

XXIV. STROBOSCOPIC RESEARCH

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A. MULTIPLE-SPARK LIGHT SOURCE AND CAMERA FOR SCHLIEREN AND SILHOUETTE PHOTOGRAPHY

This report summarizes a paper that is to be presented at the Eighth Annual Technical Symposium of the Society of Photographic Instrumentation Engineers to be held in Los Angeles, California, August 6, 1963.

A multiple-spark light source and camera have been devised by utilizing the Craz-Schardin optical method for schlieren and silhouette photography. Each light source is a spark in air, with an effective duration of 10^{-7} second and a peak light of 24,000 candle power. The interval between successive sparks is independently adjustable from 10^{-5} to 10^{-7} sec, thereby permitting a variable picture rate to be used in a single sequence of photographs.

The equipment contains 10 spark light sources and camera lenses; thus a 10-picture sequence of high-speed phenomena is obtained. Schlieren and silhouette photographs demonstrating the performance of the equipment will be presented at the meeting.

A more complete report on this work will appear in our next quarterly report.

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