
Please join us for the inaugural
Yale Day of Instrumentation
November 16, 2018
More information and registration at:
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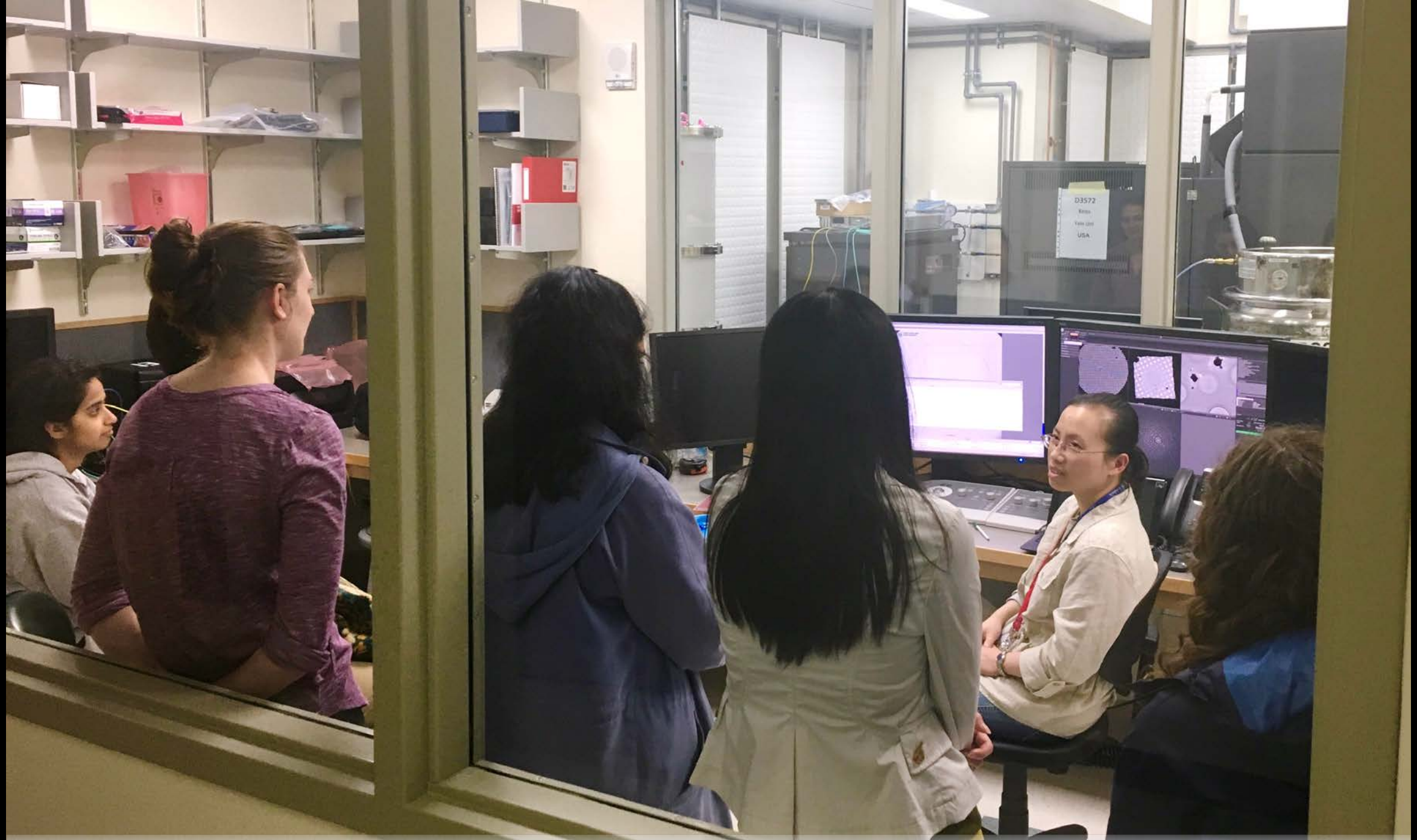
