"	65.0
04.845			4n	Little Control		1.50	5.C	18160.8
03.776			2n			,,	"	64.3
5497.197			0	R. 1-25 E. 3		,,	,,	86.2
92.048		The state of the s	2n			"	"	18203-1
84·421 81·602			4n 2n			"	29	28.5
81.002		100	o o		1	"	"	37·8 39·9
75.318		E obert	2n			1.49	"	58.8
71.040		FIGURE AND	5n		ALVIE T	,,	"	73.0
68.921			2n		No.	,,	"	80.1
68.288	The books		3n		Tie Vice	,,	"	82.2
45.424	San Trade Charles		4n		Frida.	,,	,,	18359.0
44·508 41·547	05615		2n 4n		11320	"	"	62.1
39.783		1	411	785	E INCE	1.48	"	72·1 78·1
32.224	7 - F 21		2n		1	1 40	"	18403.7

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RHODIUM-continued.

	Arc Spect	rum		Spark Spe	ectrum	Reduc		
Kayser	Wave-length Rowland	Exner and	Intensity and Cha-	Wave- length Exner and	Intensity and Cha-	Vac:	uum 1_	Oscillatio Frequence in Vacuo
	Tatnall	Haschek	racter	Haschek	racter		٨	
5431.813			2n			1.48	5.0	18405-1
25.636			4n				,,	26.0
24.910			4			"	,,	28-5
23.483			2n			"	"	33.3
08.972			2			"	,,	82.8
04.898			4n			"	"	96.
5390.622			5			1.47	5.1	18545
84.214			0				,,	67.
81.683			0			"	"	76.4
79.275			5			"	"	84.8
69.470			1			"	"	18617
64.290			Ô			"		36.
59.850			0			1.46	"	52.
56.638			3			1	"	63
54.573			7			"		70.
49.463			2			99.	"	88.
39.845			ő			"	"	18722
36.794			0		111111111111111111111111111111111111111	"	"	32.
31.237			2	AN ENTRE		"	"	52
29.890			4	The same of			,,,	57.
29.571			ō			"	,,	58.
14.911			3	1 - 1 - 1 - 1		1.45	,,,	18809
5292.279			4				5.2	90.
80.250			2			1.44	,,	18933
69.429		ARE IN	3			,,	,,	72.
68.092			0			,,	,,	77-
59.382			3	1	-	"	,,	19008
51.549			2n			,,	,,,	36
48.918			0		THE PARTY	1.43	,,	46.
37.918	Miles 9 3 1		1			17	,,,	86.
37.284	A LINE OF		5			,,	,,,	88.
30.752			4	La reference		,,	39	19112
25.706	Burn North		1	F-MEETS		,,	,,,	31.
22.783	1		4			,,	"	41.
14.913			3		1000	,,,	37	70.
13.491			2	1920	la la	,,	,,	75.
12.866			4			1.42	,,,	78.
11.637		ALL THE	4		1 - 1 - 1	,,	,,,	82.
07.099			3	S LOCAL P		"	5.3	96.
03.468	ON THE RIE		2			,,	,,,	19212
5197.697	10-1-1		1			,,	,,,	34.
93.276	- 60 10 00		7			,,,	,,,	50.
87.088	OR A DE		0		1977	,,	,,	73
85.172	AL SELLE		1		1	"	,,	80.
84.342	See See See		4			,,	"	83
78.311	THE BURN		0		1 3	"	"	19306
77.396			3			,,	,,,	09
76.110			6	1 4 4 2	The same	,,,	99	14
74.883			0	1 2 1 1 1 3	1	1.41	99	18
65.561			0		-	"	"	53
60.464			On		PEN INTE	"	"	72
57.814	Swellen		5		1000	"	,,	82
57.224	1 th 1 th 1		2	THE RESERVE TO		,,,	>>	85
55.691			5			27	99	90

	Arc Spect	rum		Spark Spe	ectrum	Redu	ction to	
ngilla licery	Wave-length		Inten- sity	Wave- length	Inten-		uum	Oscillation
Kayser	Rowland and Tatnall	Exner and Haschek	and Cha- racter	Exner and Haschek	sity and Cha- racter	λ+	$\frac{1}{\lambda}$	Frequency in Vacuo
5145.110			2			1.41	5:3	19430.6
30·903 20·824	C MYSTER		. 2			1.40	,,	84.5
10.115			1 2			,,	,,	19522.8
5090.795			5	of the state of		1.39	5.4	63.6
88.949			0			",	"	19637·9 45·0
85.676			4			,,	"	57.7
73·607 64·475			0			,,,	,,	19704.4
57.576	一 作		2	TENNEL!		1,90	,,	40.0
46.583			2 2		ALL S	1.38	"	19810.0
28.492			2			"	"	81.3
25·692 12·538			1			1.37	5.5	92.2
4997.919			0	THE PERMIT		,,	- "	19944.5
96.012			0	Belley		"	• ••	20002.8
85.107	05.15.7		2			1.36	,,	10·5 54·2
77·969 66·511			4		MARKET !	,,	22.	83.0
63.831			2 4			"	,,	20129-4
61.012	TO BE STORY		0		250	"	,,	40.2
60.318		The same	1			"	"	51·7 54·5
44.975			2			1.35	"	20217.1
22·633 19·821			2 2	100	1	,,	5.6	20310.6
18.953			2 2			"	.,,	20.3
13.649	70 10 10		2	REBUIL	1100	1.34	>>	23.9
08.744			2			,,	"	45·9 66·2
4898·022 88·045			1			"	"	20410.8
65.922	14		0 4	Tare !	d-res	"	,,	52.5
61.808	JUST WELL	N. Harri	On	DAIN THE		1.33	5.7	20545.5
61.497		E TRABIL	2n		-1976	"		62·8 64·1
56.614			0		S. Ct	"	"	84.8
51·777 44·145			6 6			,,	,,	20605.3
42.556	200		4			"	"	37.8
33.627	The Later of the		Ô		WHEE !	1.32		44·5 82·7
17.233	4		0			,,	"	20753.1
13.678 10.645			1	15.5		,,	"	68.4
03.393			6 0	E T		1.31	,,	81.5
01.517	the state of	1	ln	100	Più la	1.3	"	20812.9
4798.829	-15	the diese	4		0000	"	"	21·0 32·7
94·364 91·640	**		0	FREE		"	"	52.1
91.164	The state of		0 3		332-13	,,,	,,	64.0
77.304	A SW	THE PARTY	2	6	8/2	"	5,0	66.0
71.687	Epol Service		2			"	5.8	20926.5
70·938 55·717	A		3		nen I	,,	"	54.4
50.007	10		4			1.30	"	21021.5
45.276	7		0 6	Late 4 to		,,	,,	46.8
31.333	36 - 12	3	ln		1456	"	"	67.8
						99	"	21129-9

	Arc Spect	rum		Spark Spe	ctrum	Reduc	tion to	
1	Wave-length		Inten-	Wave-	Inten-	Vacu	ıum	Oscillation
		-	sity	length	sity		1	Frequenc
77	Rowland	Exner	and Cha-	T23	and Cha-	λ+	1	in Vacuo
Kayser	and Tatnall	and Haschek	racter	Exner and Haschek	racter	ΑТ	$\frac{1}{\lambda}$	
4724.483			2	Bear I	5	1.29	5.8	21160-6
21.148			6			99	"	75.5
19.545			2	5.0		, ,,		82.7
07.108			ln	note, 155.		,,	5.9	21238-6
04.230			5	See p.		99	"	51.6
4696.463			1	00		,,	,,	86.7
89.610		A TOTAL CONTRACTOR OF THE PARTY	1			1.28	99	21317-8
				4686.0	1n	"	,,	34.
83.093		4683.15	ln	83.0	ln	,,	,,	47.4
				81.7	ln	"	,,,	54.
77.532		77.55	ln	77.6	ln	99	,,	72.9
75.187		75.20	10	75.2	2	,,	,,	83.0
66-261			2			,,,	,,,	21424
43.337		43.35	3			1.27	"	21530:
39.526		39.53	2n	40.5	ln	,,	,,,	48.0
34.017		34.05	In			,,,	6.0	73.
26.105		26.12	ln		100	99	,,	21610
Estate I				20.2	ln	99	,,	38.
20.059		20.07	3		111111	99	,,	38.
08.294		08.30	4	08.3	2n	1.26	,,,	94.
01.792		01.82	1	F		,,	,,	21724
4599.553		4599.6	1n	1 (5.10)		,,	,,	35.
72.794		72.81	1	4572.7	1	1.25	,,	21862
120				72.5	1 .	"	99	64.
71.466		71.48	2	71.6	1	"	, ,,	68.8
70.489	1800 301	70.51	ln	00.0		"	,,,	73.
69.181	4569.184	69.19	6	69.3	2	,,,	,,,	79.
68.538		68.55	1	0=0	100	"	* **	82.
65.373		65.37	3	65.3	1	"	27	984
67.000		61.00	0	63.0	1	"	6.1	21909
61.062		61·08 58·90	3	61.0	1	29	"	18:3
58.897		57.35	2n	58.9	1	29	99	36:
57·343 51·828		51.83	2n 4	57·3 51·8	ln l	"	"	63.
01.929		48.89	3	48.8	1	"	"	77.
44.447		44.45	3	44.6	1	99	"	98.
30.763		30.77	1	30.9	1	1.24	"	22065
28.904	28.901	28.91	9	29·0b	4		17	74
20 001	20 001	20 01		25.5	1	"	"	91.
WATEL !				08.0	În	"	"	22177
06.815		06.83	1	06.8	ln	"	"	82.
03.955	03.955	03.96	3	04.1	1	1.23	"	96.
4492.644	4492.643	4492.65	4	4492.7	5	,,	6.2	22252
84.015	1103 010	84.00	2	84.0	1	"	,,	95.
01010				78.3	În	,,	"	22324
HARRY !	THE WAY		1	48.5	1b	1.22	"	22473
WHEN THE	The State	THE PARTY OF	139.55	43.5	1b	,,	"	99.
33.495	33.489	33.50	3	33.6	1	**	**	22549
			Bein	26.6	î	1.21	6.3	84.
				26.3	i	,,	"	86.
24.215	24.217	24.23	2	24.3	î	,,	"	96.
23.835	23.824	23.84	1	STATE OF	FE	"	,,	98.
21.383		21.38	ln	THE PERSON	100	"	,,,	22611
20.178	1 10 1 14	20.17	ln	- W. S. C.	-	39	11	17.5

	Arc Spect	rum		Spark Spe	ectrum	Reduction to		
1	Wave-length	- FILE 100	Inten-	Wave- length	Inten- sity	Vac	uum	Oscillation
	Dowland	Funan	and	10118011	and	Train		Frequency in Vacuo
Kayser	Rowland	Exner	Cha-	Exner and	Cha-	λ+	$\frac{1}{\lambda}$	III Vacuo
itaysei	Tatnall	Haschek	racter	Haschek	racter		λ	
4410-449	fat tit	4410-45	ln			1.21	6.3	22667-1
				4405.8	ln	,,	99	91.
02.725	4402.716	02.74	1		F. S. I.V.	99	99	22706.9
4388-224	4388-215	4388-24	2	4388.2	1	1.20	"	82-0
80.097	80.082	80.11	8	80.1	ln	"	,,	22824.2
	311			79.2	1	"	99	29.
-0.000		70.05	LINE TO	77.0	ln	"	99	40.
76.350	76.347	76.35	1	He.0		,,	99	43.8
E4 0E0	F4 001	ar 00	10r	76·2 74·9b	1 8	99	"	45· 50·9
74·976 73·212	74·981 73·212	75·00 73·22	6	74.90	0	**	"	60.2
13.212	13.212	15-22	0	72.5	2	"	"	64
	STE INTE			64.0	ln	"	6.4	22908
62.393	es a	62.40	ln	04.0	111	"		16.8
49.336	49.333	49.32	2			1.19		85.6
45.629	45.626	45.62	3	1792			39	23005-2
45.247	45.245	45.25	2	45.3	1	"	99	07.
42.608	42.604	42.60	4	40 0	100	**	19	21.3
42 000	42 004	12 00	-	42.5	1	"	,,	22.
	The state of the s			39.5	În	**	99	38.
36.181	36.176	36-19	1	000	***	"	23	55.4
90 101	00110	00 10	THE OL	28.8	1b	"	99	95.
25.584	25.578		1	200	1	99	99	23111.9
20 001	200,0		Marie S	23.2	1b	99	,,,	25.
				20.0	ln		•••	42.
				17.3	ln	1.18	"	56.
15.126	15.123	15.14	3	15.2	1	,,	,,,	67.9
				13.6	1b	,,	99	76-
				10.7	1	,,	**	92.
08.982	08.988	08-99	2	09.0	1	**	6.5	23200.8
				20.7	ln	>>-	••	45.5
4296.926	4296.931	4296.93	5	THE RESIDENCE	1785	99	••	65.9
		1735	- 31	4296.8	4	"	••	67.
88.883	88.867	88.89	10r	88.8p	8	21	99	23309.6
				84.6	ln	"	99	33.
				82.0	lb	227	99	47.
FO.F.4.4	BO. BET	FO.F4		79.3	ln	1.17	>9	62.
78.7.44	78.755	78.74	4	78.7	2	99	"	64.8
78.000	70.074	76.07	2	78.2	1	"	**	74.5
76.962	76.974	76.97	2	77.0	ln	>>	"	77.
				76.1	ln	"	99	79.
			1 12.	74.8	ln	"	99	86.
73.578	73.581	73.59	4	73.5	2	"	"	93.1
10010	13 001	10 00	DATE:	72.4	i	"	"	23400
70.696		70.72	2	70.7	i	"	99	08.8
.0000		10 12	178	69.7	ln	99	"	14.
	TO THE			69.2	1	"	,,,	17.
	The San I			65.3	ln	"	99	39.
	No. 11 Acres			64.5	ln	29	"	43.
	100	100		63.8	ln	,,	,,,	47.
	1 1 1 1 1 1 1	200	WE!	62.3	ln	99	90	55.
124	60.708		P. C.	60.7	1 Fe	90	99	63.8
	The second second	The second second		60-1	ln	1	1	67-

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RHODIUM—continued.

	Arc Spects	rum		Spark Spe	ectrum	Reduc		
T	Wave-length		Inten-	Wave-	Inten-	Vac	uum	Oscillation Frequence in Vacue
			sity	length	sity			
	Rowland	Exner	and		and		1	in Vacuo
Kayser	and	and	Cha-	Exner and	Cha-	λ+	λ	
	Tatnall	Haschek	racter	Haschek	racter			
				4259.7	ln	1.17	6.5	23469
			- Targar	59.3	1n	,,	,,	72.
4258.608	4258-617	4258-62	ln	The state of		"	,,	75.3
				58.4	ln	,,	,,	76.
				-56.6	ln	"	17	86.
			1000	56.3	1	,,		88.
			11-2911	. 52.7	1n	91	6.6	23508
				49.1	1	,,	,,,	28.
			1000	48.0	1b	"	19	34.
			100	45.4	ln	99	"	48.
				44.7	2	"	"	52.
44.598	44.599	44.60	3				"	52.7
				32.7	ln	1.16	"	23619
			13.00	32.3	ln	"	,,	21.
30.354	30.358	30.36	2	30.3	1	99	,,	32.1
28.002			0			,,	"	45.2
				21.5	1	"	"	82.
	21.362		1			"	"	82.4
				21.2	1	,,	***	83.
				20.0	ln	"	"	90.
18.142	18.153	18.15	1	18.2	1	,,	"	23700-8
11.306	11.304	11.26	20r	11.4b	10	,,	,,	39.1
06.770	06.777	06.75	3	06.7	2	,,	,,,	64.6
				04.1	ln	1.15	•	80.
4196.672	4196.661	4196.68	7	4196.6	6	17	6.7	23821.7
				95.7	1b	,	,,	27.
			LINE F	82.7	1	"	"	23901
77.780	77.803	77.80	2	77.8	2	,,,	,,	29.4
				75.8	2	,,	,,,	41.
				71.5	1 ln	,,	,,	65.
			1000	66.9	ln	1.14	,,	92.
			1 70	66.2	1 Ir	99	"	96.
58.615	58.634	58.64	2			,,,	,,,	24039.7
				57.4	1	,,,	,,	47.
54.495	54.521	54.52	4	54.5b	6	,,	,,,	63.5
37.008	37.025	37.01	1	37.0	1	,,	6.8	24165.2
35.448	35.445	35.45	13r	35·4b	6	"	,,,	73.4
- 1000			1000	33.9	1	,,	,,	83.
29.080	29.054	29.06	10r	29·0b	8	1.13	,,	24211.8
25.063	25.068	25.05	1	25.0	1	,,	" "	35.3
475 6			1	22.7	1	,,,	,,	49.
21.870	21.855	21.86	9r	21.7b	6	"	,,,	54.]
19.855	19.852	19.85	5	19.8	4	"	, ,,	65.9
16.496	16.496	16.49	4	16.4	2	29	,,	85.7
	0.00	0		13.6	In	,,,	,, ·	24303
	07.665	07.65	4	07.5	2	,,	,,	38.0
4097.690	4097.692	4097.69	6	4097.7	6	1.12	6.9	97.1
		LETTERS T	100	93.0	ln	1.12	99	24425
00.010		00.01		91.0	1	"	,,,	37.
88.646	88.651	88.64	2	600		91	"	51.1
87.950	87.948	87.94	2	88.0	2	"	>>	55.3
THE REAL PROPERTY.		428	19 19 m	85.5	1	"	",	70.
	0		Mag !	85.4	1	22	"	71.
84.442	84.450	84.45	2	84.5	1	>>	>>	76.2

RHODIUM—continued.

