

1941

## High Intensity Flash Tube (Abstract)

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ANGULAR DISTRIBUTION OF GAMMA RAYS FROM  
FLUORINE BOMBARDED WITH PROTONS

(ABSTRACT)

STANLEY ATCHISON

Certain considerations suggest the possibility of an asymmetric distribution of the gamma rays from light elements bombarded with protons.

A thin fluorine solid target was used, and coincidence Geiger counters were mounted in such a way that gamma ray intensities at various angles with respect to the direction of the beam could be observed.

Within the limitations of the apparatus, the gamma rays examined appeared to be distributed symmetrically.

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INTERESTING CASE WHERE THE HEAT FLOW  
INCREASES THE HEAT CONDUCTIVITY OF A FLUID

(ABSTRACT)

SULAMITH BERESKIN AND G. W. STEWART

If the molecules in liquid crystalline para-azoxyanisole are oriented by a magnetic field, the coefficient of heat conduction is thereby increased by (roughly) twenty-five per cent. The orientation of the molecules produces also orientation of the swarms, often called liquid crystals. Using the results of this experiment in conjunction with earlier experiments in which the flow of heat has also an orienting effect, one can state that the flow of heat decreases the coefficient of heat conduction.

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HIGH INTENSITY FLASH TUBE

(ABSTRACT)

T. ROBERT BURNIGHT

The design and construction of a high energy gaseous flash tube and appertaining equipment for high speed single exposure photography is described.

Flash characteristics are estimated and performance criteria are proposed.

Comparative experimental results are given and improvements in design are discussed.

DEPARTMENT OF PHYSICS,  
IOWA STATE COLLEGE,  
AMES, IOWA.

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THE EVAPORATION OF METALS FROM HOT  
FILAMENTS

(ABSTRACT)

WALLACE C. CALDWELL

Several investigators have used the evaporation technique for making surface mirrors, thermocouples, high resistances, and other devices. The method usually used involves attaching the metal to be evaporated to a refractory filament that is heated electrically. In this work the results of visual observations of wetting of the filament by the molten metal, of evaporation, and of any obvious alloying of the molten metal with the filament material enables the determination of the best filament to be used with each metal.

DEPARTMENT OF PHYSICS,  
IOWA STATE COLLEGE,  
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SCATTERING OF POTASSIUM IONS IN VARIOUS GASES

(ABSTRACT)

JOHN A. ELDRIDGE

Development of method for measurement of the scattering of ions projected as a beam with energies 50-400 e-volts. Results are given for scattering at different angles.

STATE UNIVERSITY OF IOWA,  
IOWA CITY, IOWA.