

in this connection and a ten-channel tube is now available around which an analyzer has been designed and built. The input pulse from a counter after amplification and shaping is applied to the vertical deflection plates of the cathode ray tube. In place of a fluorescent screen, ten "dynodes" are mounted one above the other. The beam is deflected upward a distance proportional to the amplitude of the input pulse and falls on one of the dynodes causing a voltage pulse which is amplified and recorded by a mechanical register. The analyzer provides one, five, and ten volt channels covering the range from zero to one hundred volts. Counting rates of up to two hundred and fifty counts per second are permissible with less than one percent loss. The analyzer has required no recalibration since it was first put into operation several months ago. The use of several analyzers in parallel can provide up to one hundred channels at one volt intervals. Each analyzer occupies a short relay rack and includes a pulse amplifier and a pulse generator for calibration.

It is felt that this analyzer fills two definite needs in the field of nuclear research: its high degree of stability avoids the need for frequent recalibration, and a large number of output channels may be obtained by arranging several of the analyzers in parallel.

D.A.W.

The Ten Channel Electrostatic Pulse Analyzer. By Dean A. Watkins. *Rev. Sci. Inst.* 20: 495, July, 1949.

Frequency Band Designations

A subcommittee of the American Institute of Electrical Engineers has prepared a chart covering a frequency range from eleven and a half years, corresponding to the sun spot cycle, to less than one micromicron (in electromagnetic wave lengths), corresponding to the frequency of secondary cosmic rays. The primary object of the chart is to promote the use of integers to indicate frequency bands over the whole useful range of frequencies which occur in nature, thus giving a single coordinate system. The method proposed for designating band numbers is to use the exponent of ten corresponding to the lowest frequency (in cycles per second) of a given band. Thus the frequencies of particular interest to bridge designers and to designers of large rotating machines, for example, are given the band designation "minus one" corresponding to frequencies of from one-tenth to one cycle per second, while the frequencies of visible light within the range 10^{14} to 10^{15} cycles per second are contained in the band designated "fourteen." The chart has been scheduled for publication in the August issue of the magazine *Electrical Engineering*.

The AIEE Joint Subcommittee on Standard Frequency Bands and Designations, as the group is known, is headed by Thomas Spooner of the Westinghouse Electric Corporation and includes C. T. Burke, J. E. McCormack, G. B. Ransom, and F. B. Silsbee. The band designations chart supplements a previous brief report and abbreviated table which appeared in the May, 1947 issue of *Electrical Engineering*.



CALENDAR

of EVENTS

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|------------------------|---|
| August 22-27 | New England Association of Chemistry Teachers, Durham, New Hampshire |
| August 23-26 | American Institute of Electrical Engineers (Pacific General Meeting), San Francisco, California |
| August 29-30 | Mathematical Association of America (31st Summer Meeting), Boulder, Colorado |
| August 30-September 2 | American Mathematical Society, Boulder, Colorado |
| September 2, 3, 5 | International Colloquium on Macromolecules (sponsored by the Union Internationale de Chimie), Amsterdam, Holland |
| September 5-10 | Second Canadian Mathematical Congress, Vancouver, Canada |
| September 6-8 | American Institute of Chemical Engineers, Montreal, Canada |
| September 7-10 | Biological Photographic Association, Inc. (19th Annual Meeting), Cleveland, Ohio |
| September 9-12 | Instrument Society of America Clinic on Maintenance of Industrial Instruments, St. Louis, Mo. |
| September 12-16 | Instrument Society of America, St. Louis, Missouri |
| September 18-23 | American Chemical Society (Semiannual Meeting), Atlantic City, New Jersey |
| September 19-23 | Illuminating Engineering Society (National Technical Conference), French Lick, Indiana |
| September 25-28 | American Institute of Mining and Metallurgical Engineers (Regional Meeting), Columbus, Ohio |
| September 26-28 | National Electronics Conference, Chicago, Illinois |
| September 28-30 | American Society of Mechanical Engineers (Fall Meeting), Erie, Pennsylvania |
| October 3-4 | National Association of Corrosion Engineers (Annual Meeting of South Central Region), Dallas, Texas |
| October 10-14 | American Society for Testing Materials (West Coast Meeting), San Francisco, California |
| October 11-14 | American Standards Association, New York City |
| October 17-19 | American Institute of Mining and Metallurgical Engineers (Institute of Metals Division), Cleveland, Ohio |
| October 17-21 | American Institute of Electrical Engineers (Mid-West General Meeting), Cincinnati, Ohio |
| October 17-21 | American Society for Metals, Cleveland, Ohio |
| October 23-30 | International Congress of the Society of Industrial Chemistry, Barcelona, Spain |
| October 24-28 | Society of Motion Picture Engineers, Hollywood, California |
| October 27-29 | Optical Society of America, Buffalo, New York |
| October 29 | American Mathematical Society, New York City |
| October 31-November 2 | Radio Engineers (Fall Meeting, sponsored by Radio Manufacturing Association and Institute of Radio Engineers), Syracuse, New York |
| November 7-10 | American Institute of Chemical Engineers, Pittsburgh, Pa. |
| November 10-12 | Geological Society of America, El Paso, Texas |
| November 17-19 | Acoustical Society of America, St. Louis, Mo. |
| November 25-26 | American Physical Society, Chicago, Illinois |
| November 25-26 | American Mathematical Society, Chicago, Illinois |
| November 26 | American Mathematical Society, Pasadena, California |
| November 27-December 2 | American Society of Mechanical Engineers (Annual Meeting), New York City |