	Arc Spect	rum		Spark Spe	ctrum	Reduc	tion to	
7	Wave-length		Inten- sity	Wave- length	Inten- sity	Vacı	ıum	Oscillation Frequence in Vacuo
	Rowland	Exner	and		and		an Miller	in Vacuo
Kayser	and	and	Cha-	Exner and	Cha-	λ+	1_	111 1 11000
4	Tatnall	Haschek	racter	Haschek	racter		λ	
4082-942	4082-949	4082.99	10	4083·0b	8	1.12	6.9	24485.1
81.961	81.975	81.98	2	82.0	1	,,	,,	91.1
80.690	80.699	80.70	1	80.9	1	,,	,,	98.8
77.739	77.748	77.74	4	77.8	2	,,	,,	24516.5
				61.0	1b	,,	,,	24618
FO 107	W. 0 W. 0 0	W0 W0		59.5	lb	"	,,	27.
56.491	56.503	56.50	2	56.5	2	"	,,	44.9
53.602	53.603	53.60	2	53.7	2	1.11	"	62.5
49.188	49.200	49.17	2	49.2	2	"	7.0	89.3
48.572	48.571	48.56	3	48.6	2	"	,,	93.1
				43.6	ln	"	"	24723
				43.0	ln	"	"	27.
				40.3	1b	"	"	44.
				34.0	1	"	"	82.
26.089		26.09	1	28.6	l In	"	"	24816
23.302	23.301	23.29	1 4	26·2 23·3	6 6	"	"	31·5 48·2
25 302	25.301	25.29	4	20.3	1	"	""	67.
					1	"	17	87.
				17·1 05·5	ln	1.10	"	24959
				03.3	ln		7.1	72.
3996-313	3996.307	3996-31	6	3996.2	8	"		25016.0
95.768	95.766	95.77	5	95.7	6	- "	"	19.4
20 100	35 100	30 11	0	86.6	In	"	"	77.
84.555	84.556	84.56	5	84·5b	6	"	"	89.8
76.240	01000	0100		76.3	ì	"	"	25142.3
				76.1	i	"	"	43.
75.472	75.465	75.48	5	75·3b	6	1.09	"	47.1
	2			73.5	ln	,,	"	60.
				69.3	1n	,,	,,	86.
68.320		68.33	2			,,	,,	92.4
64.688	64.688	64.68	3			,,	,,,	25215.6
59.006	59.009	59.00	20r	59.0b	10b°	,,	"	57.8
58.313		58.31	4	58.3	4	,,	,,	56.2
53.214		53.20	1			,,,	7.2	88.7
				50.6	1b	,,,	"	25305
12.505		44.10	2	Ass. First		,,,	"	47.1
42.862	10.053	42.88	5	42.9b	6	"	,,,	55.0
Residence.	42.059		8	40.0	18	"	,,,	60.2
				40.6	1	,,	,,	70.
				39.8	2	2,9	"	75.
133		20.05	La B	38.7	1	,,	,,	82· 86·1
35.982	25.000	38.05	1	38.0	1 4	1.08	"	99.4
35.123	35·983 35·120	35.99	6	35.9b	2		"	25405.3
34.384	34.368	35·11 34·39	15r	35·1 34·3e	8	"	"	09.8
34 304	94.909	34.99	191	29.5	ln	"	"	41.
				26.6	1	"	"	60.
				26.2	i	"	"	63.
A COLOR				25.1	1	"	"	70.
				24.7	î	"	"	72:
22:340	22:337	22.34	5	22.4	4	"	"	87.8
010	22 001	16.55	1			"	"	25525.7

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	Arc Spect	rum		Spark Spe		Podnot	tion to	
7	Vave-length		Inten-	Wave-	Inten-	Reduct Vacu		Oscillation
			sity	length	sity			Frequency
The state of	Rowland	Exner	and		and		1	in Vacuo
Kayser	and Tatnall	and Haschek	Cha- racter	Exner and Haschek	Cha- racter	λ+	$\frac{1}{\lambda}$	
4.9.1100	Tana de	FILE GALUE		3914.3"	1	1.08	7.2	25540
3913-657	913.648	3913.64	4	13.7	ln	"	97	44.4
12.971	12.964	12.98	2	13.0	1	"	,,	48.9
shirt ever				12·6 11·7	1	"	"	51.
				11.2	1	>>	,,,	57· 60·
Carried States			1.33	10.6	1	>>	"	64.
1				10.0	î	"	"	68.
	100		1	08.6	î	"	7.3	77.
			7.00	08.3	1	"	,,	79.
15 3177 31			-	07.6	1	"	"	84.
			11111	07.0	ln	,,	,,	88.
STATE OF THE PARTY			CONT	06.2	1	,,	,,	93.
			0.55	05.5	1	"	,,	98.
05.423		05.41	1			,,,	,,	98.2
				05.1	1	"	,,	25600
04.000	01.000	04.05	1	04.5	2	"	"	04.
04.362	04.359	04.35	2	000		,,	"	05.2
- 10 E		02.66	1	03.0	1	"	99	14.
		02.00	1	02.3	1	"	"	16.2
				02.1	1	"	",	20.
		ET SETTE		01.5	î	"	"	24.
				01.1	i	"	"	26.
				00.2	i	"	"	32.
				3899.0	1	,,,	"	40.
			122	98.6	1	"	"	43.
		3898.13	2	98.1	1	"	,,	46.0
				97.8	1	"	,,	48.
NEW TEN				97.3	1	"	"	51.
			1000	96.8	1	1.07	"	55.
Ne lation				96.1	1	"	"	59.
			Personal Property lives	94.8	ln	"	- "	68.
9001.000			0	93·8 92·0	ln ln	"	"	75· 86·7
3891.953			0	90.5	1	"	"	96.
*:				89.6	ln	"	"	25702
				89.1	ln	"	"	06.
88.475		88.48	2	88.5	2	"	"	09.7
1.0		1 3 3		87.5	1	"	"	16.
The second	3886.470		3		150	,,	"	23.0
168				86.0	ln	,,	"	26.
HAR CHI				84.3	1b	,,	99	37.
				83.2	1b	"	,,	45.
IL THE BUT				82.4	ln	,,	,,	50.
3/411/2				81.0	1	>>	"	59.
Maria and B			1000	80.2	1	22	,,	65.
77.470	77.482	77.47	4	77·9 77·4b	4	"	"	80.
11.410	11.482	11.41	4	76.6	1	"	"	88.
W. Frank				74.8	i	"	"	25800
72.534	72.532	72.57	3	72.5	2	"	99	15.5
12 003	12 002		POR POR	70·4b	2	"	"	30.
70.140	70:151	70.16	5	70.2	6	"	,,,	31.5

RHODIUM—continued.

	Arc Spect	rum		Spark Spe	ectrum	Reduc	tion to	
	Wave-length		Inten-	Wave-	Inten-	Vac	uum	Oscillation
	1 1	-	sity	length	sity	37.4		Frequency in Vacuo
17	Rowland	Exner	and Cha-	77	and Cha-	λ+	$\frac{1}{\lambda}$	III Vacuo
Kayser	and Tatnall	and Haschek	racter	Exner and Haschek	racter	**	λ	
THE WAY		•	PANIE S	3869-2	1	1.07	7.3	25838
3865.291			1		Skiri-s	"	,,	63.9
				63.7	1	1.06	"	75.
56.663	3856.654	3856.62	20r	56.7b	10	1.06	29	25922.0
56.167	56.165	56.15	4	56.3	2	"	"	25.2
		54.81	3	54.8	2	"	"	34.3
			THE .	53·5 52·7	ln ln	"	"	43.
		49.14	2	49.2	2	"	"	72.5
		44.55	1	49.2	4	,,,	"	26003.5
		44.00	Barrier .	44.0	1b	"	"	07.
	25 4 - 100		THE REAL PROPERTY.	41.3	1	"	79	26.
	20,2012		PERM	40.6	i	"	"	30.
			1 7	40.3	î	"	"	32.
STORE TO			38	38.9	1b	"	"	42.
34.893	34.895	34.89	3	35.0	2	"	"	69.1
34.016	34.020	34.03	15r	34·1b	6	"	"	75.0
33.733		02.00	0	0110		"	"	76.9
		29.17	1			"	"	26108.0
28.623	28.615	28.61		28.7b	6	"	"	11.8
27.505			15r			"	"	19.4
			0	24.8	1	"	"	38.
22.397	22.399	22.43	15r	22.5b	6	"	"	54.2
		18.90	1			"	,,	78.2
18:345	18.339	18.34	4	18·4b	8	"	"	82.1
17.990	CONTRACTOR OF THE PARTY OF THE		0	18.0	ln	"	7.4	84.4
17.524			0	A POBLET		1.05	,,,	87.6
16.611	16.611	16.62	4	16.7b	6	1.05	"	93.8
15.169	15.166	15.18	3	15·2b	4	"	"	26203.7
12.599	12.603	12.61	3	12.7	1	"	"	21.4
00.000	00.040	00.05		11.9	1 2	"	"	26.
09.655	09.648	09.65	3	09.7		"	"	41.7
06·920 06·071	06.908	06.91	4	06.90	4	"	"	60.6
3799.466	06.070	06.08	4 7r	06·1b	10	"	"	26312.1
9199.400	3799.461*	99.46	4r	3799·6 98·3	10	"	""	20312-1
Harris A.		E Cent	THE PARTY OF	95.0	i	"	"	43.
93.366	93.364	93.40	4r	93·3b	8	"	"	54.4
00 000	00 001	92.33	4	92.4	4	"	"	61.6
	A TOTAL STATE OF			91.6	î.	"	"	67.
		90.58	1	020		"	22	73.8
	DOM:		-	89.8	1	"	,,	79.
88.633	88.624	88.64	6	88·7b	6	"	"	87.4
				86.0	2	"	"	26406
			138	85.4	ln	,,	"	10.
				81.0	ln	. 39	"	41.
			100 April 100 Ap	80.0	ln	,,	"	48.
78.279	78-279	78.28	4	78·3b	4	"	"	59.7
			The same of	77.0	1	"	,,,	69.
75.864		75.85	2	76.0	2	1.04	"	76.6
71 PPO		M1 mm		72.8	1	"	7.5	98.
71.779	70.125	71.77	2 5	71.8	2 2	"	"	26505·2 16·8
70:130	10.129	70.13	9	70·1b	4	23	"	10.9

^{*} Distinct from Ru 3799.489.

RHODIUM—continued.

	Arc Spectr	um		Spark Spe	ectrum	1979	100	The state of
	THE SPECIA			ориги оре		Reduct		
To the same of	Wave-length		Inten-	Wave-	Inten-	v acu	am	Oscillation
	1		sity	length	sity			Frequency
	Rowland	Exner	and		and		1	in Vacuo
Kayser	and	and	Cha- racter	Exner and	Cha- racter	λ+	λ	
	Tatnall	Haschek	racter	Haschek	racter			
			7000	3768.8	1	1.04	7.5	26526
				67.2	1	,,	,,,	37.
3765-232	3765.227	3765-24	8r	65·2b	10	"	,,	51.3
				60.9	1	,,	,,	82.
60.554	60.559	60.55	2	60.6	2	,,	,,	84.3
				59.6	1	"	,,	91.
-09				57.3	ln	,,	,,	26607
55.748	55.736	55.73	2	55.7	2	,,	,,	18.4
55.290			1			"	,,	21.6
54.441	54.431	54.44	5			,,	,,	27.7
54.269	54.268	54.26	5	54·3b	6	"	"	28.8
			TINKE.	50.6	1	"	,,	55.
48.383	48.362	48.37	6	48.40	8	,,	,,,	70.8
				46.1	1	"	,,,	87.
	1 23 2 - 23			45.7	1	"	"	90.
44.325	44.325	44.32	4	44·2b	8	"	,,,	99.6
37.448	37.421	37.43	4		145	1.03	,,,	26700
		E LE STA	1	37·3b	6	,,,	,,	48.8
	36.295	36.00	4	~ 41		,	"	50.
35.429	35.429	35.44	6	35·4b	8	,,	"	58.0
						•••	,,	63.1
			1993	35.0	1	"	,,,	66.
		34.34	1		13.5	"	99	71.0
				33.4	ln	"	,,,	78.
				31.6	1	"	,,,	90.
05 005	1	07.10		26.8	1	"	7.6	26825
25.091		25.10	2	25.1	1	"	"	37.4
		20.03	2531	22.3	ln	99	"	58.
		20.91	1	15.0	THE STATE	"	,,	67.0
				17.2	1	"	,,,	94.
14 000	14.085	14.00		15.3	1	99	99	26908
14.989	14.975	14.99	4	15.0	$\frac{2}{1}$, ,,	,,,	10.
19.509	19.555	13.98	1	14.0		"	"	17.
13.593	13.575	13.60	3	13.6	4	"	"	20.
13.156	13·172 09·773	13.18	4r 2	13·1c	8	"	"	23.
	09.119		2	08.6	1	"	"	48· 57·
					1	,,,	"	
				07·1 05·2	1	"	"	68· 81·
				04.2	i	"	"	87
				02.7	ln	"	"	27000
01.057	01.056	01.07	20r	01·1b		"	"	11
01 001	01 000	01.07	201	00.3	1	"	"	17
3699.461	3699.458	3699-46	2	3699·5b		"	"	23
98.758		98.76	5	98.7	4	,,	"	28
98.415		98.40	3	98.4	4	"	"	31
00 110	30 410	96.24	1	00 1	197	1.02	"	46
95.674	95.669	95.65	5	95·7k	6			51
95.105		95.10		95.1	2	"	"	55
00 100	00 000	00 10	To The	94.3	ĩ	"	"	61
92.506	92.502	92.51	25r	92.5	10	"	"	74
02 000	02 302	02 01	201	91.6	2	"	"	81
91.481	91.477	91.50	2	010		"	"	81
90.872		90.88		90.9p	8	"	***	86

RHODIUM-continued.

			ODIOM-	-continuea		1		1
	Arc Spect	rum		Spark Spe	ctrum	Reduc	tion to	
V	Vave-length	The Park	Inten- sity	Wave- length	Inten- sity	- Walco	uum	Oscillation
Kayser	Rowland and Tatnall	Exner and Haschek	cha- racter	Exner and Haschek	and Cha- racter	λ +	$\frac{1}{\lambda}$	in Vacuo
				4				
SHE			TREET	3688.7	ln	1.02	7.6	27102
	3683.615		4	88.0	1	"	7.7	07· 39·6
	3003 010		*	83.3	1n	"	,,	42.
	83.030		2	1000		,,	"	43.9
3681.205	81.184	3681.19	6	81·2b	10	,,	"	57.4
	79.353		2	80.3	1	"	"	64.
	19.999		2	79.0	1	"	,,	71·0 74·
				77.5	1b	"	"	85.
FEEL STATE OF THE				75.9	1	,,	"	97.
74.924	74.916	74.92	5	74.9	4	"	"	27203.8
	73.710		2	70.7	1	"	"	12.7
				73·5 70·7	ln 1b	"	"	14· 35·
Mark.				69.2	1	"	"	46.
67.070	67.065	67.08	6	67.1	4	"	,,	62.0
66.381	66.366	66.39	7	66.3p	8	"	"	67.2
CO.00H	69.010	60.00		64.9	1	"	"	78.
62·027 61·760	62·018 61·748	62·02 61·77	3 2	62·0b	4	"	23	99.6
01 700	01.140	61.55	1			"	"	27301.6
58.148	58.135	58.15	15r	58·2b	10	,,	"	28.6
	56.994	H. H.	2	E CONTRACTOR		1.01	,,	37.2
55.044	55.026	55.04	8	55.0c	4	"	, ,,	51.8
	54.569	E9.C4	1			,,,	"	55.3
51.516	51.505	53·64 51·53	1 2			"	"	62·3 78·2
01010	01 000	0100		49.8	1	"	"	91.
				49.0	ln	"	,,	97.
		48.51	1			"	"	27400.7
44.363			0	40.0	11	"	"	31.9
43.301			0	43.8	1b	"	"	39.9
10 001		42.83	i	42.8	1b	11	"	43.5
				42.2	ln	"	"	48.
20.021	00.000	60.00		41.3	2	"	,,	55.
39.684	39.662	39.69	6	39.7	4	"	7,0	67.3
	CHALLES.			37·1 35·9	l ln	"	7.8	87· 96·
			mel.	33.8	1	"	"	27512
			100	33.0	î	"	"	18.
				32.3	1	,,	"	23.
		THE IS	Tell :	30.5	1	. ,,	"	37.
27.958	27.957	27.95	4	29·7 28·0	1b 2	"	"	43· 55·9
27.342	27.334	27.30	4	27.3	1	"	"	60.7
26.759	26.744	26.75	7	26·7b	10	"	"	65.1
of the same	OF STATE		THE SE	25.0	1	"	"	78.
May 1	A	BETTER THE	100	24.5	1	"	"	82.
THE REAL PROPERTY.	9-7-16	TO BY ST.	Tallie.	23.2	1	"	"	92.
	100			23.0	1	"	"	27600
20.621	20.605	20.61	5	20.6	4	"	"	11.8

RHODIUM—continued.

