

A Science Service Feature

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? WHY THE WEATHER ?

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Authority on Meteorology.

AN ELECTRIC HAZARD OF BALLOONING

A balloon filled with helium is obviously safer than one filled with an inflammable gas when lightning is flying about, but that is not the whole story of the immunity of the former from electric hazards. Dr. Albert Gockel, in his well-known book on thunderstorms, records the experience of some balloonists who were sailing over Spain one night in March. At an altitude of 6,500 feet the balloon entered a cloud composed of snow. The cordage of the balloon and the wet beards and mustaches of the occupants were soon illuminated with St. Elmo's fire. From the valve rope of the balloon the aeronauts were able to draw sparks two or three inches long.

Evidently the snowflakes were strongly charged and imparted their charge to the objects to which they clung, setting up a difference of potential between these objects on the one hand and the air and dry objects in the basket on the other. There was no lightning or thunder, but, as we know from many observations on mountains, brilliant displays of St. Elmo's fire often occur during snowstorms when no thunderstorm is in progress. Dr. Gockel suggests that sparks occurring in a balloon near the neck orifice, from which an explosive gas mixture escapes during flight might easily cause a disaster.

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