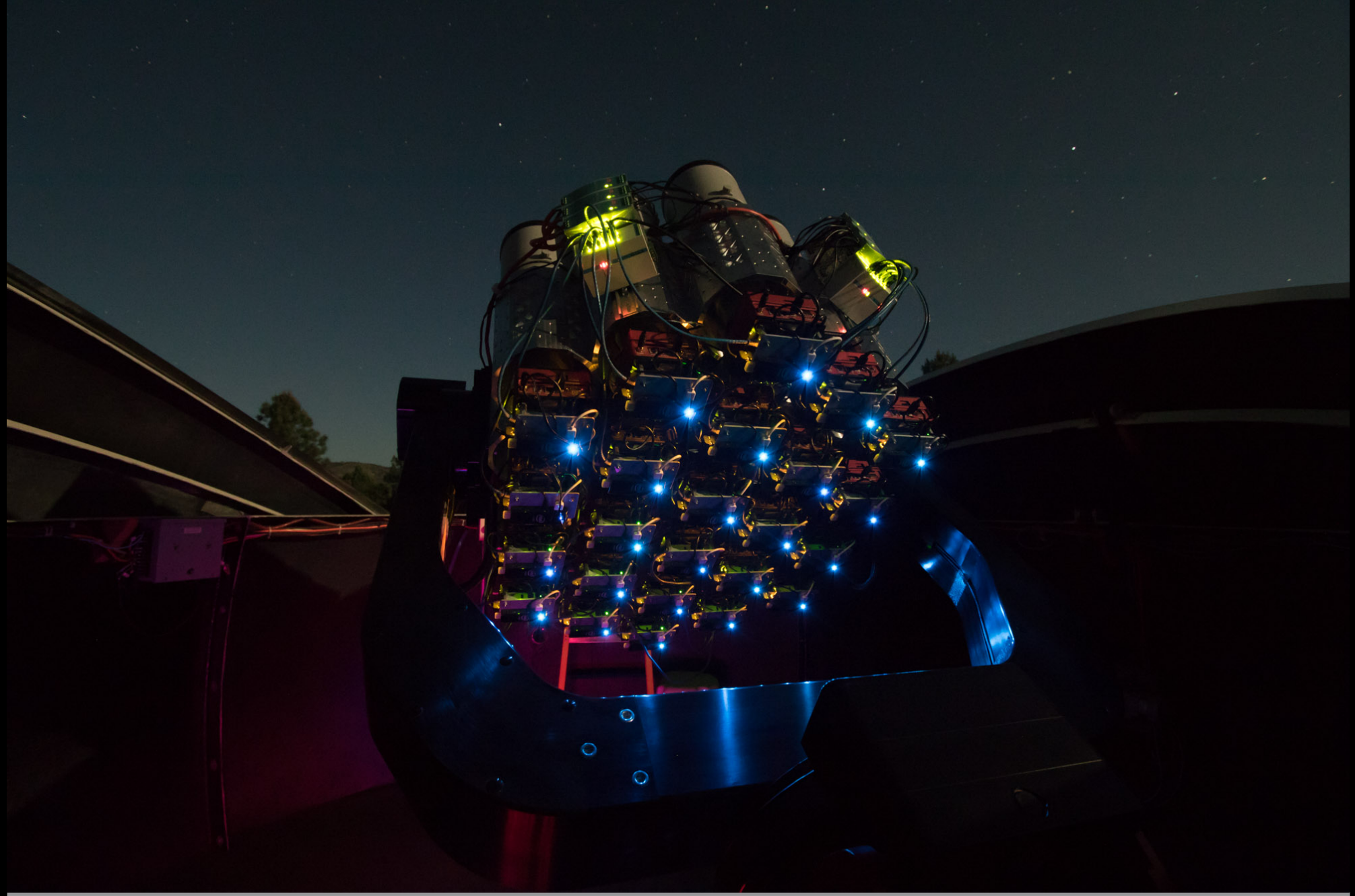
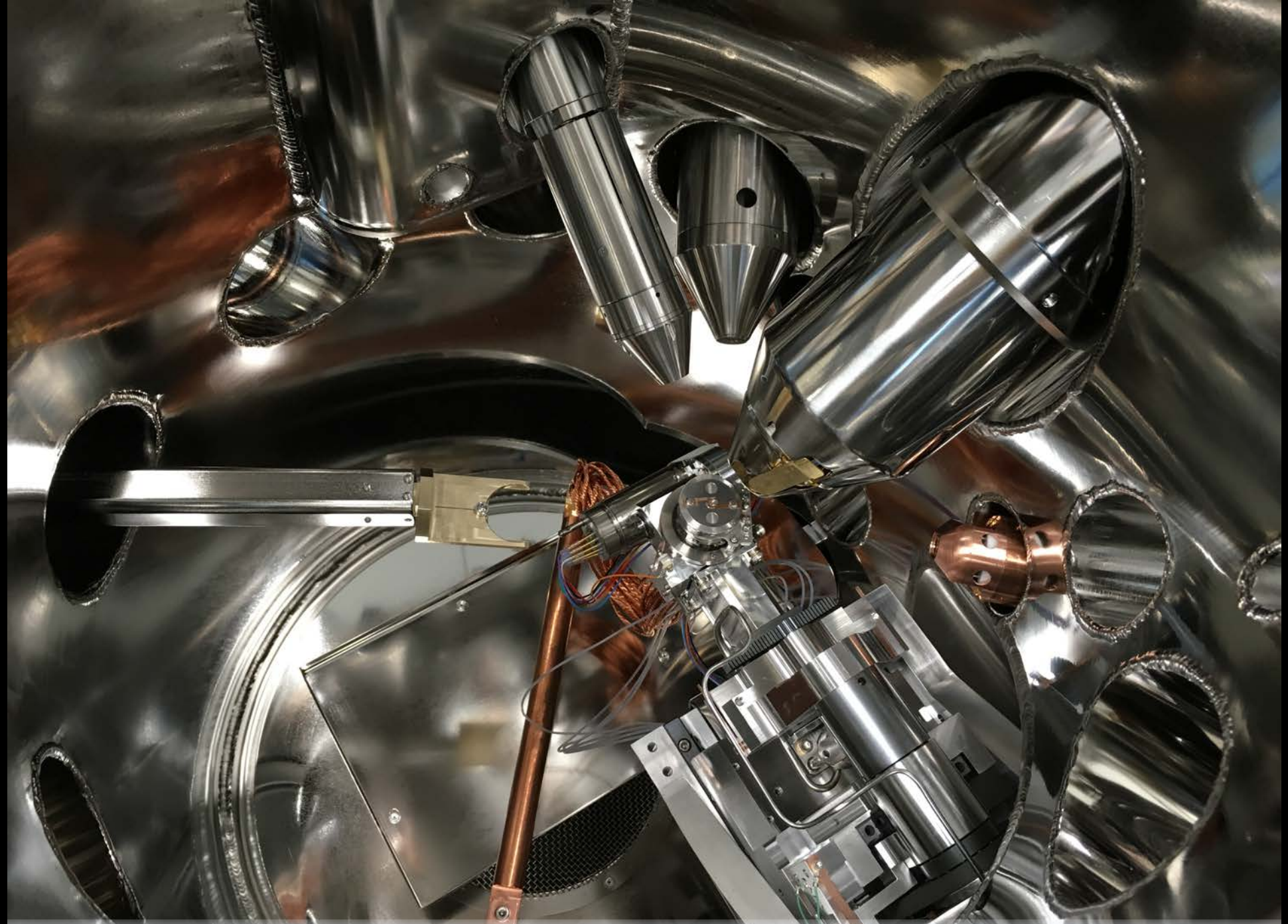
Kim Gibson describes the cryo-specimen autoloader of the Krios electron microscope. - Fred Sigworth



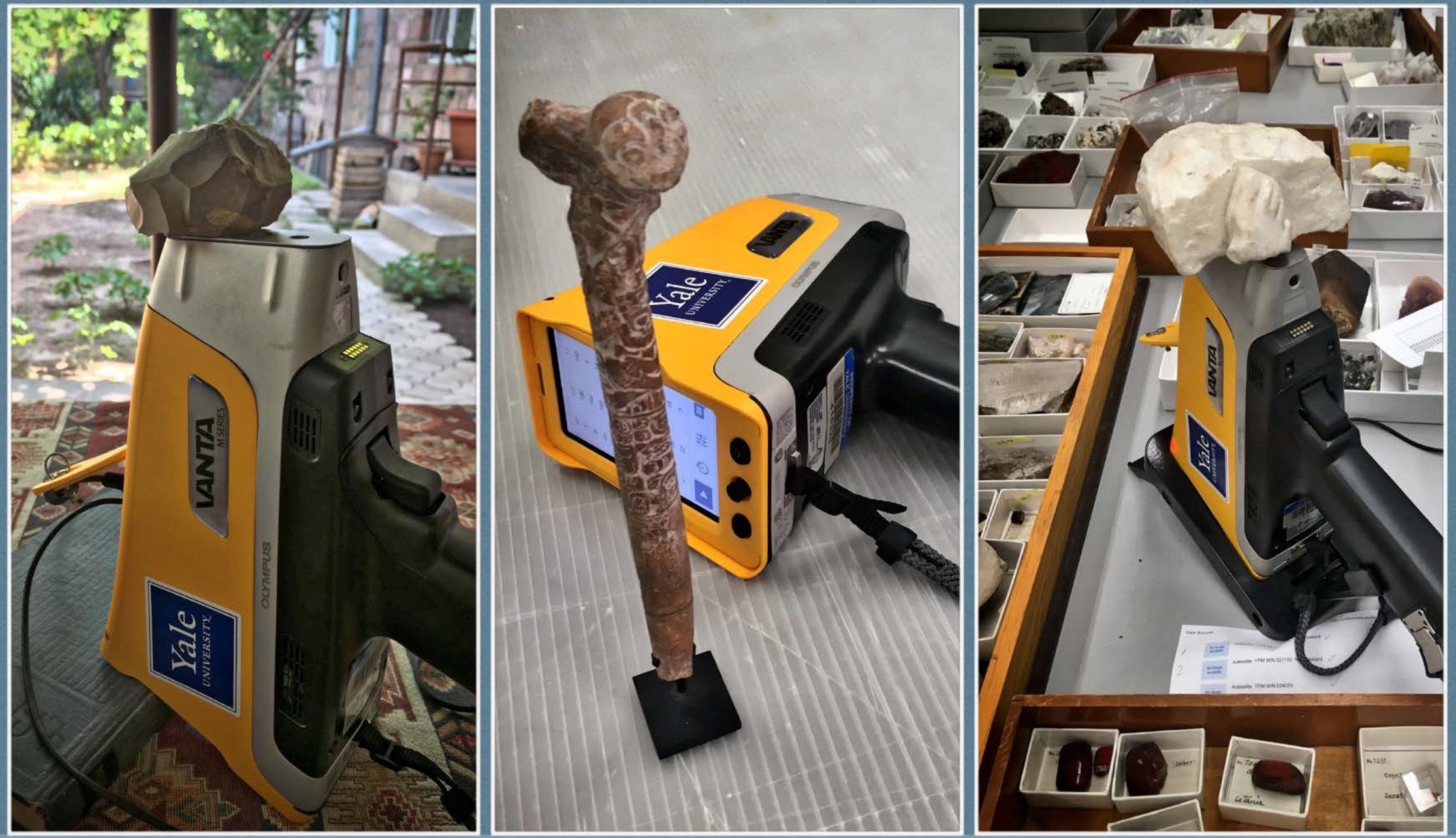