	Arc Spect	rum		Spark Spe	ectrum	Reduc		
	Wave-length		Inten-	Wave- length	Inten-	Vacı	um	Oscillation
Kayser	Rowland and	Exner	and Cha-	Exner and	and Cha-	λ+	$\frac{1}{\lambda}$	Frequency in Vacuo
	Tatnall	Haschek	racter	Haschek	racter		λ	
				3619.1	1	1.01	7.8	27623
	HOUSE			16·6 15·2b	ln 1	1.00	" "	42· 53·
3614.934	3614.931	3614.93	4	19.20	1	"	,,	55.2
0011 001	3014 331	3014 33	-	14.8	8	"	39	56.
14.674		14.67	1			"	"	57.2
14.099		Part of the last	1			,,,	,,	61.6
				13.9	ln	39	"	63.
12.621	12.618	12.62	6r	10.5	0	, ,,	99	72.9
	are no see	10.93	ln	12.5	8	99	29	74· 85·9
		10.93	111	09.0	ln	"	"	27701
	No real parts	1 8 1	127	08.5	1	"	"	05.
08.246	08.243	08.25	4	08.2	2	,,	"	06.5
		had be		07.9	1	,,	"	09.
06.029	06.019	06.05	6			,,,	,,	23.5
				05·8c	6	99	,,,	25.
	00,700	-		03.0	ln	"	22	47.
00.911	02.182	00.90	2 4	BERLIN	Value 7	"	"	53·1 63·0
00.911		00.90	4	00.6	ln	"	"	65.
3598.057	3598.051	3598.05	4	3598.0	2	"	"	85.0
97:300	97.294	97.31	12r	97·3b	8	"	"	90.8
96.343		96.32	4r	96·3b	10	,,,	,,	98.3
96.183	96.185		4		La Maria	29	"	99.4
				95.5	1b	"	,,	27805
01051		0.10		94.8	1	"	7.9	10.
94·054 93·685		94.07	0	00.7	0	"	"	15·8 18·7
99.099		93.70	3	93·7 93·0	2	"	97	24.
90.688	90.678	90.65	1	90.6	2	"	"	42.0
+	0000	00 00		85.8	2	"	"	80.
			Hill St.	85.0	1	,,	"	86.
	83.683	83.67	4	83.6b	4	"	,,	96.4
	83.252	83.24	20r			,,	99 .	99.8
			1718 4	83.1	6	"	99	27901
		80.41	1	80.8	1	"	"	19.
		80.41	.1	80·5 79·7	ln	"	"	27.
			TOUR	78.6	1	"	"	36.
36.0.0				77.0	î	0.99	"	48.
			500	76.6	i	,,	"	52.
		SHEET TO	A LEG	76.2"	1	"	"	55.
A CONTRACTOR		TO WELL	1	75.7	1	,,	,,	59.
		Tell line	-	75.4	1	,,,	,,	61.
		1 1 1 1 1 1	9	74.0	1	"	"	72· 77·
			Ellis.	73·4 72·5	1	"	"	84.
			Set Si	72.1	i	"	"	87.
-90 (1)		OF PROPERTY	100	71.8	1	"	"	89.
			1508	71.0	2	,,	,,	95.
	70.333		10	70.3	8	,,	,,	28000.7
78 DE 18		1 36 6	1	69.2	1	,,	"	10.
	THE STREET STREET	West 1	HERE !	68.9	1	,,	, ,,	12.

RHODIUM—continued.

Oscillatio Frequence in Vacu		Reduct	ctrum	Spark Spe		rum	Arc Spect	
	ium	Vacu	Intensity	Wave- length	Intensity		Vave-length	,
in Vacu	$\frac{1}{\lambda}$	λ+	and Cha- racter	Exner and Haschek	and Cha- racter	Exner and Haschek	Rowland and Tatnall	Kayser
28014	7.9	0.99	1	3568.6				
17.	,,	,,	1	68.3				
26.	,,	,,	ln	67.1				
32.	,,	,,	1	66.3				
48.	,,	,,	2	64.2	3	3564.31	3564.282	3564.290
58.	,,	"	2	62.2				
65.	,,	"	ln	63.0				
68.	,,,	"	ln •	61.8		00.70		
80.	"	"	1	60.3	1	60.53		
81.	"	"	i	60.1				
88.	"	"	î	59.2				
90.	"	"	i	59.0	9,007			200
93.	"	"	î	58.6	Time.			
98.	,,	"	î	58.0"				- 10
28102	,,	,,	1	57.5				
04.	,,	,,	1	57.2				RIL
07.	,,	,,	1n	56.8				
30.	,,	,,	1	53.9				
33.	,,	,,	1	53.6				
37.	,,	,,,	1	53.1				
39.	"	99	1	52.8				
47.	8.0	99	1	51.8				
58.	,,	99	1b	50.4		F0.3F	20.742	FO 3.05
61.	"	"	1	50.0	1	50.15	50.145	50.165
63.	"	"	10	49·6c	5	49.70	49.689	49.681
28207	"	99	10	49.00	5	44.13	44.097	44.122
09.	"	"	8	43.9	0	44.19	44.097	44 122
24.	"	"	0	100	4	42.05	42.065	42.068
25.	"	"	4	41.9		12 00	12 000	12 000
53	,,	"			4	38.41	38.391	38.409
54.	,,	,,	8	38·2b	3	38.27	38.293	38-269
62.	,,	0.98	1	37.3				
68.	,,	,,	1	36.6				
69.	,,	99	1	36.4				
86.	,,	,,	ln	34.3	100			
28302	99	,,	1	32.3		1 2 3 5 1	20 400	
16· 35·	"	"	1	30.6	2	00.10	30.536	00 100
54.	39	"	10	28·1b	15r	28.18	28.177	28.183
55.	"	"	6	95.7	2	25.80	25.808	25.805
81.	33	"	2	25·7 22·5		2 1 A		
94.	23	"	1	20.9				1
28403	"	"	2	19.6	2	19.67	19.692	19.690
20.	"	",	ī	17.7	1840	20 01	20 002	20 00.9
23.	"	"	î	17.3		- B. B. B. B.		AS H TO SE
27.	,,	"	1	16.8	THE ST	ES ES 1734		A TOWN
43.	"	,,	1	14.8	0000			Application of
52.	,,	.,	4	13.7	E STATE OF		The state of	STATE OF
55.	99	"	4	13.2	4	13.25	13.258	13.258
66	,,	,,	2	11.9	4	11.94	11.940	11.942
68:	8.1	,,	2	11.6	3	11.69	11.691	11.696

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RHODIUM—continued.

	Arc Spect	rum	Y S ST	Spark Spe	ectrum	Reduc			
1	Wave-length		Inten-	Wave-	Inten-	Vacı	ium	Oscillatio	
			sity	length	sity				
DE TOTAL	Rowland	Exner	and	-	and			Frequence in Vacue	
Kayser	and	and	Cha-	Exner and	Cha-	λ+	1-	111111111111111111111111111111111111111	
2200	Tatnall	Haschek	racter	Haschek	racter		$\frac{1}{\lambda}$ -		
3509.444			3			0.98	8.1	28486-4	
08.754		3508.65	1					92.5	
07.471	3507.466	07.48	8r	3507·4b	8	"	"	28502-5	
05.559	05.558	05.55	4	05.5	2	"	"	18.0	
						"	"		
02.686	02.674	02.67	15r	02·6a	10	,,	"	41.5	
		00.70	1	00.7	1	29	,,,	57.6	
				3499.3	1	- "	,,	69.	
3498.887	3498.878	3498.88	15	98.8p	8	0.97	,,	72.4	
				96.6	1	,,	,,	91.	
				96.0	1	,,	"	96.	
94.585	94.591	94.58	5	94.5	2	,,	,,	28607.6	
91.365	91.353	91.35	3					34.	
91.216	91.218	91.21	3	91.2"	2	"	"	35.	
01 210	01 210	01 21		90.6	ĩ	,,,	"	40.	
				90.3	i	22	"	43.	
		00.01	1	90.9	1	"	"		
05 001	OF 000	89.81	1			"	>>	46.	
87.621	87.609	87.61	3			"	,,	64.	
Million !				87.5	1	"	,,	66.	
87.366	87.363	87.36	3			,,	,,	66.	
				87.2	1	,,	,,	68.	
85.031			2			,,	,,	86.	
84.186	84.184	84.19	4			"	"	93.	
	COLUMN TO SERVE		LABY	84.0	4			95.	
		83.20	0	010		"	"	28701	
		81.33	2			"	"	16.	
80.658		01.00	ő			"	"	22.	
	F0.050	E0.0E		FO 01		"	"	35.	
79.064	79.053	79.07	10r	79·0b	2	"	"		
78.646	78.640	78.65	2			,,	"	38.	
		77.96	1	77.9b	8	,,	"	44.	
77.354			1			,,	,,	49.	
74.939	74.920	74.95	10r	74.9a	8	,,	,,	69.	
		73.93	1			,,	"	77-	
				73.8	1	,,	"	79.	
72.994			0	124 37 4		,,	"	85.	
72.402	72.393	72.40	5	72.3	4			90.	
12 102	. 2 000	71.46	2	.20	1	"	"	98.	
70.817	70.805	70.82	10r			"	8.2	28803	
10.011	10.909	10.82	TOF	70.61	8	"		20005	
70.232			1 4	70.6b	8	"	"		
70.515	00	00.00	1			99	"	06.	
69.774	69.770	69.80	6	69.7	5 Ni	,,	,,	12.	
69.355			0	LOEDS		99	,,	15.	
382			1 7/13	64.9	1	,,	,,	53.	
62.191	62.184	62.19	12r	62·2a	8	"	,,	75	
59.375	THE PARTY NAMED IN	59.36	3	59.3	1	11	,,	98	
58.815	-	VI GIA	0		170 11	0.96	,,	28903	
58.070	58.072	58.07	3	58.1	4			09	
57.219	57.216	57.21	5	57.2	4	"	"	16	
	01.210	31.21	0	312	4	"	"	24	
56.284	EF. PH.			PP.E	13,30	""	"	30	
55.595	55.571	55.57	4	55.5	1	,,	,,,		
55.369	55.365	55.36	4	55.4	4	,,	, ,,	32	
54.617	A PERSON	Pales 19, 10	0	1	A SHIELD	,,	- 11	38.	
THE REAL PROPERTY.	1	150 5 180	HERE!	52.7	2	,,	,,	55.	
51.294	51.298	51.30	4			1,		66.	

RHODIUM—continued.

	Arc Spects	rum		Spark Spe	ectrum	Reduc	tion to	
V	Vave-length	THE PARTY	Inten-	Wave-	Inten-	Vacı	ıum	Oscillation
			sity	length	sity	-		Frequency
	Rowland	Exner	and		and	100		in Vacuo
Kayser	and-	and	Cha-	Exner and	Cha-	λ+	1_	111 1 40000
Rayser	Tatnall	Haschek	racter	Haschek	racter		λ	
3450.437	3450.435	3450.47	5	3450.4	1	0.96	8.2	28973.5
48.715	48.723	48.72	5	48.7	2			88.1
47.897	47.883	47.89	6	47.8	2	"	,,	95.0
41 001	41.000	41.09	0	46.7	1	"	"	29005
46.202			0	40.1	1	,,,	"	09.2
40.202			U	45.4	1.	"	"	16.
			1993			"	"	
49.001				43.1	1	"	22	35.
43.001	WE STORY	40.05	2			99	"	36.2
10 501	40	42.87	1	100		,,	"	37.3
42.781	42.775	42.79	4	42.8	2	"	"	38.0
42.243	Contract of the Contract of th		0			99	,,	42.6
40.675	40.671	40.69	4	40.65	6	"	99	55.8
35.037	35.039	35.03	15r	35.0b	10	,,	,,	29103.6
				33.7	1 Ni	,,,	,,	15.
32.234	32.238	32.24	2	32.3	1	,,	8.3	27.2
THE THE T				31.0	1	,,,	"	38.
28.559	- I - 0	28.52	2			,,	, ,,	58.6
	7		1	28.2	1n	,,	* **	62.
24.533	24.532	24.49	6	24.5	4	,,	,,	92.9
23.699			0			"	,,	99.9
22.430	22.434	22.43	3	22.4	1	22	,,	29210-7
200		22 10		21.3	8	"		20.
20.307	20.312	20.32	4	20.3	2		"	28.8
20 601	20 012	20 02	-	18.1	ī	"	"	48.
16.901			0	10.1		0.95	"	58.0
15.824			0				"	67.2
10 024	11	FT ANS L	U	15.2	2	"	"	73.
12.425	12.417	10.49	6	13·2 12·4b	8	"	"	96.4
10.625	12.417	12.43		12.40	0	"	"	29311.8
10.074			1	Design St.		"	"	
	4		0	000		"	99	16.6
08.990	07.000	0=0=	0	09.0	1	"	99	25.9
07.884	07.883	07.87	2	08.0	1	"	29	35.5
07.387	00.00	07.38	2	07.4	1 Ni	"	99	39.7
06.690	06.694	06.70	5	06.7	4	* **	"	45.7
04.021	THE RESERVE	04.03	2n	04.0	1n	"	"	68.7
03.247	Section 1		0		133	,,	"	75.4
100	are the		1 3 3 3 3	02.2	1	,,,	"	84.
01.109	5.4 4 KF	01.11	3	01.2	1	,,	,,	93.9
HERE RECEIVE	1 1 2	THE WORLD		00.3	1	,,,	,,	29401
3399.823	3399.839	3399.82	7	3399·9b	4	,,,	,,	05.0
96.956	96.960	96.95	15r	97·0b	10	,,	,,,	29.8
		Marie Control	10.25	95.6	2	,,	8.4	41.
95.014	95.040	95.01	3			"	"	46.5
				92.8	1	"	"	66.
92.230	and the second	92.24	1			"	"	70-7
91.935	91.927	91.92	2	92.0	1	"	,,	72.7
91.847	0 DE	91.85	2		1 15 1	"	1	73.4
90.608	The Tax	31.00	lin	E. 7.04	100 h	, ,,	"	84.8
-	100	The same and	1000	89.5"	1	1	"	94.
89.340	89.361	89.34	3	300		"	, ,,	95.8
87.960	00 001	0004	0	V. Comment		"	"	29507-9
01 300	The second	But and	U	87.3	1	: "	"	14.
87.174	14 15	87.16	2	87.3		"	"	14.8
						22	99	

RHODIUM—continued.

		101	TODIUM	-continue	<i>u</i> .		02 [
	Arc Spect	rum	The state of	Spark Sp	ectrum		tion to	
	Wave-length		Inten- sity	Wave- length	Inten- sity	Vac	dum	Oscillation Frequency
Kayser	Rowland and Tatnall	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	λ+	$\frac{1}{\lambda}$	in Vacuo
3385-919	3385.924	3385.92	6	3386.0	4	0.95	8.4	29525.7
	The latest			82.6	1 2	"	"	55.
81.578	81.589	81.60	4	81.7	4	>>	"	63.5
81.208	01 000	01 00	ō	TO THE SE		"	"	66.8
			193	81.0	1	"	,,	69.
80.775	WELL THE S	80.80	4			"	,,	70.6
77.050	77.056	77.81	4	78.7	$\frac{1}{2}$	0.94	,,,	89.
77·850 77·742	77.856	11.91	2	77.8	4		"	96·3 97·2
77.275	77.282	77.28	5	77.2	4	"	"	29601.2
				76.5	1	,,	"	08.
76.017			0			,,	,,,	12.3
75.735			On O			,,	,,	14.8
73·879 72·930			0			"	"	31.1
72.672	72.668	72.68	2			"	"	41.7
72.379		12 00	7	72·4c	2	"	"	44.2
		- Sec. 19		71.6	1	,,	"	51.
THE RESERVE		3 2 -	740	71.3	1	"	,,	54.
Note Str.				70.9	1	"	,,,	57· 60·
				70·6 70·2	i	"	"	63.
69.824		69.82	5	69.8	2	"	"	66.7
68.914	68.918	. 68.91	3			,,	22	74.8
	THE RESERVE			68.8	1	99	"	76.
68.518		68.52	6	68.5	6	,,	"	78.2
65.650			0	66.9	ln	"	"	93· 29703·5
65.138			0	65.1	1	"	"	08.1
64.281	1000000	The State of the S	0	64.3	i	"	"	15.6
				63.7	1	"	,,	21.
63.382	NE PERSON	22.22	0	20.4		,,	,,,	23.6
62.321	62.330	62·33 60·95	5 8	62·4 61·0	6	"	8.5	32·9 45·0
60·952 60·043	60·947 60·038	60.04	6	60.0	4	"		53.0
58.962	00 000	00 01	0	000		"	"	62.6
57.980	10	58.00	2		of the case	,,	,,	71.4
57.560	THE REAL PROPERTY.	11-3-45	0	F0 F	1400	,,	,,	75.0
56.670	Par vers		1	56·7 56·3	$\frac{1}{2}$,,	"	82.9
	CVA II	THE RESERVE	SHOW ST	56.0	1	"	"	89.
EDRIE -	AND EVE		1	55.5	1	"	"	93.
54.853	A SHOW	54.85	4			"	"	99.1
	-16	The state of the s	Street !	54.7	1	,,	"	29800
	AL HE	22/1		54.5	1 1	,,	,,	02.
53.834	West State	53.84	2	54.1	1	"	"	06.
00.004		09.04		53.7	1	"	"	09.
Way well				53.6	1	"	"	10.
STEPPE -	Tanad			53.2	1	,,	,,	14.
FO F1.		50.50	0	52.8	1	,,	,,	17.
52.510		52.52	2	52.3	1	"	,,	19.9
1	17 11	- 11 - W	and the same	040	1	99	99	4461

RHODIUM—continued.

	Arc Spect	rum	5 2 25	Spark Spe	ectrum	Reduct		
7	Wave-length		Inten-	Wave-	Inten-	Vacı	uum	Oscillation
1			sity	length	sity	1	333	Frequenc
	Rowland	Exner	and		and		1	in Vacuo
Kayser	and Tatnall	and Haschek	Cha- racter	Exner and Haschek	Cha- racter	λ+	λ	
		4 11 33		3352.0	1	0.94	8.5	29824
100	Company St		11138	51.6	1	,,	,,	28.
A TOP OF THE				51.2	1	22	,,	31.5
All I	200	The Maria	433	51.1	1	,,	"	32.5
		ALC: NO.		50.7	1	,,	,,	36.
			-	50.5	1	99	,,	38.
			100	50.1	1	99	19	41.
			1998	49.8	1	,,	"	44.
			1000	49.6	1	29	,,	46.
				49.1	1	"	,,	50.
				49.0	1	"	"	51· 57·
			A SOL	48·4 48·1	1	* **	"	59.
			1	47.8	1	"	"	62.
3347-660			0	410	1	"	99	63:3
47.437	Market 17		1	47.1	1	"	"	65.1
11 101				46.9	i	99	"	70.
				46.7	i	"	"	72.
	HIERON !			46.2	ln	"	"	76.
	3346.071		1	46.1	1	"	"	77:
	45.707		4	101	-	"	11	80.
	45.156		10	1 3000		"	"	85.4
				44.5	2	"	"	91.
44.337	44.340	3344.34	5	1	La Rich	"	"	92.8
43.573		43.55	2	F 9A		"	"	99.
				43.2	2	"	"	29903
43.036	43.039	43.05	5		-	99	,.	04.
				42.6	1	,,,	,,	08.
				42.0	1	,	11	14.
			HEIR	41.2	1	,,	,,	21.
40.987	DOMESTIC OF		0	35.00		,,	,,,	22:
	00.00-	No Die	-	40.8	ln	,,	,,	24.
38.672	38.687	38.69	7	38.7	4	0.93	99	43.
36.842		36.85	0	36.9	4	,,	"	59.
35.328		00.00	0		ALMES A	,,	,,	73.
32.648	31.381	32.66	1	07.4	1	99	19	97.
31·393 31·233	31.230	31.42	4	31.4	2	"	**	30008
31.233	31 230	31.26	4	06.0		,,,	19	58
23.232	23.228	23.24	6r	26·0 23·3b	8	"	8.6	82.
20 202	20 220	23.24	Or	20.0	1	"		30112
			18	18.5	l i	"	, ,,	25.
16.670			0	100	1	"	"	42.
14.665	THE WORLD	14.67	2	14.7	ln	"	"	60.
	THE PLANT	11.01		13.2	ln	"	"	74.
		1 55	1019	10.7	ln	"	"	96.
09.663		09.67	2	09.7	ln	"	"	30205
			A DEST	08.2	1	"	. ,,	19
08.067	1	08.06	3	The state of	100	,,	"	20
07.474	ALC: NO	07.47		07.50	4	,,	,,	26.
07.091	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	07.10				,,	,,	29
	S. Tres-		PER I	05.5	1	,,	,,	44.
05.298		05.30		05.3	1	,,	,,	45.
04.258	Land Control	04.25	2	04.2	1	,,,	,,,	55.

