

First international symposium on ball lightning (Tokyo, 4-6 July 1988)

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Usp. Fiz. Nauk **157**, 364 (February 1989)

The First International Symposium on Ball Lightning in Tokyo was organized by the Japanese Information Center on Ball Lightning. Representatives of Austria, Hungary, Holland, China, USSR, USA, and Japan took part in the symposium. The symposium reflected the current state of the ball-lightning problem. In recent years a large amount of information has been collected on the observational parameters of ball lightning and these parameters have been analyzed. Reports on observations of ball lightning carried out in Austria, Hungary, the USSR, and Japan and also of their analysis were presented at the symposium. This symposium was an important turning point in study of ball lightning which established this phenomenon as a serious scientific direction requiring international cooperation.

At the present time we have available a number of independent sets of data on observations of ball lightning, from which quantitative information on the observation of ball lightning follows. In addition there are reliable models of ball lightning which describe its individual properties. They are based on current scientific information and also on observational data and collectively provide a schematic idea of the nature of ball lightning. The information presented at the

symposium convinces us that two forms of existence of ball lightning are possible: one is the result of internal chemical energy, and the other is maintained by an external electrical source. The current state of the problem of ball lightning indicates that in the coming years we should expect great progress both in creation of experimental models of ball lightning and in regard to practical applications.

Soviet research has traditionally occupied leading positions in study of ball lightning. For example, an important role in development of this problem was played by the work of V. I. Babat, P. L. Kapitsa, and I. P. Stakhanov. To maintain this position in the contemporary picture it has been decided to create a Soviet Information Center on Ball Lightning at the Institute of High Temperatures, USSR Academy of Sciences. This center has the function of collecting information on observations and studies of ball lightning in our country and exchanging information with existing foreign centers and will facilitate the joining of forces of Soviet scientists in development of this problem.

Translated by C. S. Robinson