In the control room Shenping Wu, facility director, demonstrates the Krios cryo-EM instrument to members of the MBB710b class. – Fred Sigworth



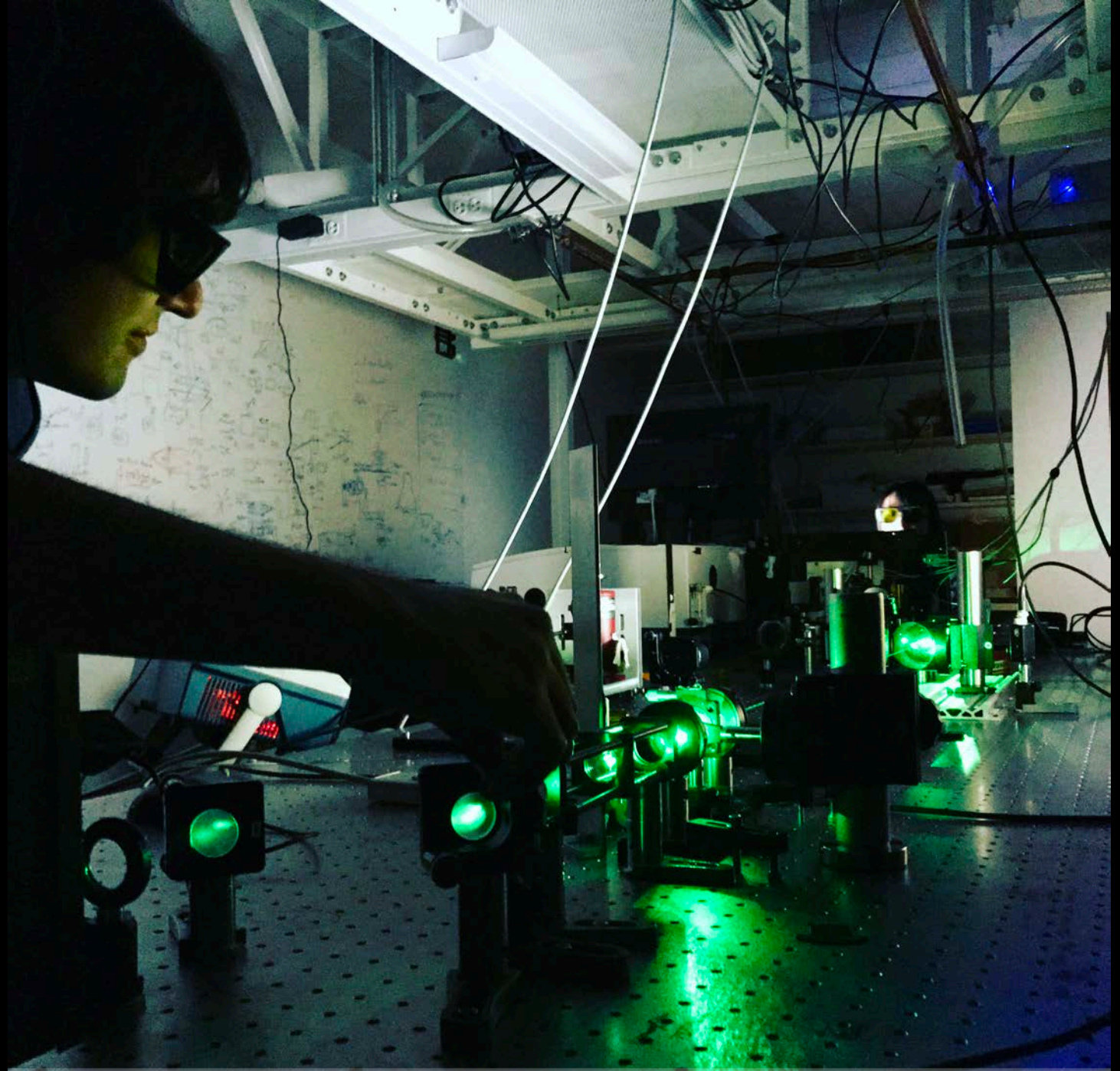
One of the two mounts of the Dragonfly Telephoto Array. Dragonfly