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	Arc Spect	rum		Spark Spe	ctrum		tion to	
	Wave-length		Inten- sity	Wave- length	Intensity	vac	uum 	Oscillation Frequency
	Rowland	Exner	and		and		la constitution	in Vacuo
Kayser	and	and	Cha-	Exner and	Cha-	λ+	1	
	Tatnall	Haschek	racter	Haschek	racter		λ	
3303.872	101-240		0			0.93	8.6	30258-9
03.474		3303.49	0			"	,,	62.5
	3303.068					,,,	,,,	66.3
THE STATE OF	02.712	1-1	4	3302.7	1	99	,,	69.5
01.820		02.49	5			,,	99	71.6
		01.80	0		M BUTTON	99	,,	77.8
9		07.40	1183	01.5	1	- "	,,	81.
00.004	00 500	01.40	The second	00 5		"	"	81.6
00.604	00.593	00.56	4	00.5	1	"	,,	89.0
00.479			4			"	,,,	90.0
00.133		0000 00	0			0.92	"	93.2
3299.066		3299.06	2	B200 F		0.92	"	30303.0
***				3298.5	1	,,,	"	08.
07.007				98.3	1	"	"	10.
97.667		07.41	0 2	07.7	-	,,	"	15.9
97.409	3296.842	97.41	4	97.5	1 2	"	"	18.2
96.847	3290.842	96.86	4	96.8	1	"	"	23.4
94.843			0	95.7	1	"	"	34· 41·9
94.400	94.404	94.42	5	94.5	4	"19	"	45.9
94.400	94.404	94.42	9	93.8	1	99	99	51.
93.533			0	99.9	1	"	"	53.9
93.012			0			99	"	58.7
93.012			0	92.9	In	"	"	60.
92.531			0	32 3	111	"	"	63.2
02 001			U	92.3	ln	"	"	65.
I respect				91.6	1	"	"	72.
				89.9	2	"	99	87.
89.739	89.750	89.73	5	000		"	"	88.9
00 100	00 100	00 10		89.4	4	"	"	92.
89.274	89.266	89.26	5	00 1		"	"	93.3
88.159	00 200	88.16	2			"	8.7	30403.4
		0010		86.7	1	"	,,	17.
86.520		86.54	4	The state of the	3	"	"	18.5
85.964		85.99	2			"	"	23.6
84.151			ō			"	"	40.6
83.705	83.695	83.71	4r	83.7b	6	,,	"	44.7
82.932		C C C C	0			"	"	52.0
S	82.455	date	5	82.0	4	"	"	56.3
81.827	81.822	81.83	4	THE PARTY.	1	"	"	62.1
322102				80·8a	8	"	"	72.
80.680	80.664	80.68	2r	1 84		,,	,,	72.8
78.620		78.60	2	1000		"	"	92.0
1120 202		INTERES.		77.0"	1	"	,,	30507
76.122		76.11	4	The state of the state of	E. 12-29	,,	,,	15.2
			THE	75.1	1	,,	,,	25.
74.908	100	74.90	4	1	A THE	,,,	,,	26.5
War and		- Dell's	THE STATE OF	74.3	2	"	"	32.
FUES - F		73.47	1		DIR	,,	"	39.9
VIV.			4093	73.2	1	,,	"	42.
F7 F40	W1 W00			71.9	4	,,	"	54.
71.748	71.736	71.75	8	HC -1	335	,,,	"	56.0
70.702	BEINE	70.72	3	70·7b	1	"	"	65.7
PORT	1000		CONTRACT OF	69.9	1	99	,,	73.

RHODIUM—continued.

	Arc Spect	rum		Spark Spe	ectrum	Reduct		
	Wave-length	9 11 7 11 1	Inten-	Wave-	Inten-	Vacu	ıum	Oscillation
			sity	length	sity			Frequenc
	Rowland	Exner	and		and		1	Frequenc in Vacuo
Kayser	and	and	Cha-	Exner and	Cha-	λ+	$\frac{1}{\lambda}$	
	Tatnall	Haschek	racter	Haschek	racter		^	
				3268.7	2	0.92	8.7	30584
3268.597		3268-62	5			99	,,	85.4
				67.7	6	,,	,,	94.
67.605		67.62	1		F 3-00	"	,,	94.7
				66.7b	1	,,,	,,	30603
66.511			1			99	39	05.0
				65.5	2	,,,	,,	14.
7885 Ye				64.6	2	99	,,	23.
64.313			0			,,,	,,,	25.6
63.924		63.95	2			99	,,	29.1
				63·4b	6	99	99	34.
63.280	3263.268	63.30	8			,,	,,	35.3
1	A Comment	The Hotel		62.3	1	,,	,,	45.
00.000	61.175		2	61.2	1b	"	,,,	55.1
60.938		60.97	2n	7-57-246		"	,,	57.2
59.994			.0			0.91	,,,	66.2
58.352			0			99	99	81.7
			1000	57.2	ln	99	99	93.
			-	56.6	ln	,,	99	98.
148				55.3	1	39	99	30710
55.104		55.10	4			99	99	12.3
				54.8	1	99	,,,	15.
98 8 12			4.8	54.2	1	99	99	21.
				53.7	ln	22	,,	26.
53.457		53.47	2	×1.0		"	"	27.8
1000			12 300	51.2	ln	"	8.8	49.
FO 151		×0.10		50.4	ln	,,,	99	57· 58·9
50.151		50.16	2	100		"	"	
		40.00		49.6	ln	99	"	64· 67·1
STILL ST		49.30	1	45.0		>>	,,,	
		La L	PURE	47.2	1 1b	"	,,	30807
			13.00	45.1		"	99	17.
		,	Herman,	44·0 43·5	1	"	"	22.
42.820		42.81		43.9	1	"	,,,	28.0
42.820		42.91	0	THE ES	150 E	"	.,,	35.3
42 111		6 5 6 7	U	41.8	1	"	,,	38.
41.602	T. C. C.	Trapile In	0	41.0	-	"	,,	40.1
40.998		The state of the s	0	-	-12 3	"	,,	45.9
10 000		Fig. 1	0	40.7	2	"	" "	49.
40.644	THE R. P. LEWIS CO.		0	10 /		99	"	49.3
TOOLE	1000			39.3	2		"	62.
			The same	38.6	În	>>	"	69.
				37.9	2	"	"	75.
37.781	37.777	37.80	4		18	"	"	76.5
		0.00		37.5	ln.	"	29	79.
			1000	36.3	1	"	99	91.
			1376	36.0	î	"	"	94.
35.910		35.92	2	300	EMP I	"	,,	94:3
34.656		30 02	0	nies - If	11 11 100	"	,,	30906.4
				34.3	1	,,	,,	10.
33.440		33.45	0	33.6	4	"	"	18.0
32.627	13.55	32.65	4	32.7	î	,,	12	25.7
			300	32.3	i	,,	"	29.

RHODIUM-continued.

	Arc Spect	rum		Spark Spe	ctrum	Reduc		
V	Vave-length	P. P.	Inten-	Wave-	Inten-	Vacı	ıum	Oscillation
A CONTRACTOR OF THE PARTY OF TH	D 1 1 1	-	sity	length	sity			Frequency in Vacuo
Kayser	Rowland and	Exner	and Cha-	7	and Cha-	λ+	1_	in vacuo
nayser	Tatnall	Haschek	racter	Exner and Haschek	racter	X+	λ-	
				3231.3	4	0.91	8.8	30938
	7000 M 10			29.5	1	,,	,,	56.
				29.0	1	,,	,,,	61.
LOW STATE	With the last	THE REAL PROPERTY.	The last	25.4	1	"	,,	95.
3221.589				24.7	2	"	,,	31002
21.422	Side of the last		0	21.5	1	"	"	31.8
21.193	Marie Like		1	P. Black P.		,,,	"	33.4
21 100			0	21.0	2	"	"	35·6 37·
20.893			2	210	4	"	"	38.5
18.655			0	WATER TO BE	7 35	0.90	"	60.1
				18.5	2	,,	"	62.
		3218.40	3		V Family	,,	"	62.5
18.009	THE RES	18.00	4	18.1	2	,,	,.	66.3
	100			17.5	1	,,	,,	71.
The state of the s		A BEEN		17.0	1	,,	"	76.
	STEEDING TO			16.5	ln	,,	,.	81.
14.984		15.00		15.1	1	,,,	8.9	94.
14.628		15.00	4	140		,,	,,	95.4
14.440	3214.440	14.44	0 4	14.6	1	,,	,,	98.9
11 110	3214 440	14.44	4	13.8	1	,,,	"	31100.7
			minute in	13.1	2	"	"	14.
12.667		Baraju 14	0	131	-	"	"	17.9
		SING SEE		11.7	1	"	,,	27.
11.504		11.52	3	13.3	1	"	"	29.1
		116 /6 19		10.7	ln	,,	,,	37.
	- 100		TALL	09.6	ln	,,	,,	48.
07.390		07.41	2	07.4	6	,,	,,,	69.0
06.202	The party	06.21	4	06.3	1	,,	,,	80.6
				05.3	ln	,,	,,	89.
		- CHEST	1000	02.0	1	,,	,,	31222
3199-979		3199-99	1	01.7	ln	,,	,,	25· 41·2
97.257	3197-248	97.26	1 4	3197.2	4	"	"	67.9
94.671	94.660	94.69	4	94.6	1	,,	"	93.2
93.963	01000	93.96	2	94.0	1	,,	"	31300-2
93.633	THE REAL PROPERTY.	0000	1	010	1	"	"	03.4
92.336	PER - ME	ENLINE.	Ô	10 P	13343	"	"	16.1
92.112			0			,,	,,	18:3
91.313	91.305	91.33	6			,,	,,	26.1
00.400				91·2b	4	,,	,,	27.
90.466	100000000000000000000000000000000000000	90.49	3	90.5	1	,,	,,	34.4
89.162	00.104	00.10		90.1	1	,,		38.
09.102	89.164	89.16	5	89.2	2	,,	,,	47.3
88.408		88.41	1	88.7	4	,,	,,	52.
87.998	ALIE THE	88.00	1	88·0b	6	,,	••	54.7
87.740		33 00	0	99.00	0	"	"	61.3
87.265		E WILLIAM	0	12000	1300 =	"	"	66.0
85.702	85.710	85.72	5	85.6	2	"	"	81:3
	The Bally State of	30.12	1	84.7	ln	"	"	82.
84.485		BYSIGH B	0	The fire in	123	,,	"	91.
83.558	THE PARTY WE	C	0	1100000		,,	"	31402-5

RHODIUM—continued.

		Arc Spect	rum		Spark Spe	ectrum		tion to	
	1	Wave-length		Inten-	Wave-	Inten-	Vac	uum	Oscillation
-				sity	length	sity			Frequency
	Design to	Rowland	Exner	and		and		1	in Vacuo
	Kayser	and	and	Cha-	Exner and	Cha-	λ+	$\frac{1}{\lambda}$	WAS ELLS
1		Tatnall	Haschek	racter	Haschek	racter			
	3183-012	exell exelect		0	TO CHELD	10 mg	0.90	8.9	31407.9
	82.519			0			0.89	,,	12.8
-	81.330		3181.38	3	3181.3	1	,,	**	24.2
					80.5	1	,,	9.0	33.
	79.833	3179.843	79.84	5	80.0	2	,,	,,,	39.2
	78.517		78.51	4	78.6	1	,,	"	52.2
					77·7 77·3	1	"	"	60.
1	77-201		77.20	4	11.3	The second	"	"	65.2
	77.020		1120	Ô			"	"	67.0
1	76.666			0			"	"	70.6
1	DE HELL				76.3	1	,,	,,	74.
					74.6	4	***	,,	91.
1	#2.000		- 104	F I TO	73.7	2	"	,,	31500
1	72.392		72.40	4	72.4	1	99	"	12.9
	71.625 70.379		71.65	2 0	71.5	ln	"	**	20·4 33·0
1	10 313			U	69.0	1	91	"	47.
1	67.072		67.07	0	67.1	2	"	"	66.5
	ALE STATE OF THE S			1	66.4	1	,,	"	73.
					64.3	2	"	"	94.
	63.551		63.55	1			,,	"	31001-1
	00 000		62.84	0	TE THELE		29	,,,	08.1
	62.608			0	62.5	2	,,	,,	10.5
	62.388	PARTIE TEN	62.40	1	02.9	2	"	"	12.6
	59.354		59.35	2	59·3b	8	"	"	43.1
	59.001		0000	2	0000		,,	,,	56.5
	58.063	STATE OF THE	58.06	2	58.0	ln	,,	,,	56.0
		55.890	55.90	lie lie	55.8	2	.,	••	77.7
	55.489			6			**	**	81.8
	54.453			0	53.7	2	••	**	92.2
	52.724	52.719	52.73	6	99.1	-	••	,.	31700-
	02 124	02 113	02 10		52.6	2	,,	"	11.
			51.50	4	51.5	2	"	"	219
					50.7	1	"	,,	30.
E	50.385		50.40	4	50.3	1	19	,,	33.1
1	49.978			0	49.9	2	"	"	37.2
	48.350			1	48.0"	ln	"	19	53.7
	47.736	BUG BALL	47.74	4	45.0	III	"	"	57· 59·8
	47.274		2, 13	ō	47.2	ln	"	"	64.5
1	46:327			0	Estilos		"	9.1	74.0
100	45.734		45.71	2n	45.7	1	,,	,,	80.1
1	45.518			1	43.03	MAN THE	,,	"	82.2
1	41.314	4 2 4 4		0	41·3b	4	0.88	"	31824.7
10	40·963 40·549	1 22		0	EST. S	Mary .	"	, ,,	28·3 32·5
	40 349			3	40.4	1	"	"	34.
1	40.355			0	101	1	"	"	34.4
1 R	TOTAL				38.7	ln	"	,,	51.
	38.506		38.50	1	100	F1- 22	,,	99	53.2
1	-	The state of	- The Contract of	All Toronto	STATE OF THE REAL PROPERTY.	16334	10000	t Lenn	12

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RHODIUM-continued.

		Reduct	ctrum	Spark Spe		rum	Arc Spect	
Oscillati	ium	Vacu	Inten-	Wave-	Inten-		Vave-length	7
	TO THE		sity	length	sity	The Year In		
in Vacuo	1		and		and	Exner	Rowland	
	λ	λ+	Cha-	Exner and	Cha-	and	and	Kayser
			racter	Haschek	racter	Haschek	Tatnall	
31860-1	9.1	0.88	753		5	3137.83	3137.824	3137.825
62.	"	,,	1	3137.6				
63.9	,,,	,,			4	37.45		37.450
82.8	,,,	99			2n	35.59		35.590
91.8	,,,	29			0			34.710
98.5	,,	"	N. S.		1			34.047
31930.5	,,	"	2	31.0	4	30.91		30.918
40.	,,	,,,	ln	30.0				
48.	,,	,,	ln	29.2				
55.	,,	,,	1b	28.5				150 1
70.5	,,,	,,			2	27.00		26.990
79.	,,	,,	1	26.2				
90.9	,,	,,			0			25.000
95.	,,	"	ln	24.6				ALL THE SE
96.0	,,	,,			2	24.50	1819 23 6 7	24.508
32003-1	"	,,	4	23.8	6	23.81	23.814	23.818
10.	"	,,	1	23.1				
23.0	,,	,,			6	21.89	21.873	21.879
28.0	,,	,,			0			21.381
30.	,,	,,	2	21.2				A STATE OF THE PARTY OF THE PAR
34.8	"	22			0			20.714
42.	,,	,,	1	20.0				
43.8	"	"	0.6		0			19.846
61.	,,	22	4	18.2				ATT THE REAL PROPERTY.
66.	"	,,	1	17.7				1 = 1 10
77.	"	,,	ln	16.6				
92.	,,	22	2	15.2				Marie W.
93.4	**	"			5	15.02	15.026	15.027
32120	9.2	"	1b	12.4	Hall			
39.	,,	,,	ln	10.6				
55.	"	,,	2	09.0				
61.7	"	"			2	08.40		08-405
86.	"	"	ln	06.1	PER I	THE WARE		I BUILDING
89.1	"	"		V 3025 3	4			05.756
95.8	"	33	1	05.2	4	05.11		05.110
32212	"	"	2	03.5	FIRE			
21.4	"	19	1	02.7	4	02.65		02.634
43.	"	0.87	ī	00.6		E-118 E	00.556	
43.1	"	99	1751191		2	WILLIAM BE	00.407	
44.6	,,	,,			2 0	100000000000000000000000000000000000000	WATER TO	A STATE OF THE STA
53.4	,,	"	C Valley		0	PALLETON !		3099-567
79.	"	99	4	3097.0	2n	3097.06		
81.8	"	"		CHEST CO.	1			96.834
83.0	,,	"		WILLIAM STATE	0	CHRISTING	milities and	96.722
95.	"	"	ln	95.6	THE REAL PROPERTY.	Tool in		KIT THE
32304-2	"	"		1 3 1 S (2)	2	94.69		94.691
15.	"	"	6	93.7	1811 -	1 2 3 5	- CON -	
15.7	"	"	17006	100000000000000000000000000000000000000	0	93.58	10 STORE	93.592
27.	"	"	2	92.5				00 002
34.0				12 12 22 2	0	THE RESERVE	700 000 000	91.840
45.	,,,	"	4	90.8			A The Carlo	01 010
47.9	"	1 1 1 1 1 1		000	2	90.52	VA STEEL A	90.506
55.6	"	27	STATE OF THE PARTY OF	18 -18 -18	ő	00 02	100	89.775
58.7	99	"	ME		0	Picker Land	ALC: NO	89.480

RHODIUM-continued.

