

*Observations on Solar Radiation, made at Fort Franklin in the years 1825, 1826, and 1827.* By JOHN RICHARDSON, M.D., F.R.S., and Inspector of Naval Hospitals. Communicated by the Author.

WHILE residing at Fort Franklin, in North America, in the year 1825-26, I made a series of observations on the heating power of the sun's rays with a black-bulb thermometer, and some of the results were published in the "Appendix to the Narrative of Sir John Franklin's Second Journey." It has been observed by an eminent philosopher, in reference to observations of this kind, that, as measures of solar radiation, they have generally been made on an erroneous principle, "the true indication of the force of the solar rays not being the statical effect upon the thermometer, but their momentary intensity, measured by the velocity with which they communicate heat to an absorbent body."† The actinometer has

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\* His critique of Kämpf's New Method of curing the most obstinate Diseases of the Bowels (Med. Bibl. vol. ii. No. i.) gave offence to the author, but yet afterwards obtained from him for Blumenbach public thanks (in the second edition of that book, Leipsic, 1786, p. 366).

† Sir John Herschel, quoted in the Report by Professor Forbes on Meteorology; Trans. of the British Association, vol. i.