

NASA TECH BRIEF

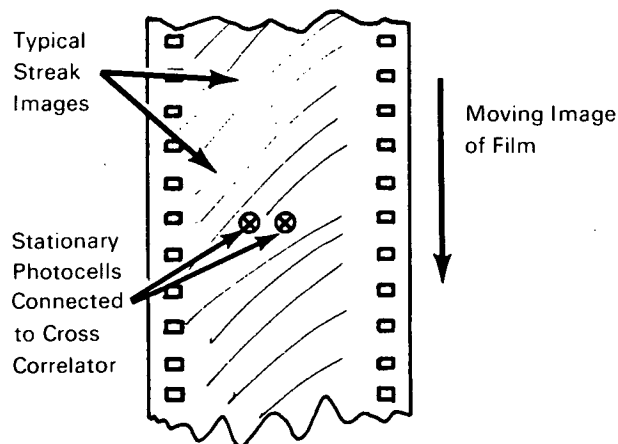


NASA Tech Briefs announce new technology derived from the U.S. space program. They are issued to encourage commercial application. Tech Briefs are available on a subscription basis from the Clearinghouse for Federal Scientific and Technical Information, Springfield, Virginia 22151. Requests for individual copies or questions relating to the Tech Brief program may be directed to the Technology Utilization Division, NASA, Code UT, Washington, D.C. 20546.

Reducing Streak Film Data Via Electronic Cross Correlator

The problem:

To find a means, other than manual (which is tedious, slow and subject to human error) of reducing streak film data used in measuring velocities of gases, liquids and solids.



The solution:

Determination by two photocells of the time delay between successive streak images.

How it's done:

The use of a continuous (nonframing) motion picture projector, two photocells, an electronic cross-

correlator (shown in fig.) and a ground glass screen where the two photocells intercept the stream image. Once the delay between successive streak images is known, together with the distance separating the photocells, the velocities corresponding to the streaks can be directly determined.

Notes:

1. Particular emphasis will be in the study of velocities of ballistics, explosives and wind tunnel applications.
2. Requests for further information may be addressed to:

Technology Utilization Officer
Code A&TS-TU
Marshall Space Flight Center
Huntsville, Alabama 35812
Reference: TSP70-10365

Patent status:

No patent action is contemplated by NASA.

Source: R. A. Dickerson of
North American Rockwell Corporation
under contract to
Marshall Space Flight Center
(MFS-18804)