

distant central office caused the authorization of local forecasting at principal stations of the government weather service. An important public service at this time was his strongly supported effort toward removal of the national weather service to a civilian department, followed by action by Congress in 1891. He was local forecast official in the new Bureau, 1891-93, and in the *Blue Hill Weather Bulletin* of 1896-97, he published weekly forecasts based upon cycles. In 1910 he was invited to Argentina, where he was chief of the Forecast Service for nine years. There he inaugurated forecasting based upon variations in solar energy. On his return to the United States, Clayton continued this work in co-operation with the Smithsonian Institution and, starting a private weather service, forecasted and acted as consultant for business organizations while prosecuting his researches. At the beginning of World War II, the Government suspended private forecasting, but, during 1943-44, at the request of the Weather Bureau, he continued research on an extended scale to determine the relations between short-period changes of solar energy and variations of weather. This work, done through Harvard University, was aided by a statistical group maintained by the Weather Bureau.

Clayton's many studies of solar relations in cooperation with the Smithsonian Institution led to *World weather records*, a notable contribution to meteorology and climatology published by the Institution and highly praised by the International Meteorological Organization; the third volume is now in press. His researches

were summarized in *World weather* (Macmillan, 1923) and in *Solar relations to weather* (Clayton Weather Service, 1943). A monograph amplifying earlier studies of the possible effects of the planets on solar variations, and of cycles, especially in their biological relationships, was completed only a month before his death.

In 1905 he headed the deBort-Rotch expedition for exploring the atmosphere over the Atlantic Ocean with kites and balloons. With Director Rotch, he represented Blue Hill at the International Meteorological Conference at Munich in 1891, and was delegate from Argentina to the first Pan-American Scientific Congress at Washington in 1915 and the Sixth International Meteorological Conference at Utrecht in 1923. In 1943 he was awarded a gold medal by the Foundation for the Study of Cycles. He was a charter member of the American Meteorological Society.

Clayton possessed the unusual combination of a vivid imagination, an ability to visualize atmospheric phenomena in their three dimensions, exceptional industry, steadfastness of purpose, and a keen sense of values. Throughout his life he was a pioneer, with all the courage and energy necessary to open new paths in spite of difficulties and hard knocks. Yet he was unassuming, warm and gracious in his manner, and always ready to concede values in points of view differing from his own.

STERLING P. FERGUSSON and
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*Blue Hill Meteorological Observatory,
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