

GENEALOGY DATABASE ENTRY

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Fowler, Ralph Howard

1889 - 1944

DEGREE: MA

DATE: 1915

PLACE: Cambridge

TEACHER/RESEARCH ADVISOR: Hill, A.

during WWI, investigated many scientific aspects of anti-aircraft gunnery and dealt with the experimental and mathematical aspects of the fundamental problem of the motion of a yawed shell under aerodynamic forces; studied kinetic theory, the focusing theory for Aston's mass spectrograph, collisions "of the second kind", and the principle of detailed balancing; developed methods for calculating partition functions in statistical mechanics (with C. Darwin); pointed out that the spectra of some stars, such as Sirius' companion, must be due to ionized gases in the "degenerate state"; classified all solutions of Emden's equation and its generalizations, which is of importance in the theory of stellar structure.

FOOTNOTE: Fowler served with Hill from 1916-1919 in the Munitions Inventions Department. This association altered Fowler's interests from pure mathematics to mathematical physics.

1. *Dictionary of Scientific Biography*; Charles Scribner's Sons: 1970-1990; vol. 5, p102-103.
2. *Obit. Not. Fell. Roy. Soc.* **1945-1948**, 5, 61-78.
3. *Nature* **1944**, 154, 232-233.
4. *Astrophys. J.* **1945**, 101, 1-5.
5. *J. London Math. Soc.* **1944**, 19, 244-256.
6. *Monthly Not. Roy. Astron. Soc.* **1944**, 105, 80-87.
7. *Dictionary of National Biography*; Smith, Elder & Co.: 1908-1986; (1941-1950), p268-269.