DINAME S		Reducti	ctrum	Spark Spe		rum	Arc Spect	3)
Oscillation Frequency in Vacuo	um	Vacu	Intensity	Wave- length	Intensity		Vave-length	V
	$\frac{1}{\lambda}$	λ+	and Cha- racter	Exner and Haschek	and Cha- racter	Exner and Haschek	Rowland and Tatnall	Kayser
32369·8	9.2	0.87	1	9007.7	2	3088-42		3088-428
79.2	"	"	1	3087.7	4	07.50		05 504
82.8	"	"			0	87.52		87.534
95.	"	"	ln	86.0	U			87.180
97.5	,,	"	200	000	2	85.78		85.790
32415.3	,,	"	4	84.2	4	84.10	3084.081	84.078
21.	9.3	,,	1	83.5				020.0
40.2	"	,,,	2	81.8	0			81.714
53.5	,,	"			0			80.449
69.8	"	99			0			78.905
90.	" "	,,	ln	78.5				
92.0	"	" "	1	77.0	9	H0 HF		
32500-4	"	99			2 6	76.75	FC.00C	76.736
03.	"	"	1	75.8	0		76.006	
13.	"	33	120	100	2	74.82		74.806
17.	,,	"	1	74.4		,102		14 000
22.	,,	,,	1	74.0				
26.	,,,	,,			0			73.550
39.	,,	,,	ln	72.4				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
45.	,,	79			1			71.716
50.	,,	,,	1	71.3				
51· 59·	,,,	99			3	71.15		71.134
65.	99	"		00.0	1			70.467
74.	"	99	1	69.9	2			
92.	"	"	2	67.5	6	67.42		69.034
32601	"	19	-	013	0	07.42		67·395 66·475
02	"	"			0			66.333
08	"	99			0			65.800
22	,,	,,	1n	64.5	1300			00 000
29	40	,,,	ln	63.9				
31	32	22	10000	The second	1			63.700
43	"	0.86	4	62.5	0			62.544
51· 70·	,,	,,,			2	61.80		61.782
72	,,	"	2	50.0	0			60.001
76	"	"	2	59.9	2	50.45	-1	E0 450
81	"	"	1	A REST	1	59.47		59·473 58·974
90	"	"	1	58.2	1			08.974
91	"	"	STEE STEE	00 2	4	58.01		57.996
97	,,	,,	1	57.5	1.974			0.000
32708	,,,	,,			0	12 1		56.452
16	,,	,,	6	55.8		55.76		55.755
24 32	"		10.3	THE P	0			54.980
32	9.4	11	ln	54.2				1
48	"	,,	1	PO PI	2	54.01		53.988
58	,,	"	1	52.7	2	51.00		F1.800
68	"	, ,,				51·83 50·92		51.780
76	"	"			0	50.92		50·842 50·050
78	"	"			0	B SUBSIS		49.919
82	"	,,	1	49.6				10 010

RHODIUM—continued.

	Arc Spect	rum		Spark Spe	ectrum	Reduc		Marine .
7	Wave-length	- 100	Inten-	Wave-	Inten-	Vac	uum	Oscillation
-			sity	length	sity			Frequenc
	Rowland	Exner.	and		and		To bear to	in Vacuo
Kayser	and	and	Cha-	Exner and	Cha-	λ+	1_	In Thous
	Tatnall	Haschek	racter	Haschek	racter		λ	
3049:334		3049.35	2		JE SYN	0.86	9.4	32784.6
0020 002		0010 00	-	3049.1	6			87.
49.003		49.00	0	00101		"	"	88.2
48.095		48.10	2			"	39	97.9
47.440		47.45	0			"	"	32805.0
		47.26	1	47·3c	6	,,	"	07.0
46.871		46.87	4	1		,,	"	11.1
46.304		46.30	2	46.3	1	,,	"	17.3
				46.0	î	,,		21.
45.887		45.90	3	1	1	,,	"	21.7
43.586			0	30-3		,,	"	46.6
		30 (12 = 1	HE BOOK	42.9	2	,,	"	54.
		A LONG THE R	100	41.8	ln	"	"	66.
		E Contract		40.6	ln	"	,,	79.
38.583			2n	38.6	1	,,	"	32900.7
			1 12.	37.6	2	12	. ,,	11.
36.483			0			,,	,,,	23.4
Miss el 9		35.15	1	35.2	4	,,	,,	37.9
34.474			0	BENDE		,,	"	45.2
		I Green Blig		34.3	ln	,,	"	47.
		Eller	F 18 11	33.0	ln	,,	"	61.
31.573			0			- ,,	"	76.8
			THE REAL PROPERTY.	29.6	1	,,	,,	98.
28.975			0			,,	9.5	33005-1
				. 28.8"	2	,,	,,	07.
28.545		28.57	4			"	"	09.5
27.817		27.82	1			,,	,,	17.6
		THE RESERVE		27.1	ln	,,	,,	25.
27.053		27.05	2			,,	,,,	26.0
				26.0	1	,,	,,,	37.
25.517		25.54	2			,,	,,	42.6
				25.3	2	,,,	,,	45.
				24.6	1	,,	,,	53.
24.018	3024.019	24.06	3,	2 2 1 Kg		,,	,,	58.9
23.164			0			,,	,,	68.4
22.673			0			0.85	,,	73.8
22.117			0		- EME	,,	"	79.9
		2 - 1 86	THE REAL PROPERTY.	21.2	1	,,	,,	90.
THE REAL PROPERTY.			17. 14	20.8	1	"	"	94.
		20.60	St. Land	Par El Callet	1 19 1	,,	,,	96.5
19.928		19.95	0	20.0	6	,,	,,	33103
19.664		19.62'		De la Company	N. Carlot	,,	"	07.1
19.569	SP SE		2	1	The same	,,	,,	07.8
18.194	6- 33	All the same	0			,,	,,	22.9
17.225		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1	17.2	2	,,	,,	33.5
16.930		181 063	ln	P. C.	E	,,	"	36.8
15.960			0			,,	,,	47.4
14000	1		1	15.0	1	,,	,,	58.
14.352		14.37	2			,,	,.	65.0
		1		11.8	1	,,	,,	93.
11.021		EXTREME	0		1911	,,	,,	33201.8
10.000		THE RESERVE		10.5	ln	,,,	"	08.
10.369		F HOELES	0	00.5	-	,,	"	09.0
			1	09.7	4	,,,	27	16.

RHODIUM-continued.

		Reduct	etrum	Spark Spe	450 10	rum	Are Specti	
Oscillatio Frequence in Vacuo	um	Vacu	Inten- sity	Wave- length	Inten- sity		Vave-length	V
	1	λ+	and Cha- racter	Exner and Haschek	and Cha- racter	Exner and Haschek	Rowland and Tatnall	Kayser
33223.0	9.5	0.85	6	3009·1e	1	3009-10		3009-103
42.0	,,	,,	5778. 1		1	07.38		
51.	,,	,,	1	06.6				
58.2	,,	,,	1	06.0	2	05.91		05.929
73.6	"	"	2	04.5	5	04.58	3004.555	04.565
97.	"	"	1	02.4				
99.	",	"	1	02.2				
33306:	99	,,	went s		1			01.582
11.	,,,	"	1	01.2				
46.	"	"	In	2998.0	3			
52.	9.6	,,	1	97.4	ln	2997.45		Piller
54.	11	"	1	97.3			SIGN CONTRACTOR	
59.	,,	23	1	96.8	16. 15			
67.	,,	99	1	96.1				
70:	**	23			0			2995.828
72.	"	"	2	95.7				
33414	"	"	476 100	01 011	2	91.87		91.881
17.	"	"	ln	91.6"				
27.	"	"	1	90.7	-			00 150
33.	39	"			0	00.00	THE STATE OF	90.158
34.	,,	"	1	00.7	0	90.07		90.048
41.	"	,,,	ln	89.5	2			00 000
43.	"	"	0	00.01	0	00.08		89.302
46· 52·	"	"	6	88.9b	0	88.97		88.977
62.	"	"	4	88.4	0	88.47		88.487
64.	"	"	2	87.4	3	87.56		87.568
67.	"	"	4	01.4	5	07.11		07.117
69.	"	"	2	87.0	9	87.11		87.117
72.	,,	"	1	86.7				
76.	"	"	1	00.1	7	86.32	2986-321	86.330
78-	"	"	4	86.2	1	00 02	2000 021	00 330
89.	"	"	i	85.2	Us "To			
95.	"	"		00 2	0			84.593
33500	"	,,,	M- Ex	The second	0			84.135
06.	"	"	1	83.7		With the second		37 100
11.	"	,,	î	83.2	4	83.20	THE TEN	83.194
19	"	0.84	î	82.5	3	82.51		82.514
26	,,	,,	1	81.9	13311		0	32 011
33	"	,,	1	81.2	2	81.25	STERNING :	81.238
52	"	,,	1	79.6	1		The second	
53	,,	"	1	79.5	NA ST		A ROLLES	
72	,,	"		100	5	77.81	No. of the last of	77.809
73	,,	,,	2	77.7	100	The state of the		AND LESS
87	,,	,,	ln	76.5	1			
93	"	"	1	E GERE	2	75.92	De la Contraction de la Contra	75.935
96	,,,	,,	ln	75.7	1 3	ALC: NO.		
33604	"	"	1	75.0	1000			
13	,,	>>	1	74.2	3	74.15		71.156
23	"	,,,	ln	73.2		73.28		
31	"	"	1b	72.6	1		a Terrail	
40	,,	,,,	17 (0)		0	F. M. 115		71.741
43	"	"	1	71.5	The same	Pho His	1 A 3 1 5 3 4 1	
51	9.7	"	ln	70.8	10000	1	The Hotels	70.807

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RHODIUM—continued.

Arc Spectrum				Spark Spectrum		Reduction to		
Wave-length			Intensity	Wave- length	Intensity and	Vacuum		Oscillation Frequency
Kayser	Rowland and Tatnall	Exper and Haschek	and Cha- racter	Exner and Haschek	Cha- racter	λ+	$\frac{1}{\lambda}$	in Vacuo
2968-790		2968.79	6	2968.7	4	0.84	9.7	33674.1
in the sales				68.2	1	99	99	81.
CE.001		COLD TO	0	67.1	1	"	"	93· 33708·0
65.801		65.26	2	65.2	1	"	99	14.2
65.018		00 20	ō			"	79	16.9
			1	64.8	1	,,	,,	19.
63.664		63.64	2	63.6b	10	,,	"	32.5
01.005		61.70	2	62.2	4	"	"	49· 53·7
61.805		61.78	0			"	"	65.3
60.686		W. William	0			99	"	66.3
00 000				60.0	1	"	,,	74.
59.769		59.76	4			"	99	76.8
59.478		59.48	1			,,	,,	80.0
58.899		58.89	4	FO =	- TEN	"	"	86.7
FO FO4		Final Cally	1	58.7	1	99	55	89· 91·2
58.504			0	58.4	1	"	"	92.
				57.6	î	"	99	33801
			100	57.5	ī	"	"	03.
		10 30 US		57.0	1	,,	,,	08.
56.406		50	1			,,	,,	15.1
56.229			0			,,	99	17.2
55.942		100	0			99	99	20.5
PE.E41		55.54	2	55·7 55·5	1	99	"	23· 25·1
55·541 55·395		55.43	2	99-9	10.	,,	33	26.6
99-999		99 49	-	53.9	1	"	,,	44.
				53.5	1	"	,,	48.
51.957			1			"	"	66.1
				50.6	1	"	"	82.
50.023		50.02	2n	40.0		"	"	88.4
10 185			1	49.8	1	"	"	91.
49.475		CO PERIODE	1	48.8	1	"	"	33902
48.388			0	400		"	"	07.1
40.900		The state of		48.1	4	"	,,	10.
				47.6	4	,,	"	16.
				46.7	4	99	99	27.
46.042		46.03	2	46.1	1	>>	"	34.2
10.220			1	44.9	4	0.83	9.8	47· 79·3
42.116		41.25	0 3	41.2	1		"	89.4
41.246		41.70	9	40.6	î	"	99	97.
40.175			0	200		"	"	34001.8
10 110				39.7	1	"	"	07.
39.588		39.58	2			,,	"	08.6
38.403		38.39	2	00.0	1	"	,,	22.4
07.602				38.2	1b	"	"	25· 35·2
37.285			2	36.0	1	"	"	50.
				35.2	1	"	"	59.
34.988			0	002		"	"	61.9

RHODIUM—continued.

		RH	ODIUM	-continued	<i>t</i> .				
	Arc Spect	rum	Buk.	Spark Spe	ectrum	Reduct Vacu	ion to		
V	Vave-length		Inten-	Wave- length	Inten- sity	vacu	lum	Oscillation Frequency	
Kayser	Rowland and Tatnall	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	λ+	$\frac{1}{\lambda}$	in Vacuo	
				2934.2	1	0.83	9.8	34071	
				33.3	1	,,	,,	81.	
				32.6	1	,,	,,	90.	
2932.065		2932.07	4	32.1	2	,,,	,,	95·8 34101·	
20.272		20.07		31.6	2	,,	,,	28.6	
29.256		29.25	4	28.6	2	,,	99	36.4	
28.559 27.062			0	27.0	6	"	"	54.5	
26.953		26.94	0	2.0		"	"	55.5	
20 900		20 01		26·4b	1	,,	"	62.	
26.322			0		-	,,	,,	62.8	
26.160			0		373	11	"	64.7	
24.140	32 V 19 F	24.15	4	24·2b	8	,,	,,	88.2	
23.239		23.23	4	23.2	1	"	"	98.9	
21.229		A B S	0	01.0		"	9.9	34222·3 25·	
20.202			1	21.0	1	"	"	33.2	
20.296			1	19.7	2	"	,,	40.	
17.028		P 50 11	0	17.0	În	"	"	71.6	
15.534		15.52	3	15.5	2	",	,,	89.2	
10 004		10 02		15.0	2	,,	"	95.	
14.691			0			,,	,,	99.1	
14.114		14.09	3			,,	,,	34306.0	
13.715		13.70	2			,,	,,	10.7	
			120	13.5	4	,,	,,,	13.	
13.474			0		19818	"	"	13.4	
13.185		1074	0 3	12.7	1	"	"	16·8 22·0	
12.746		12.74	4	10·3b	10	"	,,	50.9	
10·281 09·837		10.30	0	10 30	10	"	"	56.	
07.835			i			,,	,,	79.	
07.335		07.33	3	07.3	2	,,	,,	85.	
0.000	Action 1			07.1	2	,,,	,,,	89.	
05.106		05.07	2			,,,	,,,	34412.4	
				05.0	1	,,	,,,	14.	
				04.7	1	99	"	17.	
04.440			0	04.3	1	"	"	20:	
				04.1	i	19	"	24.	
03.960			0	011	- 32	0.82	11	25.8	
03.428			2			"	119	32.	
00 120				03.0	ln	,,	,,	37.	
02.975			0			,,	,,,	37.	
00.080		00.07	4	A Allenda	1030	,,	,,,	71.9	
ST. File		2000 -0		00.0	1	"	"	73.	
2899.800		2899.79	2	00000	1	"	"	75·3	
07.000			0	2899.0	1	"	"	99.	
97.806			U	97.7	4	"	"	34500	
97.171			0		HARM	- "	"	06.	
0, 1,1			PIE	96.2	4	",	10.0	18.	
95.823			1	NET SEE	1 - 3	"	,,	22:	
			128	95.7	2	1)	"	24.	
	100000	T 18 20		93.3	In	12	1 14 1 16	53.	

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RHODIUM-continued.

	Arc Spect		All so	Spark Spe	-			
7	Vave-length		-			Vac	tion to	
	wave-length		Inten- sity	Wave- length	Inten- sity			Oscillation
A LEGISTRE	Rowland	Exner	and		and		1	Frequency in Vacuo
Kayser	and Tatnall	and Haschek	Cha- racter	Exner and Haschek	Cha- racter	λ+	λ-	
2000 142								
2893·142 92·817			1			0.82	10.0	34554.5
92.320		2892.33	4 3			"	"	58·4 64·3
02 020		2002 00	1	2892.0	ln	"	"	68.
			ETTE OF	• 91.0	ln	"	"	80.
				90.0	1	"	,,	92.
89.962		89.96	3			,,	,,	92.5
89.623			1	00.2	0.	"	,,	96.6
89.222		89-21	3	89.3	2n	"	99	34600
88.986		00 21	0			"	"	01·5 04·2
				87.8	1	,,	"	18.
87.082			0			,,	,,	27.0
86.112		86.10	3			,,	,,	38.8
				86.0"	1	,,	"	40:
85.364			0	85.4	1	,,	"	47.
00 304			0	85.0	1	,,	"	47·7 52·
84.683		84.67	2	000	1	"	,,	55.9
		020.		84.3	2n	"	"	60.
			198.4	82.7	1	,,	,,	80.
82.497		82.50	4	82.5	1	,,	,,	82.1
91.400		07.00	0	82.0	1	,,	,,	88.
81·400 80·912		£1·39 80·91	2 2	81·4 81·0	1 4n	,,	,,	95.4
80.775		80.80	1	01.0	411	"	,,	34701·2 02·8
79.628		00 00	0			"	"	16.7
				79.3	1	,,	,,	21.
78.770	THE TANK	78.76	4	78.7	1	,,	,,	27.1
70.100	HE THERE			78.3	2n	,,	,,	33.
78.139			0	78.0	1	,,	,,	34.7
76.592			0	10.0	1	"	"	36· 53·4
10 002			U	76.2	1	"	"	58.
75.764			2		1	,,	"	63.4
THE CONTRACT			1911	75.5	1	"	,,	67.
74 705				74.6	4	,,	,,	77.
74.507	Methodal	74.10	$\frac{0}{2}$,,	,,	78.6
74·115 73·742		74·10 73·75	4	73.8	1	. ,,	"	83.4
10 142		19.19	*	73.2	2	"	99	87·8 94·
73.104			0	.02	35	"	"	95.6
	1988		I STEEL	72.0	ln	,,	10.1	34809
71.489		71.49	5n		201 2	,,	,,	15.0
50.553	Tenti basi (E0 F4		70.8	1	,,	,,	23.
70·551 70·108	The Mark	70·54 70·10	$\frac{2}{2}$	70.5	1	,,	,,	26.5
69.746		10.10	0	1 2 2		"	"	31·8 36·2
00 .10				69.0	ln	"	"	45.
68.400		68.37	2	68.4	ln	,,	"	52.7
GILT SEAL IN		1	Pag -	68.3	2	,,	,,	54.
67.973		O= ~~	1	em r	9	,,	,,	57.7
65.755		67.55	1 2	67·5 65·8	2 2	"	"	62.9
00.100	The state of	65.75	4	00.9	4	"	"	84.7

RHODIUM—continued.

