If it be now assumed that the same function holds for $B^{10}O$, then the ordinates drawn through the energy values of the vibrational states of $B^{10}O$ will give the number of these molecules in the various v' states;

FIG. 1.

these states are shown by the dotted lines. It is evident that the isotope intensity ratio for bands from the $v' = 3$ state will be considerably higher than that for the bands from lower v' states. The table

Band.	0-3.	1-4.	1-5.	2-5.	2-6.	3-7.
Intensity ratio of isotopic bands	..	..	..	3.34	3.50	..
$a =$ from lines	..	..	..	3.22	3.17	4.30
$b =$ from heads	..	..	..	3.49	3.45	4.38
	3.56	3.49	3.41	3.42	3.49	4.05
	3.56	3.20	3.53	..	..	..
Average	3.56	3.35	3.47	3.37	3.40	4.24
Corrected for plate sensitivity	3.63	3.44	3.56	3.48	3.50	4.37
$f(E'_v)/f(E''_v)$	1	0.985	0.985	0.95	0.95	1.21
Isotope ratio	3.63	3.50	3.61	3.66	3.68	3.61

Mean Isotope Ratio = 3.63 ± 0.02 .
Corresponding Atomic Weight (correcting for O^{17} and O^{18}) = 10.794.

shows the corrections $f(E'_v)/f(E''_v)$ obtained from this curve by which the measured intensity ratios must be divided in order to obtain the real relative abundance of the isotopes. More complete data (which refer to Chilian boron) are given than were contained in the previous communication, and a correction for change in plate sensitivity with wave-length has been made. The very good agreement of the corrected isotope abundances determined from different bands may be pointed out.

In a recent letter (NATURE, Oct. 25, p. 649), Stenwinkel has given an explanation of the high ratio for the 3-7 band, based on the supposition that Boltzmann distribution holds for the lower electronic level, and that the $v' = 3$ level is fed chiefly by molecules from the $v'' = 1$ level, according to the Franck-Condon principle. It may be pointed out, however, that the number of molecules in the $v'' = 1$ state, calculated from the Boltzmann law at a temperature of $470^\circ A$. (found from intensity measurements on the rotation lines of BO), is 1/370 that of the number in the $v'' = 0$ state. It is therefore difficult to imagine that the $v'' = 1$ level plays any important part in determining the distribution in the upper electronic state.

Further, the assumption that the Franck-Condon principle applies to transitions caused by active nitrogen is open to question.

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The Red Coronal Line in Oxygen.

IN looking over my spectrum plates of oxygen I find some which show not only the nebular lines $\lambda 6300$ and $\lambda 6364$,¹ which had not been produced in the laboratory before, but also a strong line $\lambda 6374.29$. The wave-length of this line seems to be identical with that of the strong, red coronal line $\lambda 6374.2$.² Although this oxygen line is well known, I do not think that the above remarkable coincidence has been previously pointed out. This coincidence in the wave-lengths of the oxygen and the coronal line, and also the fact that the line occurs in an isolated position in the oxygen spectrum when only lines of O I were present, would seem to indicate their identity, and is strong evidence of the presence of oxygen in the sun's corona.

This oxygen coronal line is still unclassified and its Zeeman pattern has not been observed. Possibly it represents a forbidden transition between terms still unknown. Such a study would be very interesting in throwing light on the spectroscopic nature of its end-terms and in helping to explain the nature of the solar corona.

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¹ Paschen: *Die Naturwissenschaften*, 34, 752; 1930.

² Campbell and Moore: Publications of the Lick Observatory, Bulletin 318, 8; 1918.

The Compound $SnSb$.

DURING an investigation of the crystal structure of the $Sn-Sb$ alloys, the compound $SnSb$ has been found to give an excellent X-ray powder photograph of the well-known pattern common to sodium chloride structures. The atomic numbers of tin and antimony are 50 and 51 respectively, and as in potassium chloride—having atomic numbers 19 and 17 respectively—odd order reflections from the 111 planes are absent. The results obtained from measurements on the film are given in the accompanying table. Observed and calculated values of the plane spacings are in very good agreement. The observed intensities of the lines on the film are also in agreement with calculated intensities.

DATA FROM POWDER PHOTOGRAPH OF $SnSb$.

Plane.	Observed Intensity.	Calculated Intensity	Observed d/n .	Calculated d/n .
100 (2)	Strong	10	3.045 A.	3.046 A.
110 (2)	Strong	8.9	2.154	2.154
111 (2)	Medium	3.7	1.759	1.759
100 (4)	Weak	2.0	1.525	1.523
120 (2)	Medium	6.0	1.362	1.362
121 (2)	Medium	5.0	1.243	1.244
110 (4)	Very weak	1.7	1.076	1.077
100 (6)	Medium	3.8	1.016	1.015
122 (2)				
103 (2)	Medium	2.7	0.964	0.963
113 (2)	Medium	2.4	0.918	0.918
111 (4)	Very weak	1.7	0.878	0.879
203 (2)	Very weak	2.0	0.845	0.845

Structure: NaCl Type.

Dimensions of Unit Cell: $a_0 = 6.092 A$.

The density of the compound is 6.94 gm./c.c.,