variation will probably not be very large. The reorganization time of an atom appears to be an atomic constant, and to be of the same order for all atoms hitherto examined in the laboratory or in stellar atmospheres. As a working assumption, then, the equality of the atomic absorption coefficients is assumed with

<table>
<thead>
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<th>Atomic Number</th>
<th>Atom</th>
<th>Log $\alpha$</th>
<th>Atomic Number</th>
<th>Atom</th>
<th>Log $\alpha$</th>
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<td>Si</td>
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<tr>
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<td>Si+</td>
<td>4.9</td>
</tr>
<tr>
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<td>C+</td>
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<td>Mg</td>
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<td>22</td>
<td>Ti</td>
<td>4.1</td>
</tr>
</tbody>
</table>

some confidence in the discussion of observed marginal appearances.

As stated above, the relative abundances of the atoms are given directly by the reciprocals of the respective fractional concentrations at marginal appearance. The values of the relative abundance thus deduced are contained in Table XXVIII. Successive columns give the atomic number, the atom, and the logarithm of the relative abundance, $\alpha_r$.

**Comparison of Stellar Atmosphere and Earth’s Crust**

The preponderance of the lighter elements in stellar atmospheres is a striking aspect of the results, and recalls the similar feature that is conspicuous in analyses of the crust of the earth. A distinct parallelism in the relative frequencies of the atoms of the more abundant elements in both sources has already been suggested by Russell, and discussed by H. H. Plaskett, and the

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9 Jeffreys, The Earth, 1924.
10 Shapley.
11 Nature, 125, 416, 1925.
12 M. N. R. A. S., 84, 665, 1924.