

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. To facilitate inquiries about a particular product, a Reader Service Card is attached inside the back cover of the magazine.

Slide Set of Galaxies and Nebulae

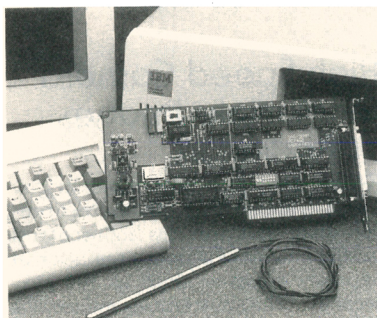
The Astronomical Society of the Pacific is offering a new set of 15 color slides of nebulae and galaxies photographed with the large Anglo-Australian telescope. The images by David Malin have been specially processed to bring out colors and detail. The slides include new images of the Trifid, Rosette and Eta Carinae nebulae, as well as several examples of glowing gas and dust clouds in our Galaxy. There are also views of a nearby dwarf galaxy and several active galaxies, including Centaurus A and Virgo A. One slide shows rings of "light echoes" surrounding the supernova 1987A.

The slides come with a booklet of captions, background material, an introduction by David Malin about the photographic techniques used and a reading list for beginners. *ASP, Malin Slide Orders, 390 Ashton Avenue, San Francisco, California 94112*
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Temperature-Measurement PC Board

Keithley MetraByte has introduced a 32-channel, 12-bit, 200-samples-per-second temperature-measurement board that is designed for use with an IBM PC/XT/AT or compatible computer. The Das-Temp board is designed for semiconductor probes and is said to deliver more accuracy than similar thermocouple-based systems in the -25°C to 105°C range; it is also significantly less expensive than RTD-based configurations. It has a minimum temperature resolution of 0.1°C and can be software programmed to reject unwanted 50, 60 or 400-Hz line frequencies.

Sensors are based on the industry standard AD592 semiconductor temperature source. The current-operat-



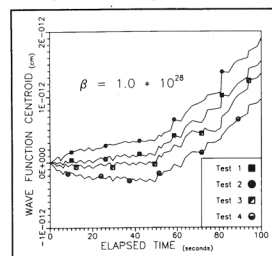
ing mode is immune to wiring-resistance variations and most noise sources. Encapsulated in $\frac{1}{4}$ -inch-diameter steel tubes, these probes come in lengths of 1.5 inches (AC2628-C6) with a 3-ft length of stranded PTFE-coated wire. The sensors have a long-term stability of $0.1^{\circ}\text{C}/\text{month}$, noncumulative. A $\frac{1}{4}$ -inch (AC2629-SS) compression is also available. Applications requiring wider temperature ranges and greater accuracies can be accommodated. Software for the Das-Temp is provided in three levels from menu to stored-program routines. *Keithley MetraByte, 440 Myles Standish Boulevard, Taunton, Massachusetts 02780.*

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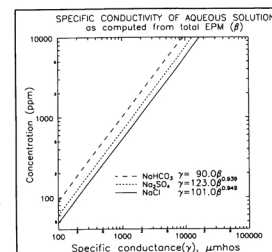
Full-Featured Vacuum-Deposition System

The VUP-5 vacuum-deposition system now available from Wintron is a multi-featured, high-vacuum metal and carbon evaporator. The system consists of an automatic, gaited processor with manual override for adjustable evacuation and sequence rates. Interlocks prevent operator exposure to electronically powered devices in the standby and operating modes. The system offers a range of standard and optional accessories, including: a 22-liter, stainless-steel bell jar and ionizer auto-scrubber, a set of devices for laser-illuminated interferometer control of film thick-

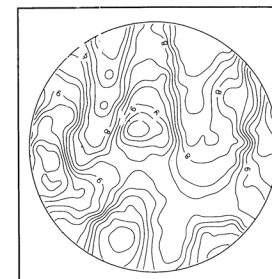
SCIENTIFIC GRAPHICS



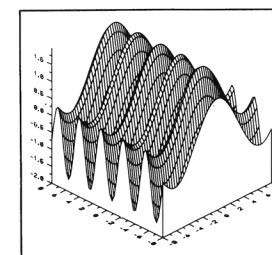
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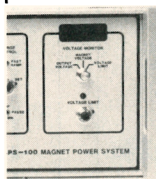
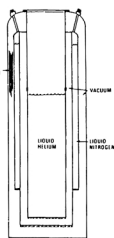
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ness; a twin, independently controlled electron-beam evaporator; an ion-plasma chamber for ion-beam processing, plasma thinning and bilateral polishing of specimens; a motorized rotating-tilting stage that holds up to 12 3-mm-diameter grids or larger specimens; a film-thickness (to 1000 Å) monitor; a multilayer thin-film deposition accessory; and an ionizer for treating the substance surface in a glow-discharge plasma. *Wintron, Markham Gate, 620 Alden Road, Suite 102, Markham, Ontario, L3R 9R7, Canada*

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High-Speed Camera for Multiple Images of Radiation

KMS Fusion has introduced Bright-Cam IV, Model XUV-1020, a real-time converter that provides high-contrast visible images of primary radiation at exposure times as short as 100 picoseconds. The shutter uses microwave strip lines to produce bright, precisely timed images. The instrument is compatible with high-vacuum systems and is designed for CCD camera or film readout. Its windowless, open-detector geometry permits sensing of electrons, ions or photons with wavelengths of 260 nm to less than 0.1 nm. It has four active rectangular regions, which are individually gated to produce up to four independent images (frames) per cycle; cycle times are limited only by the image recording method. *KMS Fusion, 700 KMS Place, P.O. Box 1567, Ann Arbor, Michigan 48106-1567*

