

trial substance. Hence the line was attributed to the presence of a new chemical element, which was called helium, from the Greek *helios*, the sun.

It was not until a quarter of a century later, however, that the new element was discovered to be a constituent of the atmosphere. It had been supposed that air contained only oxygen and nitrogen, and that once the oxygen were removed, pure nitrogen would remain. But in 1892 Lord Rayleigh made careful quantitative experiments, and discovered a discrepancy between the weight a litre of supposedly pure nitrogen from air, and that prepared from nitrogen compounds. Sir William Ramsey took up the problem, and succeeded in preparing a hitherto unknown gas, argon, comprising about 1% of the atmosphere. Not long after, when Ramsey was making spectrum analysis experiments, trying to discover argon in uranium compounds, he noticed an orange line which he recognized as that discovered in the sun's spectrum, thirty years previous, by Lockyer. In 1898, Ramsey discovered helium and three similar inert gases, neon, xenon and krypton, in minute quantities in the atmosphere.

The source of helium for all practical purposes, is in compounds of uranium, and in natural gas. It is not found here in combination, for as yet no compound of helium has been found in nature or prepared in the laboratory. Rather, it seems to be held physically in the uranium ores. In passing, it is of interest to note that the Alpha-rays emitted by compounds of uranium and radium are atoms of helium given off at the rate of 158 cubic mm. per 1 gr. of radium per year.

Helium is a typically American resource, the United States and Canada producing nearly the whole of the world supply. Of the two, the United States produces by far the most. Canada is practically the only source of supply in the British Empire. A large part of the helium produced in the neighboring republic is found in the State of Texas, but it is also found in varying quantities, wherever there are supplies of natural gas. In Canada, gas fields in Ontario and Alberta were examined and found to contain helium. A plant was