# new products

**The descriptions of the new products** listed in this section are based on information supplied to us by the manufacturers, and in some cases by independent sources. PHYSICS TODAY can assume no responsibility for their accuracy.

## Fiber-optic stripper

Optical Fiber Technologies is offering a precision optical-fiber stripping tool manufactured by Utica Tool Company. The Micro-Strip stripper mechanically strips the protective coating from the fiber. This eliminates the need for chemical strippers and cleaning, without damage to the fiber. The MS tool features replaceable, hardened-steel blades with cutting aperature tolerances of $+.0002$ to $-.000$; an adjustable strip length gauge; and a tube guide that positions the optic fiber concentric to the cutter blades, thus preventing blade damage that could be caused by oversize mismatch.

With the MS tool, stripping is a simple three-step operation: Insert the cable through the tube and against the strip length gauge; close the handles and the blade cuts through the material without ever touching the optic fiber; keeping the handles closed, pull the fiber-optic cable from the tool. This is claimed to yield "a no-nick operation and a precision strip length every time." The stripper removes multilayered buffers of Tefzel, Hytrel, Acrylate, Silastic, and so on, and it is recommended for all major types of optical fibers, including graded-index, partially-graded-index and PCS-step-index fibers. The price is $22, with replacement blades at $10 a set. *Optical Fiber Technologies, Inc. PO Box 148, Nutting Lake, Mass. 01865*

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## Vacuum control

Edwards High Vacuum has introduced a new range of microprocessor-controlled instruments—the 2000 Series Controllers. The manufacturer claims that the instruments offer "unrivaled flexibility" in vacuum system control. Series 2000 are not dedicated instruments. They can control not only the vacuum system and vacuum measurement but many process devices. To do this they accept on/off signals via opto-input units and incorporate them into the control sequence.

Programming is said to be simple. It may be changed to suit growing system needs. A 16-character alphanumeric display indicates system status during operation. Facilities include a seven-day clock for automatic startup and shutdown, a memory that holds data for up to six weeks with all power switched off, and delays between one second and 250 minutes. The instruments may also be linked to an external computer.

The Controller 2001 is for use with Pirani and Penning measuring heads, for vacuum ranges down to $10^{-7}$ torr. The 2002 Controller uses ion and Pirani gauge heads, covering pressures down to $2\times10^{-10}$ torr. A Penning gauge may also be fitted to the 2002. The numbers of gauge heads used with each instrument is variable. Associated opto-input and relay units can be mounted remotely. These compact 2000 Controllers are designed for rack or bench mounting. They have totally sealed front panels with membrane switches. *Edwards High Vacuum, 3279 Grand Island Blvd., Grand Island, New York 14072*

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## Mirror mount

The novel design of Newport's new model TM-75 mirror mount "makes

# new products

this rugged turret mount ideal for semi-permanent optical systems where adjustments are infrequent and maximum stability and ruggedness are required." The intention, we are told, was "to design a mount that would retain its orientation even if it fell off a truck." One screw locks this compact mirror mount securely in position. Before being locked down, the mirror can be tilted more than 180° in elevation and rotated a full 360° about the base. The mount accomodates mirrors up to $^3/_4$" in diameter and fits inside an optional $1^1/_8$" diameter, 2"-high push-on dust cover. The price of the TM-75 is $28. *Newport Corporation, 18235 Mt. Baldy Circle, Fountain Valley, California 92708*

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## Fast-filter amplifier

EG&G Ortec's new model 579 is a fast-filter amplifier designed for "state-of-the-art, fast-timing measurements and ultrahigh-count-rate spectroscopy." The 579 has a wideband, gated baseline restorer and a pole-zero cancellation network. It provides continuously variable gain and independently selectable integration and differentiation time constants (out, 10, 20, 50, 100, 200 and 500 ns).

With a fast risetime (less than 5 ns), a high output drive ($+/-5$V into 50 ohms), and a wide voltage gain range (0.9–500), the 579 is claimed to be well suited for a variety of applications, including timing with high-purity germanium or surface-barrier detectors, and with systems using low-gain photomultiplier tubes. External cable clipping is provided, and a wide variety of pulse filterings are available. *EG&G Ortec, 100 Midland Road, Oak Ridge, Tennessee 37830*

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## Software packages

DEC is offering five new laboratory-application program packages for PDP-11 and VAX-11 computer systems. The packages are designed to fill specific application needs in laboratory data management, signal processing, and data acquisition, conversion and analysis. The programs will be distributed through Digital's External Application Software Library.

The new program packages are: RS/1, an integrated data-management package for input, analysis, and output of data; RDE, a forms-based data entry capability; ILS, a signal-processing package; DACS, a software interface for a laboratory subsystem to PDP-11 or VAX-11 computers; and IAE, an interactive analysis editor to edit speech parameters for hardware and speech synthesizers.