is a novel telescope concept, comprising 2x24 state of the art telephoto lenses. It is able to see large, faint structures in the night sky that go unnoticed with traditional telescopes. The telescope has identified an unexpected new population of large, faint galaxies that are providing new information on the distribution and nature of dark matter. – Pieter van Dokkum



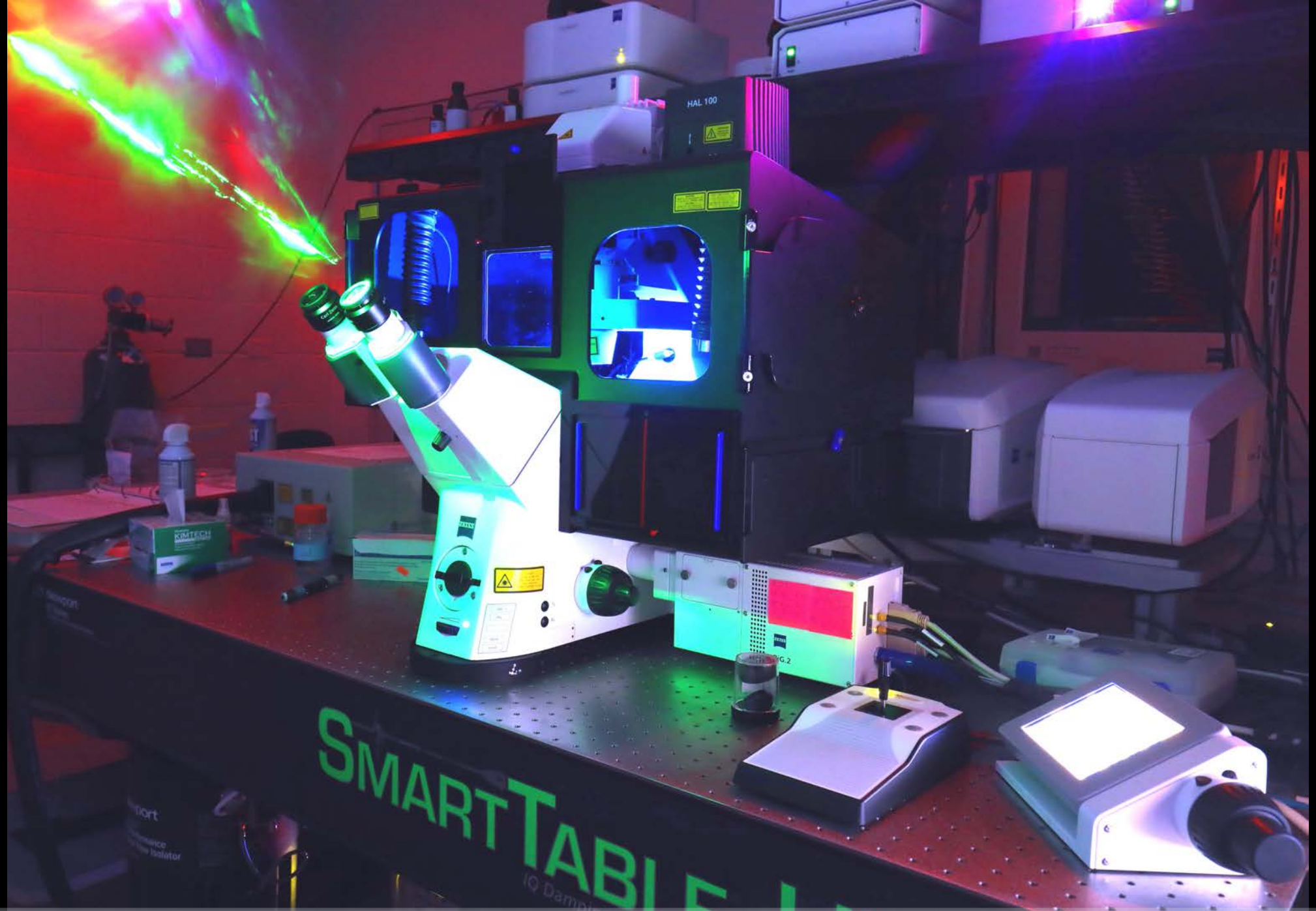
Inside X-ray photoelectron spectrometer (XPS) – Min Li, West Campus Materials Characterization Core



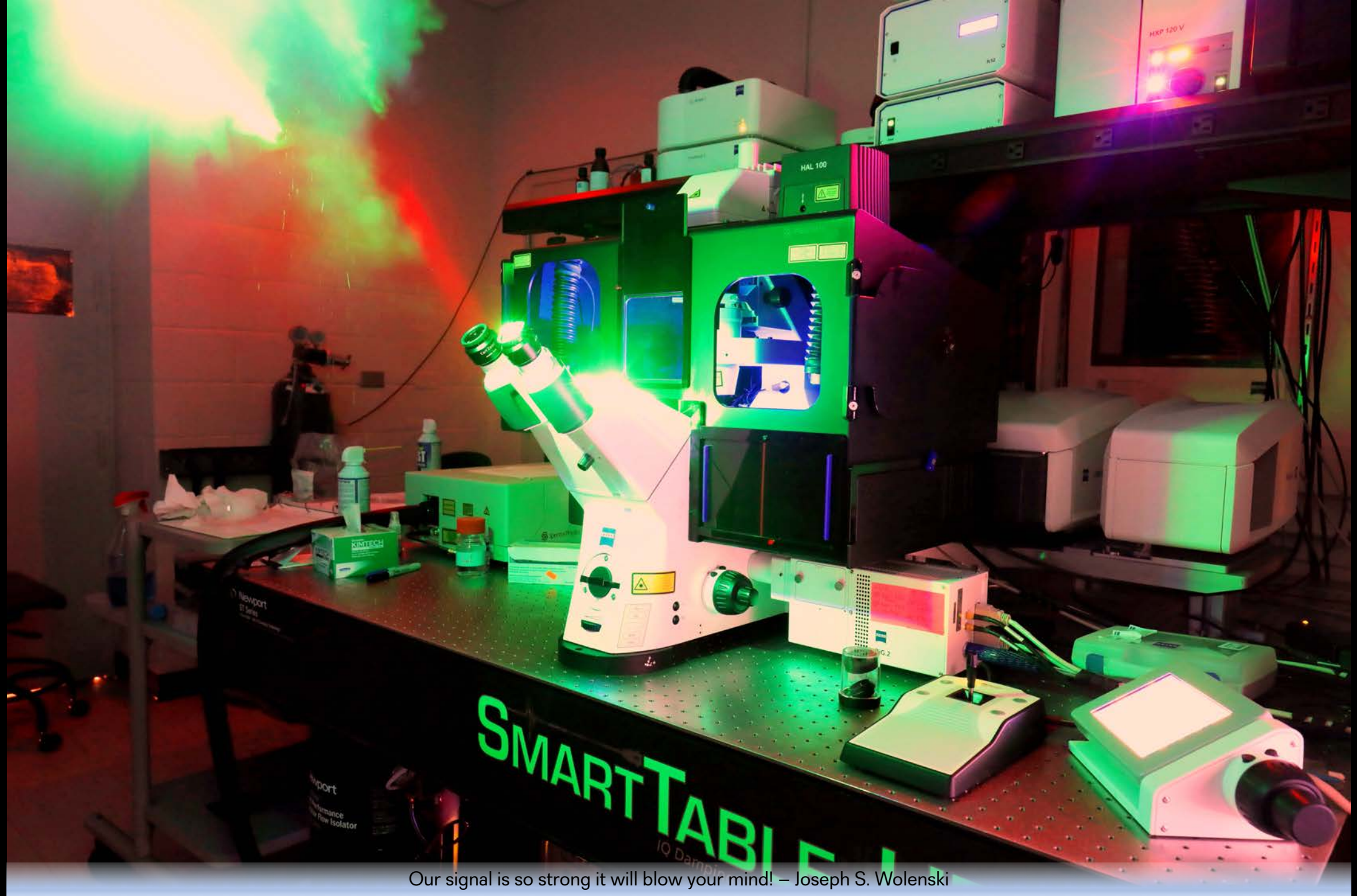
The portable instruments of the Yale Archaeological XRF ExoLab (YAXX) travel wherever our researchers need to analyze