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Dielectric Mirror Coatings

Newport's new DM.7 and DM.8 multilayer dielectric mirrors are optimized

for the 1.3- μ m laser-diode and 1.55- μ m laser-diode wavelengths, respectively. Their reflectivity is said to exceed 99% for angles up to 45° regardless of polarization. The coating can be cleaned repeatedly with no degradation of reflectivity. All Newport dielectric mirror coatings are available free of lot charges, regardless of quantity ordered. *Newport, P.O. Box 8020, Fountain Valley, California 92728-8020.*

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Graphing Software for Windows 3

dPlot from dL Soft is designed for use with Windows 3.0 to produce graphs containing data points, error bars, lines and least-squares-fit lines or polynomial-fit curves. The graph's title, caption, and axes and scale labels may be printed in any of the fonts, sizes and styles available on the installed Windows system, and each may be specified and positioned independently.

dPlot uses style sheets and permits instant conversions to logarithmic, exponential, square and square-root scales. A variety of user-selectable point and line styles is available for up to 10 data sets plotting on a single set of axes, and the origin of the graph may be moved to any position using the mouse. Scales and data points may be in integer, floating point or exponential format. Up to 1000 points can be keyboarded or read from a file using one of 12 available formats. The ASCII data-file format allows creation of dPlot data files directly. *dL Soft, P.O. Box 9, Buckhurst Hill, Essex IG9 5BE, United Kingdom.*

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Alpha Management Software

Canberra Nuclear is marketing an Alpha management software package developed by Martin Marietta Energy Systems for the Department of Energy to perform internal-dose calculations for uranium and plutonium workers.

The software operates with Canberra's VAX-based Genie 9900 system, which automates calculations, calibrates equipment and ensures quality control. The software maintains records of more than 2700 system parameters, including backgrounds, controls, daily checks, weekly checks, reagent blanks and



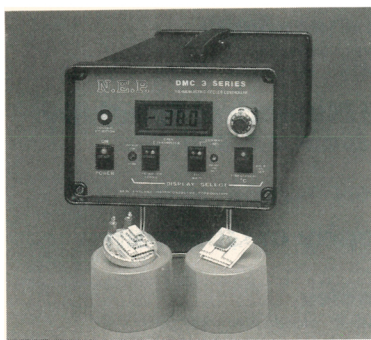
NEW PRODUCTS

chemical yields for urine samples. The Canberra system consists of alpha chambers, detectors, ancillary software and on-site service to ensure proper setup and calibration. Canberra has also released an applications note that describes the Martin Marietta system in detail. *Canberra Industries, One Staten Street, Meriden, Connecticut 06450.*

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200-Watt Thermoelectric-Cooler Controller

Alpha Omega Instruments has introduced a new thermoelectric-cooler controller, the DMC3, a light-weight, microprocessor-based instrument capable of output powers of up to 200 watts. The DMC3 features analog-proportional-integral-temperature control to the top surface of a thermoelectric cooler. The system provides



temperature stability and conversion of thermistor resistance to degrees Celsius by digital solution of the Steinhart-Hart equation. The DMC3 also features built-in visual and audible alarms, front-panel temperature display and easy-to-use front-panel controls with a multicolor LED to indicate the status of the control-loop condition. The DMC3 can be equipped with an optional RS-232C output with or without ramp-soak control. *Alpha Omega Instruments, P. O. Box DE, 253 Mansfield Avenue, Norton, Massachusetts 02766*

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New Literature

Brochure and demo disk—A brochure and demonstration disk outlining the features of the new VIEWDAC—data-acquisition, analysis and graphics software package are now available from Keithley Asyst. The eight-page *Software for Data Acquisition*

and *Control* describes how applications can be created by selecting tasks from menus in a windowing environment. It also outlines the tools for data acquisition, analysis and display—including virtual front panels, which can be customized to control experiments or provide graphical or numerical feedback of results. *Keithley Asyst, 100 Corporate Woods, Rochester, New York 14263*

Synchrotron energy-ramping application note—A new application note from Tektronix describes the application of digital signal processing to critical energy-ramping measurements, including monitoring the synchrotron's tune frequencies on a real-time basis to avoid beam blowup. It describes adjustment problems that were solved at the Stanford Linear Accelerator Center using the Tek 3052 DSP system, a wide real-time bandwidth analysis tool of time, frequency and amplitude that provides simultaneous monitoring of the tune frequencies. The 3052 performs 1024-point complex FFTs in 200 microseconds and offers fully triggerable, time-amplitude-frequency signal measurement on a VME bus-based platform. *DSP Marketing, Tektronix Federal Systems, P. O. Box 4545, MS 38-386, Beaverton, Oregon 97076*

Cleanroom manuals—HPS is offering product manuals printed on cleanroom paper for the following products: SensaVac vacuum gauges, including the series 919 hot cathode gauge, and VacuComp vacuum valves and components, including the Vacuum Sentry solenoid safety valve. *HPS, 5330 Sterling Drive, Boulder, CO 80301.*

Comprehensive reference manual—Bertan High Voltage has made available a 102-page reference manual and product catalog that includes a glossary of terms. The catalog also features photographs, charts, diagrams and complete specifications for more than 300 different standard and custom-designed high-voltage power supplies and systems available from the company. Products listed in the catalog can be used in nuclear instrumentation, precision CRT displays, analytical and materials research, automatic test equipment and scanning-electron microscopes; units are certified to UL, VDE, TUV and CSA specifications. Also described in the catalog are calibration services, repairs, warranty statements and ordering information. *Bertan High Voltage, 121 New South Road, Hicksville, NY 11801.*

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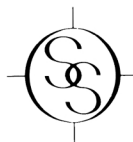
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