RS/1 is priced at $18 750. RDE is priced at $4000 if ordered with RS/1, or $5000 if ordered alone. ILS is priced from $13 000 to $20 000, depending on the operating system. DACS is priced at $4000. *Digital Equipment Corporation, Maynard, Mass. 01754*

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## Diffractometers

Huber Diffraktionstechnik, a West German firm, is offering a line of "sophisticated" diffractometers and goniometers, intended primarily for crystallography by means of x-ray, synchrotron and neutron scattering. There is also a growing interest, we are told, for using them in laser-light scattering experiments.

The device shown is a stepper-motor-driven, 4-circle diffractometer. The available outer diameters range from

140 to 500 mm for turntables, and from 340 to 500 mm for the vertical Eulerian cradles. Positioning accuracy is said to be within 0.005°. A broad line of accessories provides versatile modes of operation. Custom models conforming to special user needs are also available. *Huber Diffraktionstechnik GmbH, Sommerstrasse 4, Rimsting/Chiemsee, Germany D-8219*

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## Surface studies

A molecular-beam system from Vacuum Science Workshop of Manchester, England, will be exhibited at the American Vacuum Society Show at Baltimore in November. It is designed to carry out diffractive scattering of inert gas atoms or simple molecules from single-crystal surfaces for surface structural investigations. It can also

do a wide variety of reactive-scattering, molecular-beam experiments concerned with surface kinetics, adsorption, diffusion and desorption. The instrument can be used for studies of

energy or momentum exchange in surface collisions.

The system consists of a main chamber, pumped by a liquid-nitrogen, trapped-oil diffusion pump, with a base pressure better than $2\times10^{-10}$ mbar. The continuous, nozzle beam source employs a 10-micron molybdenum nozzle; this could readily be replaced with a pulsed beam source. Differential pumping between the source and the main chamber is achieved in the nozzle–skimmer region by an oil diffusion pump and in a further diffusion-pumped chamber between skimmer and collimator. This latter chamber also contains a variable-frequency chopper. The nozzle can be heated to 1500 K, allowing for different translational beam energies. Both nozzle and skimmer can be aligned and positioned during the operation.

The scattered atoms or molecules are detected by a 300-amu quadrupole mass spectrometer mounted on a goniometer that permits 200° of movement in the horizontal scattering plane and $-50°$ to $+70°$ of movement out of the plane. The quadrupole mounting can be varied to allow sample detector distances from 1 to 30 cm, thereby allowing either high sensitivity or high angular resolution. The instrument is also equipped with LEED facilities. The US distributor is *The Technology Shop, PO Box 443, Weston, Mass. 02193*

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## Solar simulators

Oriel has introduced a line of solar simulators for photovoltaic testing. Power levels range from 1 to 11 suns. Beam sizes of $2\times2$ inches to $8\times8$ inches are available with beam uniformity of $\pm5\%$. The beam power is adjustable from 15% to 100% of full power. A wide range of filters is available for simulating solar conditions. Most notable of these is SERI's air mass 1.5 proposed standard solar spectrum. Other filter sets range from air mass 0 to air mass 2. A radiometer is also available for monitoring the output of these solar simulators. A catalog is available from *Oriel Corporation, PO Box 1395, Stamford, Conn. 06902*

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## Surge suppressor

GTE has announced the availability of a new line of Sylvania PremaSpec transient voltage surge suppressors, Type TVSS-plus. These suppressors meet the new UL-1449 specification developed to update suppressor requirements for protecting modern electronic equipment and instrumentation against transient voltage surges. Voltage spikes, if not quickly clamped, can interrupt control programs, cause complete or partial losses of data-processing memory banks and erratic instrument performance. The Sylvania TVSS-plus devices, we are told, can react to surges of voltage in less than five nanoseconds, and they will withstand repetitive transients up to 5000 times per second over extended time periods.

The units are furnished in thermal epoxy construction or aluminum housings, suitable for panel mounting. Two plug-in models are also available. TVSS-plus is furnished for single or three-phase power in voltages from 120 to 480; it may be applied at frequencies from 50 to 415 Hz. Replacement fuses and a pilot light to verify operating condition are standard on most models. *GTE Products Corporation, Wiring Device Division, PO Box 591, Trenton, New Jersey 08604*

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## New literature

**Surface analysis.** Surface Science Laboratories has begun the publication of *SSL Reflections*, a semi-annual newsletter intended to keep the community apprised of new techniques and instruments for surface analysis. Subscriptions are available without charge from *Surface Science Laboratories, 1206 Charleton Road, Mountain View, California 94043.*

**Fiber optics.** A new 56-page catalog from Oriel, entitled *Fiber Optics and Accessories for Spectroscopy, Illumination, Light Detection and Energy Transfer*, is said to help the user to simplify photometric, radiometric or spectroscopic measurements through the use of Oriel's fiber-optic "building-block system" of accessories. These include quartz halogen, xenon, mercury deuterium and spectral-line sources, as well as grating monochromators and photomultiplier detectors. *Oriel, Box 1395, Stamford, Connecticut 06902* □