

#### Weekly News





### New and Improved Skipper CCDs **Count Photons from Distant Galaxies**

Using an instrument on the 4.1-meter Southern Astrophysical Research Telescope, researchers obtained the first astronomical spectrum using skipper charge-coupled devices. Originally envisioned for this purpose, the technology has been largely limited to the study of charged particles since its introduction in 1990. Read Article



# Frequency Comb Efficiency

Topological Platform Can Increase

A new path to generating optical frequency combs, developed by a team from the University of Maryland, resulted in a nested comb-within-a-comb that could lead to smaller, more efficient frequency combs for atomic clocks, rangefinders, quantum sensors, and other applications that require precise measurement of light. Read Article



## Applications Open for 2025 SPIE Prism Awards

SPIE, the international society for optics and photonics, is

accepting applications for its 2025 Prism Awards, which will celebrate its 17th anniversary on January 29 during a gala evening at SPIE Photonics West. The awards, held annually by SPIE, recognize and honor the most innovative products on the market across the wide range of optics and photonics applications. Read Article





#### Lumencor AURA Light Engine



#### Lumencor Inc. Why settle for archaic bulbs

and weak LEDs when optimal solid-state performance and value are within reach? AURA Light Engine provides bright,

stable, reproducible illumination for OEMs. Proprietary light sources and advanced electronics make this excitation subsystem ideal for instrument manufacturers. Customization is available upon request. Visit Website Request Info



### Ampliconyx Oy

Green Laser to Deliver

patented technology, is designed to break new

ground in time and spectral resolution flavored by versatile OEM integration and elegant control. Visit Website Request Info

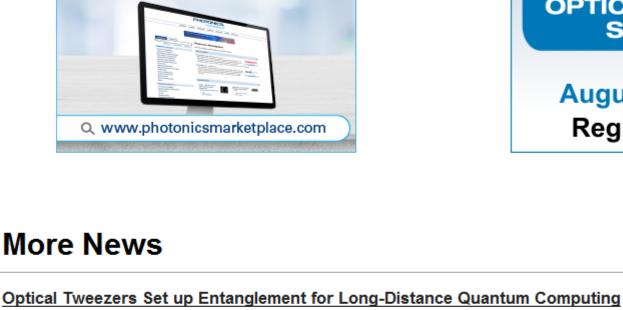
spectra

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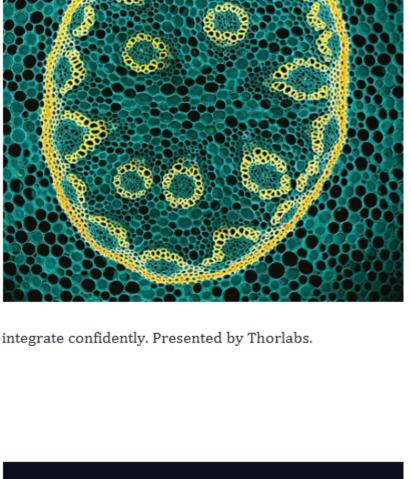


## Insights on Photon Shapes Hold Promise for New Tech

Microlaser Bandage Measures Glucose Without Drawing Blood

**Latest Webinars** 

Optogenetics Identifies Blood Sugar Regulating Pancreatic Cells



#### microscopy, lidar, and the laser processing of materials. Choosing the correct configuration for a particular application requires the consideration of a wide range of factors. In this

steering laser beams and are used in applications including

Galvanometer scanning systems are highly configurable tools for

Beam Steering with Galvos: Common

Configurations and Their Uses

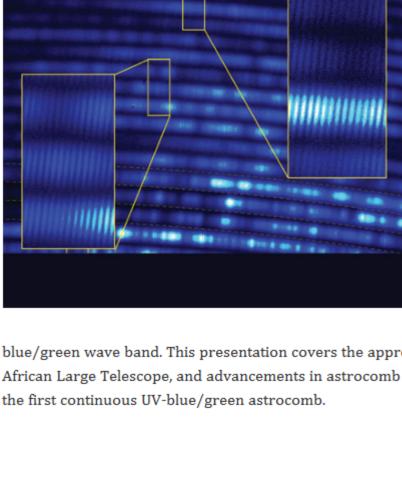
Wed, Jul 24, 2024 1:00 PM - 2:00 PM EDT

webinar, Carol Borsa from Thorlabs compares commonly available configurations and discusses the merits of each. She provides key insights to specifications on data sheets, and guides users to suitable solutions. This presentation also covers basic integration steps and requirements, as well as helpful tools for finding the limits of a system. Participants will gain insights into best practices when choosing a system and will have the opportunity to learn ways to use other available equipment to Register Now Measuring Starlight with an Ultrafast

Laser: Astrocomb Development for the

In this webinar, Yuk Shan Cheng of Heriot-Watt University

explores the important role of the Extremely Large Telescope's (ELT) ANDES spectrograph and its need for a high-precision frequency calibrator in order to pursue exciting ventures. She



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Call for Articles

# focuses on the development of astrocombs, which are laser

**Extremely Large Telescope** 

Tue, Aug 6, 2024 10:00 AM - 11:00 AM EDT

frequency comb systems that can provide thousands of stable, atomically referenceable, and evenly spaced calibration lines. Despite their demonstrated success in labs and various telescopes worldwide, integrating astrocombs into modern telescope facilities presents challenges, including aligning their mode spacings with the spectrograph's resolving power and achieving broad spectral coverage, particularly in the UVblue/green wave band. This presentation covers the approaches to these challenges, recent implementation at the Southern African Large Telescope, and advancements in astrocomb technology at Heriot-Watt University, including the development of

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