		пн	MOIGO	continue				
	Arc Spect	rum		Spark Spe	ectrum	Reduc		
7	Wave-length		Intensity and	Wave- length	Intensity and	-		Oscillation Frequency in Vacuo
Kayser	Rowland and Tatnall	Exner and Haschek	Cha- racter	Exner and Haschek	Cha- racter	λ+	$\frac{1}{\lambda}$	III Vacuo
	HE SO A B		Treas.	2864.7	1	0.81	10.1	34898
2864.517		2864.51	3			,,	,,	99.8
				63.8	4	,,	",	34909
00.055		20.00		63.2	4	,,	"	16.
63·057 62·572		63.06	6		Enter:	19	"	17.6
61.877			0	100		"	"	32.0
010				61.7	1	"	"	34.
PARTY SIE			10.50	61.0	1	,,	"	43.
60.886		60.84	4			,,	,,	44.4
60.774			3			"	"	45.5
60·208 59·908		59.86	0 2	TO SECUL	No.	"	"	52·4 56·4
59.735		59.80	2	59.7	1	"	"	58.2
09 100		29.13	-	58.2	ln	"	"	77.
			1 3 6	57.0	1	,,	,,	92.
		56.25	2	56.2	1	,,	>>	35000.8
55.273	THE PARTY		4			**	,,,	12.8
54.848		54.84	2		1.80	"	,,	18.1
F4.00F				54.4	1	"	* **	24· 25·5
54.237			0	53.6	1	"	"	33.
			10 38	53.5	i	"	"	35.
		100		53.0	î.	,,	,,	41.
52.809			0			",	,,	43.1
52.459			1	REIS I		,,	,,	47.4
W1 W20				52.3	ln	","	,,	49.
51.526		The second	0	51.6	1	"	"	58.8
50.608	District Street	To a se	1	51.2	1	"	33	70.2
30 003				50.5	2	"	"	71.
49.461		49.43	2		1	,,	"	84.5
			Total In	48.9	1	,,	,,,	91.
	The state of		1310	48.5	1	"	,,,	96.
1 × 000		1		47.7	1	"	10.2	35106-
45·868 44·917	188	45.84	2 0	45·8b	8	"	"	40.2
44.917			0	44.6	1b	,,,	"	44.
44.463		44.45	4n	110	-	,,	"	45.9
	4		Maria	43.1	ln	"	,,	63.
42.270		42.24	4n	42.3	1	>>	,,	73.2
41.909	201	41.90	4n			"	"	77.5
20.000				41.0	2	"	"	89· 35205·2
39·666 38·425		38.40	0 2	38.4	1	"	"	20.8
90 420		30.40	4	37.3	ln	"	"	35.
36.799		36.78	4	36.8	1	",	"	40.9
		Z STATE		36.5	1	,,	,,	45.
35.671	HE HER CHA	35.61		35.6	1	"	,,	55.2
84.053	See Se	35.52		1 1 1 1 1 1 1 1 1		"	,,	56.7
34.990			1	34.3	2	"	"	63.3
34.233	MANAGER AND SERVICE AND SERVIC	34.22	3	24.2	-	,,	"	72.8
33.981	100	34 22	1	S COST		"	"	75.9
20 001			1			, ,,	1 "	

RHODIUM—continued.

	Arc Spect		IODIUM	Spark Spe	ectrum	Reduc	tion to	
	Wave-length		Inten-	Wave- length	Inten- sity	Vac	uum	Oscillation Frequency
Kayser	Rowland and Tatnall	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	λ+	1_\[\lambda \]	in Vacuo
12000				2833.4	2	0.82	10.2	35283
2832.893		2832.87	2	32.6	1	"	,,	89·6 93·
31.398			0	020		"	"	35308.0
29.664		29.65	2	29.5	1	"	,,	29·8 32·
29.421		29.39	2			"	"	33.0
28.259			0	28.5	1b	"	,,	44· 47·2
40.499			U	27.5	1	"	"	57.
27.433		27.41	4	07.0	1	"	"	57.7
26.798		26.78	4	27·0 26·8	4 2n	"	"	63· 65·6
26.532		26.53	4		Fire and	,,,	"	68.9
23·988 23·756			0			0.80	10.3	35400·7 03·5
23.504		23.47	2 2			"	,,	06.9
22·979 22·850		22.97	2 0			"	"	13·3 14·9
22 000			0	22.6	2	"	"	18.
91,690				21.8	1	,,	"	28.
21.620			1	21.1	1	"	"	30·3 37·
20.946		20.95	3			"	"	38.8
19.742		19.72	3	20.8	1	"	"	41· 54·1
E MENTERS				19·5c	8	,,	,,	57.
19.367		19.35	2	18.7	ln	"	,,	58·7 67·
16.979			1			"	"	88.7
14.817			0	16.8	2	,,	,,	91· 35516·0
11017				13.9	2	"	"	28.
				13·4 12·9	2 2	,,	"	34· 40·
				12.3	1	"	"	48.
10.000		11.00		11.6	ln	* **	"	57.
10.999		11.00	3	10.8	1	"	"	64·2 67·
09.853			0	09.8	ln	"	"	78.7
07.270		07.25	2	07.6	ln	"	"	35607· 11·6
06.212			1			"	"	24.9
05.908		05.89	2	05.7	2	"	"	28·9 31·
04.020		04.03	2	04.1	4	"	"	52.7
02-113			0	02·4b	4	"	,,	73· 77·1
				01.7	1	"	"	82.
01.674		01.68	3	01.6	1	"	"	82.6
00.021			0	00.9	ln	"	"	93· 35703·7
2799.705	25.14		0			"	,,	07.7
99.536			0	0.00000		"	10.4	09.8

RHODIUM-continued.

		RH	ODIUM	-continued	6.				
	Arc Spect	rum		Spark Spe	etrum	Reduct Vacu			
V	Vave-length		Inten-	Wave- length	Intensity and			Oscillation Frequency in Vacuo	
Kayser	Rowland and Tatnall	Exner and Haschek	and Cha- racter	Exner and Haschek	Cha- racter	λ+	1 - \lambda		
			ALL E	2798.3	1	0.80	10.4	35726	
BOD HILL				.97.9	1	,,,	,,	31.	
		1		97.1	ln	,,	>>	41.	
2796.743		2796.75	3	00.4	1	"	99	50.	
			2	96.4	1	"	"	57.2	
95.824			4	95.6	ln.	"	"	60.	
95.366		95.37	1			"	,,	63.1	
94.587		0001	0			"	99	73·1 80·3	
94.020	William Estate		2	94.0	1	"	"	94.9	
92.886	7131. 4	92.88	2	92·8 91·2	4 1n	,,	"	35815.6	
91.270		91.27	4 2	90.9	4	"	"	20.6	
90.872		90.88	2	30 3		,,	23	25.5	
90.493		30,30	2	89.1	ln	,,	"	43.	
86.934		86.93	2		1	,,	"	70·6 84·4	
85.920			0	240		, ,,	"	92.	
				85.3	1	"	"	99.	
				84·8 84·3"	1	"	"	35905	
			-	83.6	li	0.79	,,,	14.	
09.140		83.14	5	83.2	1	,,	99	20.2	
83.140	Tay and	0011		82.8	1	,,	"	25· 35·	
	1 3 L 32	A CONTRACTOR		82·0b	6	,,	"	45.5	
81.184			1	81.2	l ln	"	,,	53.	
		00.45	9	80.6	111	"	"	55.1	
80.439		80.45	3	79.8	1	,,	,,,	63.	
HO.654		79.65	3			,,	,,,	65.3	
79·654 78·967		78.96				,,,	"	74.2	
10 201	100		No.	78.8	1	99	"	82.	
				78·4b	6	"	"	84.0	
78.162		78.16	4	76.0	6	"	"	36013	
	Na Fill	75.86	3 2	100		"	,,	14:	
75.869		15 60	-	75.21	0 1	"	10:	31:	
74.557		74.56	3 2			"	"	33.	
.100.				74.4	4	"	"	46.	
73.397			2	73.2	4	"	99	49.	
			-0.5	72.5		"	,,	58.	
#1.G15		71.63	3 4			,,	,,	69.	
71.615		110		71.2	1	"	"	75· 87·	
70.277	7		1	20.0		"	"	36112	
68.336	3	68.3		68.3	1	"	"	18	
67.832	2	67.8		67·8 66·6		"	"	34	
04.004		66.6	_	65.0		,,	,,	57	
64.909	9	04.9	4	64.2	1	,,	,,	66	
				64.0	1	"	"	69 82	
62.93	8	62.9		00.0	200	"	"	01	
62.31			0	62.3	-	"	"	36204	
IX SECTION	-	00.5	55 2	01.5	1	"	,,	14	
60.54	1	60.5	00 2	and the same	1	"		7 7 7 7 2 2	

RHODIUM-continued.

L. Touris		RI	HODIUM	-continued	d.			
	Arc Spect	trum		Spark Spe	Reduction to			
	Wave-length		Inten-	Wave- length	Inten- sity	Vac	uum	Oscillation Frequency
Kayser	Rowland and Tatnall	Exner and ' Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	λ+	$\frac{1}{\lambda}$	Frequency in Vacuo
The state of				2759.7	1	0.79	10.5	36225
THE REAL PROPERTY.				59.3	ln	,,	,,	31.
			Page 1	57.6	ln	,,	,,	53.
2757.00	05		1.			"	"	60.7
54.84	5		0	• 56.9	2	"	"	62· 89·2
0101			0	54.3	4	"	"	96.
Then I is				53.3	1	"	,,	36310
1 8				53.2	1	,,	,,	11.
W0.04			140	53.1	1	,,	"	12.
52.94	La training	2752.95	2	50.0	0	"	"	14.2
			The state of	52·3 51·6	2	"	"	23· 32·
51.45	60	51.47	2	310	1	,,,	"	34.0
51.14		011	0			"	10.6	38.0
THE REAL PROPERTY.		49.38	1	17 19 39	Mile !	"	,,	61.2
				48.4	1	,,	,,	74.
				47.7	4	,,	"	83.
1.00				45·8 44·8	1 1b	"	"	36409.
43.56	8	43.55	0	110	10	"	"	38.4
HAME IN		41.85	2	41.8	1	0.78	,,	61.1
100				41.7	1	"	,,	63.
40.64		40.63	2			,,	"	77.2
40·48 40·30		40.30	0 2			,,	"	79.3
40.02		40.00	1	40.0b	8	"	"	81·7 85·6
39.84		39.80	1	10 00		',,	"	88.1
38.35		38.34	2			,,	,,	36507.7
37.71		37.67	2			**	,,	16.5
37.50		37.47	2	37.5b	8	"	"	19.2
36.86		36.84	3	36·8 35·7	1	"	"	27.9
Telepoon N			Maria .	35.2	i	"	,,	50.
34.90	6	34.89	2	002		**	"	53.8
TO BE SEE			many 1	34.2	1	,,	,,	63.
32.26			0	1000		,,	,,	89.1
31.87	4		0	31.7	1	"	"	94.3
and the same	Participants			30.8	4	"	"	97· 36609·
29.61			0	29.7	î	"	"	24.7
29.034		29.00	6	29·1b	6	,,	,,	32.6
20.00		TO SEE	9194	27.7	1	,,	10.7	50.
26.934			0	35		,,	10.7	60.5
25.961	0.74		0	25.8	1	"	"	73·6 76·
				25.1	i	""	"	85.
				24.1	1	"	"	99.
			2395	23.1	1	,,	,,	36712
00.000			0	22.9	1	,,	,,	15.
22·389 22·243		22.23	$\begin{bmatrix} 0 \\ 2 \end{bmatrix}$	22.3	1	"	"	21.7
22 243	(Contract	20.60	2	20.6	1	"	"	45.9
20.235	6	20.23	3		1000	,,	"	50.9

RHODIUM-continued.

	Arc Spectr	um	E	Spark Spe	ectrum	Reduction to		
1	Wave-length		Inten-	Wave- length	Inten- sity	Vacu	ium	Oscillation
Kayser	Rowland and Tatnall	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	λ+	$\frac{1}{\lambda}$	Frequency in Vacuo
				2720:1	1	0.78	10.7	36753
2718-640		2718.63	2		Was To	,,	,,	72.4
A 92 N. Y.			1	18.5	1	,,	"	74.
18.111		17.56	0 3	18.1	4	"	"	79·6 86·7
17.606		17.50	3	17.4	1	"	"	89.
16.912		16.89	2	Z/		"	"	95.9
16.645		1	0	16.7	1	,,	"	99.4
15.399		15·40 15·14	2 2	15·4b	8	,,,	,,,	36816.3
15·149 14·881	Cal Partie	10.14	0	120 (37.0)	C121	"	"	19·8 23·3
14.499		14.50	4			"	"	28.5
				14.3	1	,,	,,,	31.
00.619		09.60	3	13.3	2	"	"	45.
09·613 07·896		03.00	0n		7/23/3	"	"	95·0 36918·3
07.320	B 62 1 5 - 4	07.32	2	07.3	1	"	"	26.2
				06.7	2	,,	"	35.
06.135		05.73	2 3	05·7b	10	"	,,	42.4
05·718 05·059		05.05	0	03.10	10	"	"	48·0 57·1
00 000	Series Inc.	00 00	Hill	04.9	4	"	"	59.
03.820		03.84	6			,,	,,	73.9
				03.7	1	,,	,,	76.
				03.3	1	"	"	78· 81·
02.621			0	000	To the	"	168	90.3
02.337		02.33	2		1	,,	,,	94.3
02.158		02.17	2	01.0		"	,,	96.6
00.688		00.69	1	01.3	1 4	"	"	37008
00.384		00.39	2	00.	1	"	"	20.9
			122	2699.9	2	,,	"	28.
2005 055		0007.05	2	99.0	ln	0.77	,,	40.
2697.955		2697.95	2	97.1	2		,,	54.3
				96.0	4	"	"	81.
94.405	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	94.40	4			"	"	37103-2
09.500		09.70	0-	94.3	2	,,	,,	05.
93.726		93.73	2n	93.5	2	"	,,	12:8
		STERE E	1000	92.9	1	"	"	24.
92.390	REPERT	TIE UNE TO SE	2	92.4	1	"	"	30.8
		12 8	1	92.2	1	"	,,	34.
		7 - 12 5	Page 1	91.2	4	"	"	47· 58·
89.716	100	89.71	0	89.7	4	"	"	67.9
89.022	THE TREE	CHILDS.	0			,,	"	77.4
00.150	12 11 11	00.10	9	88.3	1	"	,,,	87:
88·173 87·411		88·18 87·40	2 2		1	"	"	89.1
87.015	PACTOR (NO	87.01	3			"	"	37205.2
	张作 元	-	1	86.7	1	",	"	10.
86.608	LI BERTON	86.63	3	THE PERSON		,,,	,,	10.7

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Marie	Arc Spect	rum		Spark Spe	Reduction to			
1	Wave-length		Inten- sity	Wave- length	Intensity	Vac	uum	Oscillation Frequence
Kayser	Rowland and Tatnall	Exner and Haschek	cha- racter	Exner and Haschek	and Cha- racter	λ+	$\frac{1}{\lambda}$	in Vacuo
2685.551			0	00044	0	0.77	10.8	37225.5
04.201		9004.90	0	2684.4	8	"	"	41.
84·301 83·660		2684·30 83·66	2 0	83·7b	8	"	"	42·9 51·7
82.624		82.64	2			"	"	52.1
81.873		81.87	3			"	,,	76.6
				81.7	4	,,	,,	79.
80.717		80.72	4	20 300		"	,,	92.6
80.379		80.37	2	=0.0	Corner !	,,	"	97.4
FC.579		50.55	0	78.8	1	"	10.9	37319
76.573		76.55	2	76.4	4	"	"	50·5 53·
76.200		76.18	4	10 4	-	"	,,	55.6
74.525		74.52	2	74.5e	8	"	"	79.0
74.287		74.29	2		7	"	"	82.1
74.059		74.05	2	74.0	2	,,	,,	85.5
			No. of the	72.9	1.	,,	- ,,	37402
				72.2	1	"	"	11.
=1 =00				72.0	1	"	,,	14.
71.529		71.15	1 3	71.0	1	"	,,,	20.8
71.144		71.15	9	71·2 70·1	1	"	"	26·2 41·
69.419			0	101	W Day	"	"	50.4
00 110				69.3	4	"	"	52.
di ma				68.5	2	,,	,,	63.
67.453			0			,,	"	78.0
67:317			0	2-2		,,	,,,	80.0
00 100		00 71		67.2	2	"	"	82.
66.498		66.51	2	65.3	1	99	,,	91.4
MARKET !			THE PARTY	64.9	1	**	99	37508· 14·
			TO BE	64.6	2	"	"	18.
63.764		63.77	2	63·7b	6	"	"	29.9
63.389			0			"	99	35.2
				62.1	1	,,,	,,	53.
40.00			NEW T	61.7	1	,,,	,,	59.
59.937			1		11 11 11 11	"	"	84.0
59.573		50.10	2 2	59·1b	0	"	"	89.1
59·098 58·515	- 30 18716	59.13	0	99.10	8	"	"	95·7 37604·1
99 919	The State of		U	58.4	2	"	"	37004
2000	IN THE		1170	57.3	4	"	"	21.
		The state of	Total Control	56.4	În	"	"	34.
56.000	- The Park 1910	56.00	2			,,	,,	39.7
52.750		52.76	5		I To	0.76	11.0	85.7
F1 0F0				52.6	1	"	"	88.
51.973			0	51-01	10	"	",	96.8
50.985			0	51.8b	10	"	>>	99· 37710·8
49.686		49.69	1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		,,	"	29.3
10 000		10 00	1	49.5	1	"	"	32.
	BENEZ BI	FEB LANGE	1 A 1 A	49.0	î	"	"	39.
48.681	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	48.67	2			"	"	43.7
47.375	Set Day	47.38	3	47.3	1	"	"	62.2

