NEW PRODUCTS

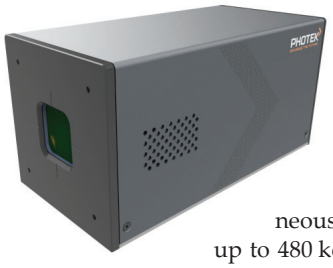
Focus on software, data acquisition, and instrumentation

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

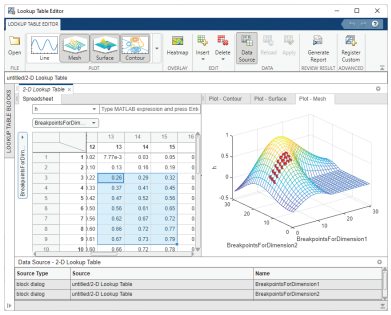
Magnetic test and measurement instrument

Lake Shore Cryotronics has added a live plotting feature and other enhancements to its F41 (single-axis) and F71 (multiaxis) teslameters. They are easy to operate and provide fast, highly accurate field measurements. Live plotting of the magnetic field makes it easier to see fields changing over time; it can also be used to capture field measurement sweeps and save the data to a USB flash drive. Other improvements include the addition of maximum peak holding for high-speed pulse detection; fully configurable digital low-, high-, and band-pass filters that can be applied to an rms reading when the teslameters are operating in high-frequency mode; and a qualifier feature for pass-fail classifications of field values. Improvements have been made to the onboard TruZero technology's algorithm to further reduce residual offsets. TruZero, a time-saving feature, eliminates the need to re-zero the probe. ***Lake Shore Cryotronics Inc**, 575 McCorkle Blvd, Westerville, OH 43082, www.lakeshore.com*



Photon-counting system

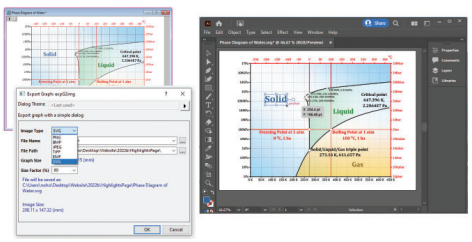
The AuraTek-PCS from Photek, an all-in-one multichannel photon-counting system, enables parallel readout with precise timing and high event-rate capabilities. Its 256 independent channels, each with 60 ps timing resolution, can simultaneously register single-photon events with count rates of up to 480 kcps. Customizable features include detector gating. A range of photocathodes are available, including versions with high UV sensitivity and very low dark counts. A gigabit Ethernet connection and specially designed software allow for fast, easy data acquisition. According to the company, the PCS may potentially unlock new possibilities in wide-field fluorescence-lifetime measurements, lidar, quantum information systems, and other applications. ***Photek Ltd**, 26 Castleham Rd, St Leonards-on-Sea, East Sussex TN38 9NS, UK, www.photek.com*



Mathematical programming software

MathWorks now offers Release 2022a (R2022a) of its MATLAB and Simulink software. New capabilities in MATLAB include new apps and App Designer functions, graphics enhancements, and customizable Live Editor tasks. Simulink updates let users streamline masking workflows with a new mask editor and accelerate simulation using a model-reference local solver. New products in R2022a include the Bluetooth Toolbox, which provides standard-based tools to design, simulate, and verify Bluetooth communications systems; the DSP HDL Toolbox, which offers Simulink blocks and subsystems for developing wireless, radar, audio, sensor, and other signal-processing applications; and the RoadRunner Scenario interactive editor, which can simulate and test automated driving systems. R2022a includes major updates to MATLAB Compiler SDK and Production Server, Simulink Real-Time, and other products in the areas of signal processing, computational finance, and verification, validation, and testing. ***The MathWorks Inc**, 1 Apple Hill Dr, Natick, MA 01760-2098, www.mathworks.com*

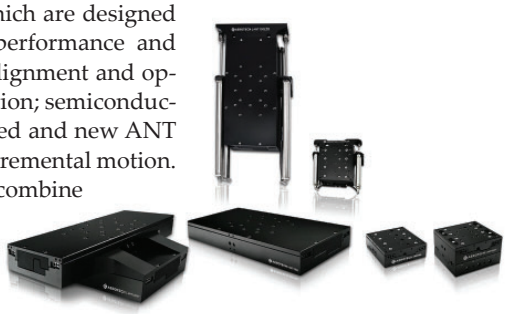
Data analysis and graphing software



Version 2022b of Origin and OriginPro, OriginLab's data analysis and graphing software, adds new features, apps, and improvements. Graphs and layouts can now be exported in SVG (Scalable Vector Graphics) format, which allows for easy editing of the exported file in applications such as Adobe Illustrator. New workbook window buttons allow users to add sheets or toggle the organizer panel on and off. A new dialog box for arranging, tiling, and sorting windows makes it easier to manage large projects. Users can now define multiple regions of interest on GeoTIFF images and extract them for further analysis or create graphs such as a 3D surface plot. New graph types include a bar map for placing bar or column plots on a map base, a spiral bar chart (with Colormap for customizing the bar colors), and right- and equilateral-triangle ternary plots. Among the new apps are GeoTIFF Export, Color Spectrum Plot, and Matrix Analysis. ***OriginLab Corporation**, One Roundhouse Plaza, Ste 303, Northampton, MA 01060, www.originlab.com*

Highly precise nanopositioning stages

Aerotech has launched the second generation of its ANT nanopositioning stages, which are designed for single-axis and multiaxis applications that require high-throughput motion performance and nanometer-level precision. Those include photonics assembly and inspection; fiber alignment and optimization; optics manufacturing, testing, and inspection; sensor testing and qualification; semiconductor processing and inspection; and research and laboratory applications. The enhanced and new ANT nanopositioning stages can achieve subnanometer position stability and minimum incremental motion. For example, the ANT95L and ANT130L single-axis linear nanopositioning stages combine resolution, accuracy, repeatability, size, and reliability; the ANT130L is now available in travel lengths up to 210 mm. The ANT130LZS and the new ANT95LZS stages deliver vertical-motion performance with a low profile and very low frictional characteristics. ***Aerotech Inc**, 101 Zeta Dr, Pittsburgh, PA 15238-2811, www.aerotech.com*



Turbomolecular pumps for high-energy physics

With its Turbovac iR variants, Leybold introduces a new turbomolecular pump series derived from the existing Turbovac i family and covering the same range, with pumping speeds from 90 L/s to 950 L/s. Developed to meet the requirements of the high-energy physics market, the robust, flexible iR models are suitable for applications such as synchrotrons (particle accelerators), cyclotrons (circular accelerators), linear accelerators, and free-electron lasers. To facilitate remote operation from 3 m to 200 m, Leybold offers special cable lengths and the option for users to employ their own cables. Materials contained in the iR models have radiation tolerances of up to 10^6 Gy. Absolute purity, an elementary condition in high-end research, is ensured by the oil-free operation of the pumps' bearing. The company offers the Turbovac iR pumps combined with its ion and nonevaporable getter pumps, which it says other suppliers cannot offer as a package. ***Leybold GmbH**, Bonner Str 498, 50968 Cologne, Germany, www.leybold.com* PT