

iron, cobalt, nickel, carbon, copper, and tungsten give out numerous characteristic radiations.

In the other regions of the spectrum, such as the ultra-violet section measured by Prof. R. A. Millikan, the radiations themselves can be more or less directly studied, but these very soft X-rays are so strongly absorbed and so little reflected that workers must resort to very indirect methods for their detection, such as the photo-electric methods described by Prof. Compton.

INTERIOR OF STARS STUDIES

Recent advances in atomic physics have led to a great increase in the understanding of internal conditions in the stars, Dr. Henry Norris Russell, of Princeton, told the National Academy of Sciences at its recent meeting.

"The outstanding problem is to find out where the heat radiated by the stars comes from and in what manner heat is liberated inside the stars," said Dr. Russell. "We know that inside a star the atoms have their outer parts knocked off, but retain their individuality. And it is possible to calculate at what rate heat should escape from the interior to the surface, and therefore how bright the stars should be, if we know how large and massive a star is and how much denser it is in the interior than at the surface."

Existing evidence, indicates that heat is probably produced by a slow transformation of matter into energy, after the manner first suggested by Einstein, Dr. Russell declared. If all stars were composed of exactly the same material, stars of the same mass would be similar, not only in brightness, but also in size, color, and temperature. This is not a fact, and it follows that some stars must contain more than others of the "active material" which is the source of heat.

"The life history of a star depends upon the proportion of active material in its composition," said Dr. Russell. "If, as seems probable, this originally forms the larger part of the star's mass, a star of large mass will start as a red giant, gradually become hotter and whiter, and finally cool down and end as a faint dwarf. Stars of smaller mass may begin their careers as dwarf stars without ever passing through the giant stage."

The presence of a great ice cap lowers the temperature of a region about 50 degrees.

A recent invention is a rubber frame to protect baby's milk bottle from breaking if it falls.