		Arc Spect	rum		Spark Spe	Reduction to			
	1	Wave-length	122011	Inten-	Wave- length	Inten- sity	Vac		Oscillation
	Kayser	Rowland and Tatnall	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	λ+	$\frac{1}{\lambda}$	Frequency in Vacuo
			2647.07	1			0.76	11.0	37767.5
					2644.2	1	,,	,,	37808
	2643.691		43.68	2			,,	,,	15.0
	43.077		43.10	3			,,	,,	23.5
	42.857			0	42.8	4	,,	,,	26.8
					41.7	4	,,	,,	43.
					40.6	2n	,,	,,	59.
	90 905				39.8	1	,,	,,	71.
	39.327			0	20.01	0165	"	,,	77.4
1	39.097			0	39·2b	4	,,	"	79.
4			90.04	0 2	20.0	HAR.	"	"	80.7
1	38·839 38·388		38·84 38·39	0	38.8	4	,,	**	84.4
	37.484	The state of	29.23	0			"	29	90.9
-	37.484			0	37.0	1	,,	"	37903.9
-	36.744			1	370	In	"	"	11.
	90 744			1	36.5	1	"	"	14.6
ı			35.40	1	20.9	1	"	"	18.
	2000		4 39.40	1	35·3b	6	,,	,,	33.9
1	35.082		35.07	3	99.90	0	,,	"	35.
1	34.605		30.01	0	34.6	4	"	"	38.6
	33.523		33.50	2	940	4	"	"	45.4
1	33.373		33.40	2	33.4	1	"	"	61.1
	00 010		99 40	4	32.7	1	"	"	
1				Part of	31.3	1	"	"	73· 79·
1	30.509		30.49	2	31 3	1	"	11.1	38004.4
1	00 000		00 10		30·3b	4	"		07.
	30.003		30.00	2	00 00	7	"	"	11.7
İ	28.222		28.22	0	28·2b	8	"	,,	37.4
ı					27.9	2	"	"	42.
ı	27.042			0					54.5
1	26.776		26.77	2	26.7	4	"	"	58.4
1	25.973		26.00	3	26.0	Î	"	"	69.9
-	25.496		25.51	1	25.5b	8	,,	,,	76.8
1	25.309		25.33	2			,,	,,	79.5
	24.948		24.96	0			,,	,,	84.8
1	24.821			0	24.8	2	,,	,,	86.7
1	22.756		22.70	1	HO SERVE		,,	,,	38117-1
ı	22.661			4	22.6	2	,,	,,	18.1
ı	ART PE			all le	21.2	1	"	,,	39.
1	21.099		21.12	2			,,,	,,	40.7
1				HARRY !	20.0	1	,,	,,	57.
1	-10000000		The state of the s		19.0	1	,,	,,	71.
1	18.596		18.61	3	- 11	A COLUMN	,,	,,	77.2
-				100	17.8	ln	,,	,,	89:
	10.150		Water Sale		17.1	1	,,	"	99.
	16.178		16.17	2		1 3	**	,,	38212.7
-	15 805				16.0	1	"	,,	15.
-	15.735		15.74	2		124	"	,,	19.0
1				BERT	15.4"	1	,,	"	24.
				PRIBA	14.7	1	"	22	34.
-	19.000		10 -0	A 30 A	13.8	1	,,	,,	47.
1	13.689		13.70	4n	13.6	1	"	"	48.9
41	13.145	20	13.19	0	12 TO 1 1 2 TO		"	,,	56.6

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Oscillation		Reduction to Vacuum		Spark Spectrum		Arc Spectrum				
	uIII	vacu	Inten-	Wave-	Inten-		Wave-length	7		
Frequenc		1	sity	length	sity		WWW TO LONG WILL			
in Vacuo	,	16.50	and		and	Exner	Rowland			
	1_	λ+	Cha-	Exner and	Cha-	and	and	77		
	λ		racter	Haschek	racter	Haschek	Tatnall	Kayser		
38269-1	11.1	0.76	I TOLK		0			2010 015		
77.			2	2611.8	U			2612.315		
83.	"	"	ĩ	11.4		A Print se		1.50		
99.	"	"	i							
38300.8	"	, ,,	1	10.3						
07.	"	0.75	1	00.7	0			10.156		
13.8	11.2		1	09.7				THE PARTY OF		
18.		"		00.01	0	2609.26		09.266		
22.9	"	"	8	09·0b		and the life				
28.	"	"			2	08.64		08.639		
	"	,,,	1	08.3	1000					
34.9	,,	"	The same	Bulling	2	07.83		07.831		
53.	,,	,,	1	06.5	4	06.55		06.540		
64.	,,	,,,	1000	Name and	2	05.80		05.807		
87.	,,	,,	2	04.3	1 3 2 -	- 1-27-2		30 001		
98.	"	,,	1500	The same of the	4	03.51		03.500		
38402	,,	,,,	2	03.3	1 1 1 1 1	The state of		09 900		
21.	,,	,,			0	STATE OF THE		01.926		
28.	,,	,,,	2	01.5				01 920		
41.	,,	,,	2	00.6						
55.	,,	,,	1	2599.7						
59.	,,	"	î	99.4	0	Total i		2500 050		
75.	"	,,,	î	98.3	0	The same of		2599.352		
77.	"	,,	-	30 9	2	9700.00		The state of		
83.			1	97.8	2	2598.20	7725 7 5	98.166		
87.	"	"		310	2	97.80		97.774		
92.	"	"		The level		0	THE PARTY	97.484		
94.	"	"	8	07.01	0	97.16				
38507	"	"	0	97·0b	3	97.06		97.014		
20.	,,	"		0.0	0	P MAGE	0 120 OIL 10	96.134		
47	"	"	2	95.3		T HOUSE				
65	"	"	4	93.5	Des les	Last Call				
	" "	"			0	92.26	1 1 1 1 1 1	92.247		
68°	"	"	6	92·1b	1	1 3 3 3 3	THE PARTY			
	"	"			1	90.91				
87	"	,,	1	90.8		THE SECOND				
38600	"	,,	1 3 1 2	I lave by it	1		1 3	89.892		
20	,,,	,,	1 1 1 1 1	A LONG BOOK	0n	88.55	LED E	88.545		
38	11.3	,,	4	87·3b	0			87.353		
39	,,	,,			2	87.25	E STATE OF	87.245		
45	,,,	,,	la La Car	1 5000	2	86.90	Set Bitte	86.897		
52	,,	19	4	86.4		0000	ENIEN DON	00 001		
88	,,	,,	1		1	17,92100	1000	84.016		
99	,,	"	1	83.3		A STATE OF	10000	84.010		
38708	,,	,,	2	82.7		TO BEE	To Cite a			
21	,,	,,	PAGES		0	81.80	WAS BUT	01.700		
24	,,	,,	4	81.6b	·	01 00	The second	81.790		
31	,,	,,		02 38	2	81.14	1	01.100		
41	,,	,,	2	80.5	-	01.14		81.100		
47	"		3	00 0	0		The state of	00010		
53	"	"	2	79.7	U	A STATE	DE ISWALL	80.043		
53	"	"	1	19.1		HO 04		- 12 AND		
56	1300	"				79.64		79.650		
60	.,,	"	1	70.0	2	79.49	Contract of	79.487		
	"	"	1	79·2 77·9	1 2 4 -		A DESIGNATION			
80	99	99								

RHODIUM—continued.

	Arc Spec	trum		Spark Spectrum		Reduction to Vacuum		1
	Wave-length		Inten-	Wave- length	Inten- sity			Oscillation Frequency
	Rowland	Exner	and		and			in Vacuo
Kayser	and	and	Cha-	Exner and	Cha-	λ+	1_	
Itayser	Tatnall	Haschek	racter	Haschek	racter		λ	
2576.330		2576.32	3			0.75	11.3	38803.7
		75.85	2			,,	,,	10.8
74.751		74.75	2	2574.7	ln	,,	"	27.4
74.332		74.33	2n			,,	"	33.8
73.577		73.60	2n			,,	"	44.9
			POR -	71.6	ln	,,	,,,	75.
				70.4	1	,,	,,	93.
70.206		70.20	2			,,	,,	96.1
69.171		69.16	0			,,	"	38911.8
				69.0	4	160	"	14.
				68.8p	4	"	"	17.
67.374		67.37	4			"	11.4	38.9
66.960	*	66.95	2	66.9	1	,,	"	45.3
66.137		66.13	2	1000		"	"	57.7
07 000		22.22		66.0	1	,,	,,	60.
65.888		65.86	2			"	,,	61.7
64 000				65.1	2	0.74	"	73.
64.900			0	010	5.073	0.74	"	76.5
				64.3	1	"	,,,	86.
CO.741		00 45	0	63.7	1	"	,,,	95.
62.741		62.75	0n	00.0	1 20	,,,	"	39009.2
				62.6	1	"	"	11.
60.322		60.99	0	62.0	2	"	"	21.
00.322		60·33 60·02	2			"	"	46.1
		00.02	1	E0.01	4	"	"	50.8
58.714		58.76	4	59.8b		"	"	54.
90.114		99.10	4	· 58·7 57·8	1 2	"	"	70·4 85·
				57·1b	6	,,	"	95.
		56.98	1	37.10	0	"	"	97.2
56.172		00 00	i			"	,,	39109.6
55.449		55.45	4			"	"	20.6
00 110		00 40	-	55.3	2	"	"	23.
55.010		55.00	1	000		"	,,	27.5
00 010	THE HITE	00 00	28	54.7	1	"	"	32.
53.426		53.42	On	01.	18134	"	"	51.7
	THE STATE OF	00 1	011	53.1	1	"	"	57.
		LIKE STATE		52.3	î	"	,,	69.
51.289		51.30	2		Mark !	"	"	84.4
	STATISTICS .	Sale Male	W. College	50.6	1	"	"	95.
SECTION AND ADDRESS.				49.6	î	"	,,	39210
48.679		48.67	2		-17-1	"	11.5	24.6
		47.75	1			,,	,,	38.8
				47.6	1	,,	,,	41.
47.366		2 H S	0			"	"	44.7
45.794		45.79	4	1		,,	,,	69.0
		45.44	1	1 45.4b	8	,,	,,	74.4
44.317	The Resident	44.30	2	A. M.		"	"	91.9
	1 3 3 3 3 3			44.0	4	,,	"	97.
43.648	12 12	43.63	0	The state of		23	"	39302.3
B. C. A.		07-12-5-0		43.4	1	"	"	06.
41.096		41.11	2	41.1	2	"	**	41.5
39.860	-	39.88	4n			"	"	60.6
WEIGHT LAND	The same of the last		-73	39.7	1	22	99	63.

S

RHODIUM—continued.

Arc Spectrum			ODICM	Spark Spectrum		Reduction to		
T.	Vave-length		Inten-	Wave-	Inten-	Vacu		Oscillation
			sity	length	sity			Frequency
	Rowland	Exner	and	72	and Cha-		1	in Vacuo
Kayser	and Tatnall	and Haschek	Cha- racter	Exner and Haschek	racter	λ+	λ	
To Page 18				2539.2	1	0.74	11.5	39371
				38.6"	1	,,	"	80.
		2537.80	1	07.7		,,	"	92.7
2537.721		37·72 37·16	2 3	37·7 37·1	4	"	"	39402.7
37·155 36·803		36.80	3	36.8	i	"	"	08.2
30 003		00.00		36.2	1	,,	"	18.
				35.7	1	,,,	,,,	25.
				35.3	2	,,	"	32.
34.682		04.10	0	34.6	4	" "	"	41·2 49·2
34.170		34.18	2	34.0	1	"	"	52.
33.687		33.70	2	24.0	1	"	"	56.6
99.001		30 10	-	33.5	2	"	"	60.
32.743		32.79	2			"	,,	71.0
				32.3	2	,,		78.
31.920		31.85	2	27.0		"	,,	84.8
31.369			0	31.3	4	"	"	92.8
31.053			0			"	11.6	39509.7
30.284			0	29.3	2	"		24.
				27.3	1	"	"	56.
		27.14	1			,,	,,	58.8
26.744			0	26.7	1	,,	,,	65.0
26.244		26.25	2	15 1		.99	,,,	72.8
26.092		26.10	1	90.011		"	,,	75.2
07.001	Same and	25.21	0	26.0"	1	"	19	77· 89·0
25.221		24.36	1			"	"	39602.4
		2100		23.4	2	"	,,	17.
22.988	had been	22.98	2n			,,	"	24.0
	Va Ingel			22.7	1	,,	,,,	28.
		A A SE		21.4	1	,,	"	49.
20.623		20.66	2	20·5b	8	"	"	60.8
	1900			19.3	2	"	"	82.
18.561			0	100		"	"	93.6
13 001			12/2016	17.5b	. 4	0.73	"	39710
15.833	120 100	15.84	2	THE WAR	1411	,,	,,	36.6
	Ser sale		1 Albert	15.7	1	,,	"	39.
		14.00		15.3	2	"	"	45· 52·7
	THE R. P. P.	14.82	ln	14.7	1	,,,	"	55.
13.464		13.50	2	14.1	3	"	"	74.1
10 104	Sei Hillian	10 00		13.3	1	,,	"	77.
12.180		12.19	2	The Ball	FELL	,,		94.4
11.133		11.15	2	11.2	2	,,	11.7	39810.8
		10.88	1		Set 1	,,	,,	15·0 17·1
10.747		10.75	2	10.6b	8	"	"	19.
09.788		09.81	2	10.00	0	,,	"	32.1
09.100		00 01	The state of	09.6	1	"	"	35.
08.743		08.73	0			,,	"	49.0
102万万十二			THE STATE OF	08.1	2	" "	,,	59.
	State of the last	Treat 1	STATE OF THE PARTY	TO SECOND SECOND		THE RESERVE	100	CO. TO THE REAL PROPERTY.

RHODIUM—continued.

	Arc Speet	rum	6 198	Spark Spe	ectrum		tion to	
	Wave-length		Inten- sity	Wave- length	Inten- sity	v a.e.	uum	Oscillation Frequency
Kayser	Rowland and Tatnall	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	λ+	1_\[\lambda \]	in Vacuo
2507:342	No.	2507:35	0			0.73	11.7	39870.9
0 = ==0		0==0		2506·1	1	,,	,,	91.
05·758 05·189	Tetra 28	05·76 05·20	$\frac{2}{2}$	05·1b	4	"	,,	96·4 39905·4
04.384		04.39	4n	00 10		"	"	18.2
03.939			1			"	"	25.4
00 450	THE STERN			03.8p	2	,,	"	28.
03·458 02·843	15.00		0			"	,,	33·0 42·9
02.546		02.55	2	02.6	1	, ,,	"	47.5
	100			02.4	-1	,,	,,	50.
			100	01.3	2	,,	,,	68.
01.115	1 E. W.	01.10	1 0			,,	,,	70.6
00·740 00·668	The state of the s	00·74 00·67	2			"	"	76·5 77·6
00 000		2499.81	ī			"	"	91.3
				2499.2	2n	"	,,	40001
2499.095		99.10	2n			,,	,,,	02.7
	100			98·1 96·8	2n ln	"	"	19.
				96.0	11	99	"	40· 52·
94.604		94.61	4n	000	ME S	"	"	74.8
				94.3	1	"	,,	80.
93.733	Sulfative of	93.73	1	00.4		"	11.8	88.8
92.395	11-20	92.39	2	93.4	ln	"	"	94.
92.999		91.93	1			"	"	40110.3
	Fa Balling	02 00		91·8b	4	"	"	18.
90.860		90.85	3		13.0	"	,,	35.0
00.000		00.00	0	90·7b	10	"	"	38.
89.986		89.98	0	89.8	1	"	"	49.1
				89.2	î	"	"	62.
88.547		88.54	1			"	"	72.3
		00.04	abitary	88.3	2	"	"	76.
87.581		88·24 87·60	$\frac{1}{4}$			"	"	77.3
01.001		01.00	4	86.7	1	"	"	87·7 40202·
85.688		85.67	2	85.7	4	"	"	18.6
00 100				84.6	2n	,,	,,	36.
83.423	ETE CHOWN	83.41	2n	09.9	1	. 33	,,	55.3
				83·3 82·7	4	,,	"	57· 67·
		82.15	2	02 1	-	"	"	75.9
81.686			0			"	.99	83.4
00.001		90.04	0	81.2	2	"	,,	91.
80·921 80·596		80·94 80·60	0			"	"	95·7 40301·1
00.090		30.00		80.4	4	"	"	04.
	District of the second	79.85	2			"	"	13.2
	The same			79.1	1	,,	,,	25.
77.010		77.01		78.6	1	19	,,	34.
77.618	NEDE W	77.61	1	77·6 77·2	1 2	"	"	49·6 56·

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RHODIUM—continued.

