

impressed by its many unusual aspects that I felt a brief account of it might be of interest for permanent record. Before I could find opportunity to work up my notes for this purpose, a very fine and detailed description of what was doubtless the same phenomenon was published in *SCIENCE* by Ernest H. Cherrington, Jr., and my own contribution was allowed to lapse.

The aurora of the night of August 11 of this year, also witnessed by me from this spot, ranked with the foregoing as one of the three most magnificent I have had the good fortune to witness,<sup>1</sup> but in some particulars it was altogether unique. When first observed at about 9:20 P.M. it comprised a single sweeping auroral arch in the northern heavens, but one reared so high that it included almost half the horizon between its termini, while its vertex nearly attained the zenith. At this time it appeared from my window as a simple broad band of strong whitish light, not without a serene majesty of its own. This was little prophetic of the glory to come, yet I roused a friend, Harold M. Hill, who had never witnessed an aurora, and it was consequently our good fortune to be in the open with an unimpeded view of the entire firmament when the climax came.

The first evidence of breaking was a narrow beam or ray which appeared to the northwest just under the span. The arch then rapidly broke up, with strong cloud-like patches of light appearing to east and west, while the portion evolved into an array of luminous shafts or streamers so grouped as to seem to radiate from a roughly stellate centrum just south of the zenith in the general neighborhood of Vega. The best of the display occurred from about 9:45 to 10:00 o'clock, when the fast-changing beams and rays covered more than half the heavens, and rapidly shifting lesser flickerings were flashing all over and through the whole. At its peak nearly three fourths of the sky was illuminated, although the radiating streamers to the south of the centrum were very short, in contrast to those extending far down the northern sky and the still longer ones to east and west. Also on the south there was more of a tendency for the beams to give way to scattered, irregular spots and clouds of light than in other parts of the heavens. By this time considerable color had developed, mostly reddish, orange and pinkish brown tones which again were much more in evidence to the extreme east and west than elsewhere. After 10:00 o'clock the illumination lost its active motion and most of its color, retreating more and more into the northern sky, where it finally resolved itself into a simple diffused arch of the more usual type. This endured until we retired, and was still in evidence when I arose to look, around

1:00 A.M. and again just before dawn, though meanwhile considerable cloudiness had developed to obscure its details. I was unable to note any recurrence of the more lively pyrotechnics. As long as the first arch persisted, the northern sky remained quite dark under it, but at no time did I observe the intense contrasting *blackness* there which was so conspicuous an accompaniment of the arch of August, 1937.

It occurred to me at the time that the centering of the major display so definitely *south* of the zenith might well entail a visibility in much lower latitudes than is ordinarily the case for such phenomena. This has since received confirmation through newspaper reports, from one of which<sup>2</sup> it transpires that on this night the aurora was seen at least as far south as Summit Lookout in Cajon Pass and Lake Arrowhead in the San Bernardino Mountains of southern California, where some observers are reported to have interpreted it as the glow of a distant forest fire.

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### OZONE IN THE '38 HURRICANE

DURING the hurricane on September 21, 1938, the smell of ozone was strong during the latter part of the storm. The peak of the storm was shortly after 6 P.M. (D.S.T.); the lowest barometer 28.41 (corrected) at Amherst, Mass., being at 6:05, and the highest wind velocity, 80 miles, at 6:17. During the heavy rain, about 6 to 6:30, the ozone was strong, and later, when the rain stopped, the ozone was so strong I was uncomfortable. At this time my watch said 7 o'clock. No odor of ozone was noticed in the first part of the storm nor was any noticeable in the house. My colleague in chemistry, in the Massachusetts State College, Dr. Walter S. Ritchie, independently reports similar observations.

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### THE INTERNATIONAL UNION OF CHEMISTRY

COMMUNICATIONS have been received from individuals and organizations of many lands requesting advice as to whether or not they should endeavor to continue the work of the Union and its various commissions during the present chaotic condition of the world, or suspend operations until the return of peace and the general resumption of friendly international relations.

The answer to this question in the judgment of the writer should be unequivocally that the work is to go on, if possible still more actively than heretofore, not only in its local national field, but particularly in its international aspects. The Union, as its name signifies,

<sup>1</sup> For the third of these see *SCIENCE*, 44: 496, 568, 678, October and November, 1916.

<sup>2</sup> *Redlands (Calif.) Daily Facts*, August 12, 1939.