5-7. Texas Acad. of Science, annual, Dallas. (G. C. Parker, Education Dept., Texas A&M College, College Station.)

6-7. Oklahoma Acad. of Science, annual, Enid. (J. T. Self, Dept. of Zoology, Univ. of Oklahoma, Norman.)

7-8. American Acad. of Dental Medicine, New York, N.Y. (S. Ross, 136 E. 36th St., New York 16.)

8-11. American Inst. of Chemical Engineers, annual, Chicago, Ill. (F. J. Van Antwerpen, AIChE, 25 W. 45 St., New York 36.)

9-11. Fluorides Symp., Cincinnati, Ohio. (Secretary, Inst. of Industrial Health, Kettering Laboratory, Eden and Bethesda Aves., Cincinnati 19.)

9-13. Eastern Joint Computer Conf.,

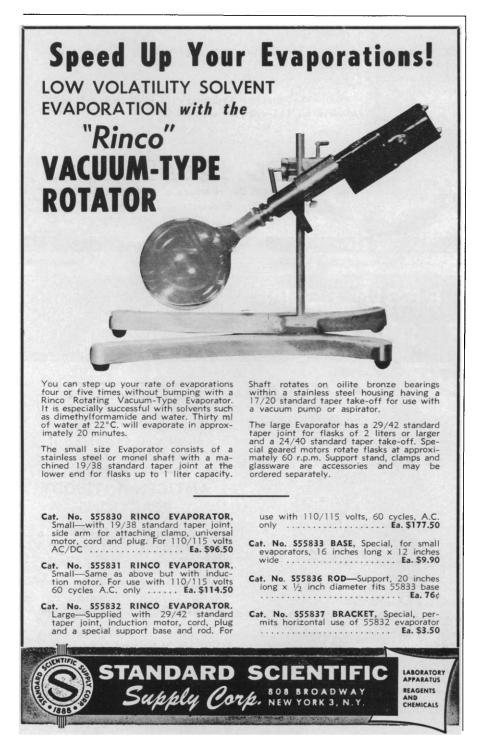
Washington, D.C. (H. H. Goode, Dept. of Electrical Engr., Univ. of Michigan, Ann Arbor.)

13-14. Association for Research in Nervous and Mental Disease, 37th annual, New York, N.Y. (R. J. Masselink, 700 W. 168 St., New York 32.)

17-19. Nuclear Sizes and Density Distributions Conference, Stanford, Calif. (R. Hofstadter, Stanford Univ., Stanford, Calif.)

19-21. American Physical Soc., Stanford, Calif. (W. A. Nierenberg, Univ. of California, Berkeley 4.)

26-27. Northwest Scientific Assoc., annual, Spokane, Wash. (W. B. Merriam, Geography Dept., State College of Washington, Pullman.)



EQUIPMENT NEWS

The information reported here is obtained from manufacturers and from other sources considered to be reliable. Science does not assume responsibility for the accuracy of the information. All inquiries concerning items listed should be addressed to Science, Room 740, 11 W. 42 St., New York 36, N.Y. Include the name(s) of the manufacturer(s) and the department number(s).

PROCESS VAPOR FRACTOMETER consists of an analyzer, a programmer and a recorder. The analyzer is installed in the plant, close to the sample take-off point. Column temperature is regulated to ± 0.1 °C with a range of 50° to 100°C. The programmer supplies timing, switching, and other electric functions for calibration. From one to four components are directly recorded on a bar-chart representation. Concentration span for each component may be adjusted independently. (Perkin-Elmer Corp., Dept. S587)

ROCKING TABLE is a servo-controlled two-axis system for simulating control systems. Angular rotation about each axis is controlled by electric signals supplied to the servo amplifiers. Motions about the two axes are independent. The table measures 16 by 10 in. and has a capacity of 30 lb. Maximum deflection is ± 15 deg, and maximum angular velocity is 120 deg/sec. Response is flat to ± 0.5 db up to a frequency of 1.5 cy/sec. (Short Brothers and Harland Ltd., Dept. S596)

■ WAVEFORM ANALYZER for the frequency range from 0.5 to 2250 cy/sec has a resolution of 0.5 cy/sec. Up to 225 cy/sec, resolution is 0.1 cy/sec. The output of the analyzer is an inked chart record. Six scan ranges from 2 to 500 cy/sec may be centered at almost any point in the range. Resolution is adjustable in steps to 20 cy/sec. (Panoramic Radio Products Inc., Dept. S597)