	Arc Spectrum			Spark Spe	ectrum		tion to		
Wave-length		Wave-length		Inten-	Wave- length	Inten- sity	Vac	uum	Oscillation Frequency
Kayser	Rowland and Tatnall	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	λ+	$\frac{1}{\lambda}$	in Vacuo	
2475.978	recitions.		0		Waller !	0.73	11.9	40376.2	
75.749		2475.72	0			,,	,,	80.1	
			III.	2475·6b	8	,,	,,	82.	
75.097		75.11	4			,,	"	90.5	
74.677		74.67	1	74.1	1	"	,,	97.5	
74.116		74.12	0	74.1	1	"	"	40406.5	
=0.100		70.00	2	73.4	1	"	"	18· 21·5	
73.199		73.20	1			"	"	24.8	
E0.551		73.00	2			"	"	31.9	
72.571		72.56	4	71.7	2	"	"	46.	
71.561		71.56	2	111	-	"	"	48.4	
		11.90	0			"	"	59.8	
70.860			0	70.6	1	"	"	64.	
70.486		70.50	2	.00	Sino:	"	- "	65.9	
10.400		10 30	-	69.6	1	0.72	"	80.	
69.203		69.20	1	000	1	,,		87.0	
05 205		03 20		68.8	1	,,	"	94.	
				68.2	î	"	,,	40503	
		BOY LATE	10.85	67.1	i	"	"	22.	
			100	66.1	î	,,	"	38.	
				65.2	ln	"	"	53.	
63.670		63.70	4n	002		"	"	77.7	
03.010		00 10	111	63.4	2	"	,,	82.	
		62.74	1	00 1		"	"	93.3	
61.120		61.14	2			,,		40619.8	
01 120		01 14	115/11	61.0b	8	,,	"	22.	
59.237			1	0200		,,	12.0	51.0	
59.004		59.00	2	59.0b	6	"	,,	54.9	
56.277		56.26	1	56·2b	4	,,	"	40700-2	
55.788		55.79	2	55.7	8	"	"	08.1	
55.521		00.10	0			"	"	12.5	
53.898			0	100000000000000000000000000000000000000	5	,,	"	39.5	
00 000				52.1	1	,,	"	69.	
		PLEA	To the same	51.0	1	"	,,	88.	
50.660		50.67	3			,,	,,	92.2	
00 000	. 5 5 3 3	Maria Inc	1	50.5	1	,,	,,	96.	
	59 5 5 AL		FUE	49.5	ln	,,,	,,	40813	
		49.15	2	TO SUFFER IN	Branch.	,,	,,	18.5	
48.923		48.92	2 .	N. S. S.		,,,	,,	22.3	
				48.8	ln	,,,	,,	24.	
48.378	The state of	48.36	0	NEW TENTE	1000	"	,,	31.5	
		114 6 7	538	47.8	. 4	"	,,,	41.	
			135	47.4	1	,,	"	48.	
		1 20 1		46.8	1	,,	,,	58.	
45.714	THE STREET	45.70	2		N. T.	"	"	76.0	
		HE SHOW	1 1	45.2	2	,,	"	84.	
44.843	AN SER		0 .	44.8	1	"	,,	90.4	
44.337	A STATE OF THE STA	44.35	4n			,,	"	98.8	
	Sur Ville	No. P. L. P.		44.2	2	"	"	40901	
43.812	Verification in	100000	0	Park and	1500	"	12.1	07.6	
43.221	LEC D	A BLOOM	0	100000000000000000000000000000000000000	THE REAL PROPERTY.	"	"	17.5	
42.830	146 7 36	11-12	0	11.6	153	"	"	24.0	
	1 - 1 - 10		1	41.3	1	99	,,	50.	

RHODIUM—continued.

	Arc Spect	rum		Spark Spe	ctrum	Reduct	tion to	
7					Inten-	Vacu	Oscillation	
		1	sity	length	sity	1		Frequency
-	Rowland	Exner	and		and		1_	in Vacuo
Kayser	and Tatnall	and Haschek	Cha- racter	Exner and Haschek	Cha- racter	λ+	λ	
				2440.6	1	0.72	12.1	40961
2440.427		2440.45	2	00.0		,,	"	64.1
20.220			0	39.8	1	"	"	75.
39.338			U	38.7	4	"	"	82·6 93·
37.174		37.16	2	00.	-	"	"	41019-1
36.974		P. Carlotte	0			"	"	22.4
			1753	36.8	4	, ,,	"	25.
				35.2	2	"	"	52.
	STEEL BENEFIT			35·0 33·6	l ln	"	"	56· 79·
33.346			0	33.4	ln	"	"	82.7
32.755		32.75	1	32.7	1	"	"	93.6
	1111	32.03	i			22	"	41105.8
31.936		31.94	2		(12 m B	"	99	07.4
	12-7-3			31.8	3	"	,,,	10.
				31.5	2	"	"	15.
			FAST	30·8 29·8b	2 2	"	"	27· 44·
29.610		29.60	2	2500	4	"	"	46.9
20,010		20 00		29.5	2	"	"	49.
29.268		11 10000	0			,,	"	52.6
29 053			2	29.1	2	"	,,,	56.2
27.777		27.77	2	-		"	12.2	77.8
27.193		27.20	3	27·2 27·1b	2 4	"	"	87.5
		1		26.5	2	"	"	99.
			14.50	25.4	1	"	"	41218
24.521		24.51	0	24.5	2	"	"	33.2
			Lana .	24.1	2	"	"	40.2
24.021		24.02	2	the state of		"	,,,	41.9
- HOUSE AND ASSESSMENT OF THE PARTY OF THE P			FEED .	23.8	1	"	"	45.
	A STATE OF THE STA	FOR STATE	1000	23·5 23·2	2 2	"	99	50· 56·
			HELD !!	22.6	1	"	"	66.
22.237			0	22.2	2	"	"	71.9
		11/19/14/3		21.9	1	0.71	"	78.
21.060		21.05	2	21.0b	6	"	"	92.1
20.947		90.00	0	20.1	2	99	"	93.9
20.271		20·26 19·79	2 2		3350	99	"	41305.6
18.718	100	18.71	3			"	"	32.1
17.523			0	17.5	4	"	"	52.5
A STATE OF THE PARTY OF THE PAR	31	I Educate	NO.	16.8	2	"	"	65.
N. Busine	0.00	15.93	2			"	"	79.7
14.007	W 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	AL DE	1	15.8b	6	-,,	"	82.
14·927 14·662	1000000		3 0	14.6	1	"	"	96·9 41401·5
14.433			0	14.0	-	"	"	05.4
	Bury Be	THE REAL PROPERTY.	di lis	13.8	1	"	,,	16.
12.613	Marie Contract	12.61	1		1-3	"	12.3	36.6
	The state of	A LAMBER		11.9	1	"	99	49.
10.240	a grade	10.00	10	10.6	4	"	,,,	71.
10.348	THE STATE OF	10.35	10		1	1 "	>>	75.5

RHODIUM—continued.

		KI	HODIUM	-continue	u.		1000		
	Arc Speci	trum		Spark Spe	etrum	Reduc	tion to		
7	Wave-length Rowland		Rowland Exner and		Wave- length sity and		vac	1_	Oscillation Frequency in Vacuo
Kayser	and Tatnall	and Haschek	Cha- racter	Exner and Haschek	Cha- racter	λ+	λ		
2409-626		2409-62	0			0.71	12.3	41488.0	
08.745			0	2408.6	2	"	99	41503.1	
08.275		08.26	1	2408.0	2	"	"	06.	
08.100		08.06	0			"	"	14.6	
07.974		07.97	2		Sits .	"	"	16.4	
				07.8	1	"	"	19.	
725				06.9	1	. ,,	"	35.	
06.472		13/13/0	0			"	"	42.3	
G. Street				05.3	4	99	"	63.	
		A STATE OF		04.0	1 2		"	85.	
190				00.6	2	"	"	97· 41644·	
				2399.3	1	"	"	67.	
2399.044		2399.05	0	2000 0	19 18	"	"	70.9	
2000 011				98.9	1	,,	"	73.	
96.617		96.61	0	96.6p	8	,,	12.4	41713.1	
				95.7	1	,,	"	29.	
				92·4b	8	"	"	87.	
			All and a second	90.7	4	>>	"	41816	
				89·9 89·2	1	22	"	30.	
R-SHEET ST				87.9	2	"	"	65.	
86.489			0	0,0		"	"	90.1	
86.222		86.23	4	86.2	2	"	33	94.8	
				85.5	4	,,	"	41908	
84.751		84.76	2			,,,	* **	20.6	
				83.6	4	"	"	41.	
83.490		83.50	2 2	000	2	"	10.5	42.8	
82.969		83.00	2	82·8 82·1	2	"	12.5	51·7 67·	
				81.0	1	,,	"	87.	
AND THE				79.5	ln	"	"	42013	
		79.02	1			"	"	21.6	
			dan s	78.0	4	"	"	40.	
P. Stere I.				76.8	1	,,,	,,	61.	
				76.4	1	>>	"	68.	
The state of the s			1 156	75.0	2 ln	0.70	79	93· 42116·	
				73·7 72·9	111	0.70	"	30.	
				71.7	i	"	"	51.	
1 2			100	71.1	In	",	"	62.	
70.642		70.67	2	100 1100		"	"	69.9	
Section 18th			19 May 1	70.3	1	"	,,	76.	
69.654		69.66	2	69.7	2n	"	,,,	87:7	
00 000	THE REST OF S.	68.94	ln	ESSE!		"	100	42200.5	
68.380		68.38	3	67.0//1	4	"	12.6	10·4 35·5	
		66.97	1	67·0"b	ln	"	"	46.	
100 3 1			THE PARTY	65.3	ln	"	,,,	65.	
Ballat B		64.74	1	64.8	2	"	"	75.3	
186		1000	19 41 52	64.3	2	,,	"	83.	
			MILE	63.2	1	"	"	42303	
870 20 20		62.01	1	62.2	1	23	,,	24.2	

	Arc Spect	rum		Spark Spe	ectrum	Reduc		
Entroid V	Vave-length	Tendent	Inten- sity	Wave- length	Inten- sity	Vacı	um	Oscillation Frequency
Kayser	Rowland and Tatnal	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	λ+ 5	1 - \lambda	in Vacuo
Special P	VEF BOO	2361.25	6:8182	2361.6	1	0.70	12.6	42332
536	0	2301.23	1	60.9	1	99	"	37·8 44·
	77		0.00	60.5	i	"	. 29	51.
			100000	59.7	2	"	"	66.
ng-		59.26	1	59.3	2	,,	"	73.6
102-F-V		58.55	1			,,	,,	86.3
(0)				58.0	1	,,	,,	. 96.
			3-10	57.6	1	"	,,	42403
The state of			1.20	56.3	1	"	"	27.
	7		8.66	55.8	î"	,,,	"	36.
The state of the s			AL SECTION	55.2	1	"	12.7	47.
147			455	54·2 53·7	1 1	"		65· 74·
	The state of the		Control of	53.0	ln	99	,,	86.
		52.55	1	52.5	i	"	"	94.4
		02 00		51.7	ī	,,	"	42510
				51.3	1	,,	,,	17-
dame.				50.4	1	,,	,,	33.
45				49.7	1	,,,	"	46.
			Table .	48.0	2	,,	,,,	77.
			1 5 6	47.2	1	,,	,,	91.
				46.8	2	,,	,,	99.
2015.507			1	46.5b	4	"	"	42604
2345.597			1	45.0	2	"	,,	20·4 31·
				44.4	ln	"	**	42.
				43.6	1	"	"	57.
				43.3	i	"	**	62.
				42.5	2	,,	,,	77-
				41.8	1	,,	,,	89.
			2018	40.1	1	,,	12.8	42720
	5000		The state of	38.6	1	"	,,	48.
		1 1	1.66	36.9	2	,,	99	79.
			KURS .	35.9	1	,,	"	97.
	999 36	34.85	2	35·2 34·8b	6	"	"	42810-
34.762		94.00	1	94.00	0	"	, ,,	18.1
01 102		33.37	1	33.4	4	"	"	43.7
	HI.	000.	No see of	29.5	ln	"	"	42915
28.737		28.74	2	E COLUMN		"	,,	28.9
		Time In	AND THE	28.5	2	,,	,,	33.
		To the last		27.8b	4	,,		46.
	DA ELLA	26.56	le l	26.5	1	"	12.9	69.0
104			TOSD.	25.5	1	0.69	"	89.
	- C - C	22.68	1	23·0 22·6	1	"	"	43035
	375	21.82	1	21.9	1	"	"	56.8
	100	19.95	1	21 0	- 27	"	"	91.5
19.173		19.18	2	The same	1	"	"	43105.9
18.432		18.44	2	PRESI	1 3 10	29	"	19.6
#815.41E		1 577	7.53	17.4	1	"	**	39.
		2-73	(ES)	16.6	1	"	99	54.
	The second second	1	1	14.2	1	"	13.0	98.

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(Nepallows)		2611	ODIUM	-continueu	•	1000	-303	11-1-18-11-1
	Arc Spect	rum	he sistemal	Spark Spe	ectrum	Reduct		4
nairollionia	Wave-length	-sepat	Inten- sity	Wave- length	Intensity	Vact	a contract	Oscillation Frequency
Kayser	Rowland and Tatnall	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	λ+	$\frac{1}{\lambda}$	in Vacuo
-15000	mps of spo	1 1	2-5200	2313.9	1	0.69	13.0	43204
8-74	112		1611	13.5	2-1082	,,	"	12.
-25			0-00	12.6	2	,,	,,	28.
		2311.14	1	11.6	1		"	47· 55·7
	***	09.89	i i	9-	246	"	"	79.1
1000000		0000		09.0	1	"	,,	96.
2308.88			2			**	"	98.0
THE PARTY OF	Land Of Long		The second	08.2	1	,,	"	43311.
		4	dame.	05·9 05·0	2	"	,,	54· 71·
-		1 1	1.512	01.9	1	,,	"	43429
- 200			2.64	00.5	ln	"	13.1	56.
154			THE	2298.8	1	",	,,	88.
THE STATE OF		57)	BEEN !	98.3	4	"	,,	97.
A SE	Now In the	2294.54	1	94.6	2	,,	>1	43568.6
BERGEON		00.07	1	94.2	4	"	**	75· 91·2
- 33		93.35	1	90.2	8	"	,,	43651
A STATE OF THE STA		90.10	1	90-2	0	"	,,	53.1
-2000		20 10	125	89.7	1	"	,,	61.
· figure		88.97	- 1			,,	,,,	74.7
-1981		88.61	1	-		,,	"	81.5
				88.3	1	,,	13.2	43728
7427				86.2	1	,,	••	43/28
				85·1 84·2	4	,,	,,	66.
				83.6	1	"	,,	77.
10.453(47)		1	U-1000	83.2	î	,,	,,	85.
10				83.0	1	,,	,,	89.
Castilli co		E I	At A	81.4	1	,,	,,	43820
THE PERSON NAMED IN	SERVICE SERVICE		1	81.2	1	,,,	"	23.
100000				80·9 80·1	1	,,	"	45.
		1 7 7 7 7	I September	78.1	1	",	,,	83.
10.89		F. Carle	2:02	78.0	i	,,	,,	85.
THE REAL PROPERTY.			-	77.3	1	0.68	"	98.
1194	HE STATE OF	77.00	1	77.0	2	,,	,,	43904.2
- 1111		1		76.3	2	,,	12.2	18.
	100	The state of	11 11-9	74.2	1	"	13.3	68.
		NEW !!	15 100	73·7 71·5	1	",	,,	44010
		DAY W	3,772	70.5	1	"	"	30.
(880 m)	and the last	Car hard	51900	68.9	2	,,	,,	61.
149	1-11-11	LA PERTA	100	68.0	1	",	,,	78.
THE STATE OF			1000	65.7	ln	,,	,,	44123.
1 2 3			10 7 10	63.5	4 2	,,	13.4	99.
1 700	***		1	61.8	1	,,		44262
Taxone !	THE STATE OF THE S	1 5 / 5 FA	1- 185	58.4	1	"	"	66.
Alex To		1 2 3 3 5	1 3.65	57.3	i	"	,,	87.
		1 1 1	1027	55.7	1	,,	,,	44319
TORON.	10		11:30	55.5	2	,,	,,,	23.
1000	HOUSE IN		120.00	50.9	2	,,	13.5	44413

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RHODIUM—continued.

		Reduc	ctrum	Spark Spe		Arc Spectrum			
Oscillation	uum	Vact	Wave- length Inten- sity		Inten- sity	Wave-length			
Frequencin Vacu	$\frac{1}{\lambda}$	λ+	and Cha- racter	Exper and Haschek	and Cha- racter	Exner and Haschek	Rowland and Tatnall	Kayser	
44429	13.5	0.68	1	2250-1			- Total 1		
37.			î	49.7					
57.	"	"	În	48.7					
74.	"	"	ln	47.8					
90.	"	"	1	47.0					
44609	"	"	1	41.0					
	"	"	1	40.8					
13.	**	37	1	40.2					
	"	99	2	39.2					
45.	10.0	99		38.4					
61.	13.6	"	1	37.7					
75.	99	, ,,	2						
85.	99	"	1	37.2					
95.	,,,	- "	1	36.7					
99.	"	,,	1	36.5					
44709	,,	,,	1	36.0					
23.	,,,	**	1	35.3					
44815	37	,,	2	30.7			The state of the		
46.	,,	0.67	ln	29.2					
64.	,,	,,,	1	28.3					
. 96.	13.7	,,	2	26.7			10000		
44910	,,	,,	1	26.0					
28.	,,	**	2	25.1					
91.	,,	,,	1	22.0				11 3185	
45013	,,	**	1	20.9					
23.			1	20.4					
44.	**	"	î	19.4					
45307	13.8	"	i	06.5					
45461	13.9	"	i	2199.0			Section of the last		
45519		"	i	96.2					
61.	"	,,	i	94.2			WELL BY BE	A A STATE OF	
90.	"	"	i	92.8					
45627	14.0	"	1	91.0			LO STREET		
		"							
45732	"	,,	1	86.0			The American		
45816.	77.0	0.00	1	82.0					
46126	14.2	0.66	2	67.3		0.00			

Note.—Lines marked a are resolved into four constituents in a very strong magnetic field, those marked b into triplets, those marked c into doublets (Purvis, $Proc. Cambridge\ Phil.\ Soc.$, xiii. p. 322).



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BRODIES - COMPANIES

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100343		8870	1	TARREST .		. 1922	
	in			7.84			
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	4500						
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				1975			
W. 1815							
				2015			
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L. CHab		144					
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		The same			4.00		

and a resident of the state of









