

NEW PRODUCTS

Focus on software, data acquisition, and instrumentation

The descriptions of the new products listed in this section are based on information supplied to us by the manufacturers. PHYSICS TODAY can assume no responsibility for their accuracy. For more information about a particular product, visit the website at the end of its description. Please send all new product submissions to ptpub@aip.org.

Andreas Mandelis

Helium-saving laboratory cooling system



The fully automated Infinite Helium cooling system from Lake Shore Cryotronics enables a continuous-flow cryostat to operate cryogen-free, with base temperatures reaching as low as 2 K. It offers single-button cooldown operation, with no manual valve adjustments required. Intelligent features reduce user error to ensure consistent and optimal performance. Samples can be exchanged easily without the system being warmed up, allowing for fast turnaround times. The system can run continuously for six months or longer without requiring servicing. Suitable for physics or materials research laboratories challenged by liquid helium shortages and costs, the Infinite Helium cooling system seam-

lessly integrates with various continuous-flow cryostats, such as the Lake Shore ST-500 cryostat for low-vibration microscopy applications and ST-400 series cryostats for UHV and beamline applications. The system also provides an option for reducing vibrations in a measurement to ultralow levels—to 1 nm vibration at greater than 10 Hz—when it is used with the ST-500. **Lake Shore Cryotronics Inc**, 575 McCorkle Blvd, Westerville, OH 43082, www.lakeshore.com

Oscilloscope for fast data acquisition

Rohde & Schwarz has developed the industry's first application-specific integrated circuit (ASIC)-based zone triggering and implemented it in its new MXO series oscilloscopes. The company says the MXO series offers the world's fastest zone trigger update rate, which reaches up to 600 000 waveforms/s, and less than 1.45 μ s blind time between trigger events. The new functionality enhances the oscilloscopes' ability to precisely isolate events in which traditional triggering does not provide the needed flexibility. The MXO zone triggering allows oscilloscope users who are testing and debugging in the frequency domain to draw specific zone areas. The oscilloscope will trigger or activate when a certain tone exceeds a set power level within those zones, or users can simply draw a zone for RF chirps or pulses. With the MXO's new free-run mode, the oscilloscope captures data as fast as possible without looking for an edge-trigger event. Combining that mode with zone triggering can enhance power integrity measurements and electromagnetic interference debugging. **Rohde & Schwarz GmbH & Co KG**, Muehlhofstrasse 15, 81671 Munich, Germany, www.rohde-schwarz.com



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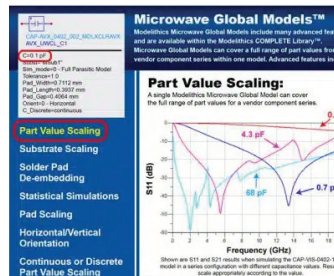
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NEW PRODUCTS

Software for electronic design automation

Modelithics, which provides accurate RF/microwave models for multiple EDA (electronic design automation) simulation software tools, has introduced its Exemplar Library for MATLAB. The library adds to the company's large collection of highly accurate circuit-simulation models, and it includes almost 50 Microwave Global Models, representing nearly 3500 components for many component suppliers. Developers of wireless communications, radar, and signal integrity applications use Modelithics models within the RF Toolbox, a MATLAB add-on from MathWorks, to build networks of RF components, such as filters, transmission lines, matching networks, amplifiers, and mixers. The company's Microwave Global Models for MATLAB include advanced model features, such as part-value scalability, solder pad size scaling, de-embedding, and substrate scaling. The part-value scalability makes the Microwave Global Models suitable for tuning and optimization; it is not necessary to manually substitute individual models during a design process. **The MathWorks Inc.**, 1 Apple Hill Dr, Natick, MA 01760, www.mathworks.com



Low-noise magnetometer

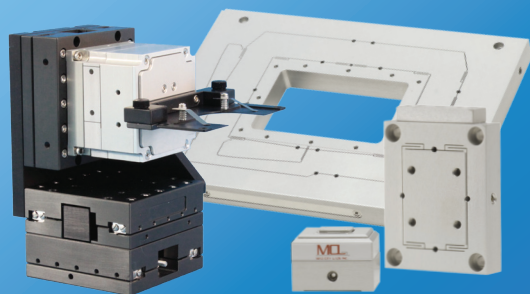
Bartington Instruments has brought to market the Mag-13Q, a very low-noise variant of its Mag-13 fluxgate magnetometers, which provide high-precision measurements of static and alternating magnetic fields. This model features less than $5 \text{ pT}_{\text{rms}}/\sqrt{\text{Hz}}$ at 1 Hz (70 and 100 μT measurement ranges only). The series' field sensors are available in a range of enclosures, including environmentally sealed, unpackaged, and submersible. Those enclosures make them suitable for use in the laboratory, in the field, and underwater. They are easy to integrate into users' measurement platforms and can

be combined with the company's power supplies and data acquisition units to create complete measurement systems. The Mag-13 series can be used for magnetic field monitoring, feedback sensing in active magnetic field cancellation systems, magnetic signature measurements, and electromagnetic surveys, in the fields of physics, geophysics, bioelectromagnetics, mineral exploration, defense, and space. **Bartington Instruments Ltd**, 10 Thorney Leys Business Park, Witney, Oxon OX28 4GG, UK, www.bartington.com

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