■ PHASE SHIFTER for thyratron control applies alternating current to the thyratron grid and varies its phase angle over 180° to control thyratron output up to 10 kw. Four isolated control windings are provided for d-c input signals. Input signal power requirement is 1 mw. Signal voltage for full control may be 0 to 1 v or 0 to 2.5 v, depending on the model. (Vectrol Engineering Inc., Dept. S599)

• MOISTURE ANALYZER is an application of nuclear magnetic resonance technique for detecting protons. The instrument will detect hydrogenous liquids in solid material. Tightness of binding of the water or other hydrogenous liquid may be estimated by more detailed examination of the magnetic resonance spectrum. The sample to be measured is placed in the uniform magnetic field of a perma-



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nent magnet with a 10-in. pole face and a 2-in. gap. The magnetic field is varied by sweep coils wound on the poles. At a particular field strength characteristic of the proton, the sample will absorb energy from a radio-frequency field established by a coil surrounding the sample. The derivative of the absorption curve thus obtained is recorded. By measuring the derivative of absorption in this manner, the instrument is able to distinguish the narrow absorption bands, characteristic of protons in fluids, from the broader absorption produced by protons in the solid in which the liquid is contained. Precision of the instrument is ± 0.1 percent. (Schlumberger Well Surveying Corp., Dept. S600)

■ TIME-INTERVAL METER provides for measurement of elapsed time in the range of 3 µsec to 1 sec with accuracy of 1 µsec. Extension to 10 or 100,000 sec is optional. The time interval is defined by voltage signals which may range from - 300 to + 300 v. Trigger sensitivity is 0.2 v root-mean-square at any voltage level within that range. (Computer-Measurements Corp., Dept. S601)

■ VOICE DATA LINK converts automatic commands from computing machines into verbal messages. The system consists of recorded-word storage, word-sequence control, programmed sampler, and input-control units. A prerecorded library of words can be provided for adapting the system to a particular operation. Simultaneous transmission of more than one message over individual audio channels can be accomplished. (Fairchild Camera and Instrument Corp., Dept. S603)

• MICRO K JELDAHL DIGESTOR incorporates six 200-w heaters for operation at temperatures up to 450°C. Flasks from 10to 100-ml capacity and test tubes up to 12 in. long can be accommodated. (Arthur H. Thomas Co., Dept. S612)

M 11

ELECTRONIC GAGE has four magnifications from 400/1 to 20,000/1. Gaging is based on comparison to gage blocks. A self-calibrating feature permits check of the full-scale reading without reference to masters. Readings are repeatable to 1 µin. (Taft-Pierce Manufacturing Co., Dept. S636)

■ VAPOR-PHASE CHROMATOGRAPH for operating temperatures from 20° to 100°C is a portable desk model. Columns up to approximately 30 ft long are accommodated. The detector is of the thermistor type. Sampling systems for liquids or gases are interchangeable. A 10-mv recording potentiometer for output is optional. (Podbielniak, Inc., Dept. S639) JOSHUA STERN

National Bureau of Standards 20 SEPTEMBER 1957

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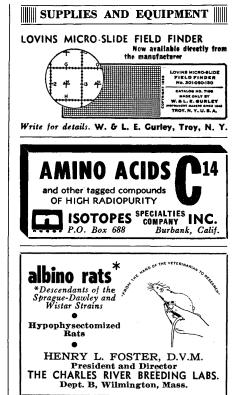
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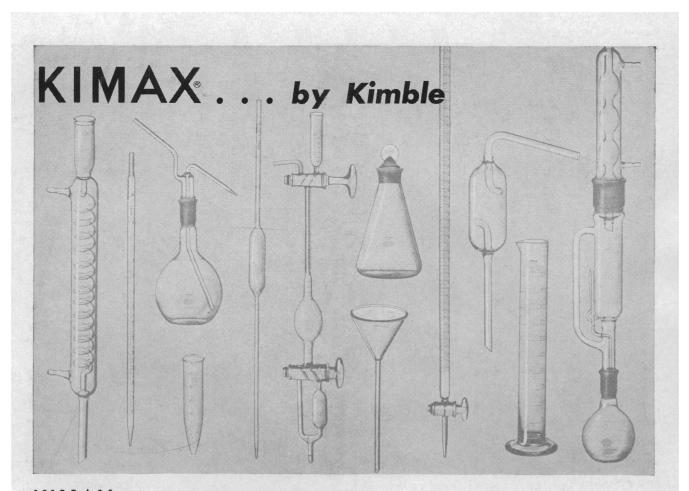
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