artifacts and cultural heritage, from Greek marble statues (right) and carved Maya bones (center) at the Peabody Museum of Natural History to million-year-old stone tools halfway around the world (left). - Ellery Frahm



Plasma filamentation – Jacob Black

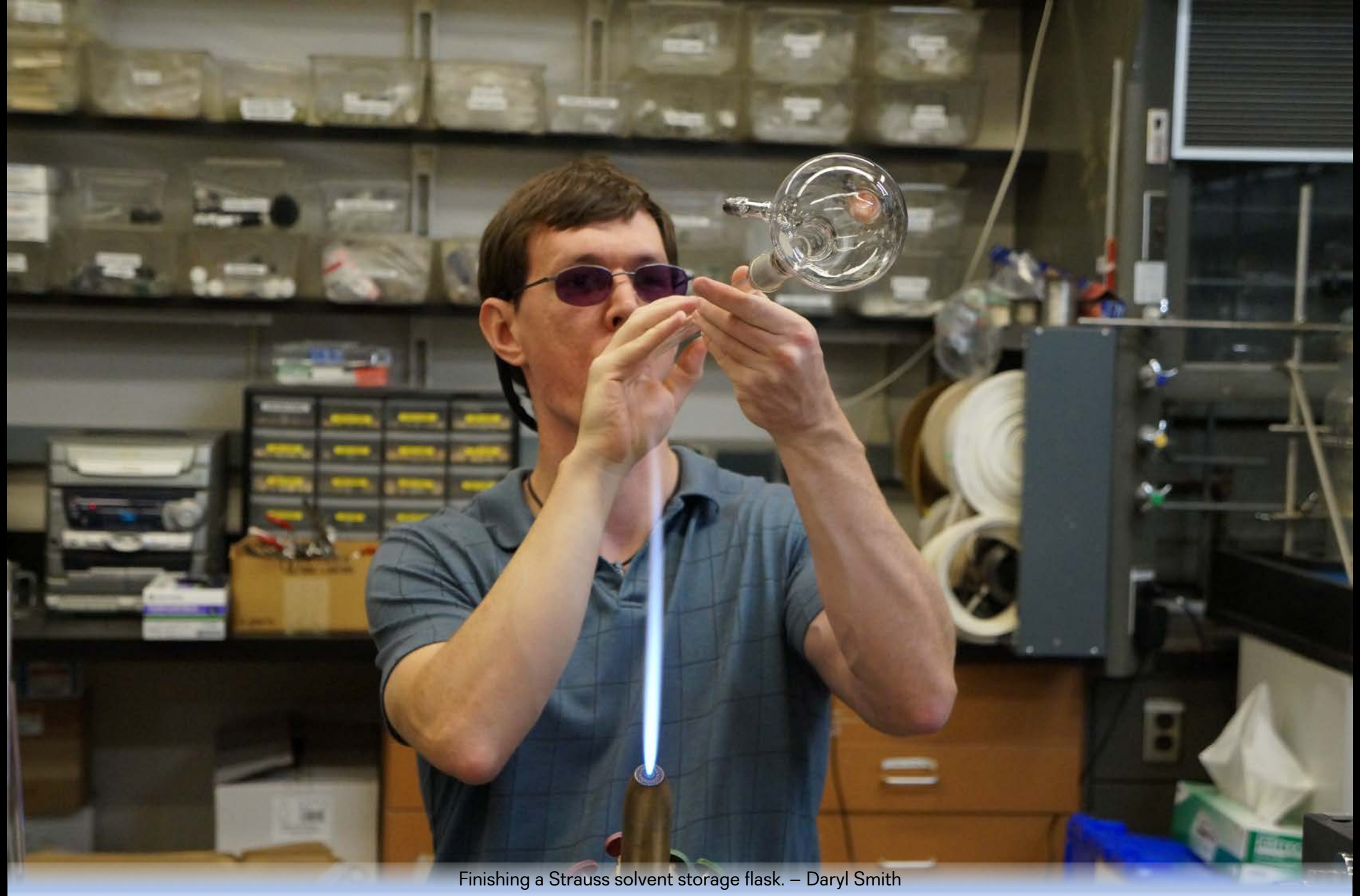


Zeiss LSM 880 Airyscan Confocal Microscope in the Science Hill Light Microscopy Imaging Facility in the Department of MCDB, KBT 300. – Joseph S. Wolenski.



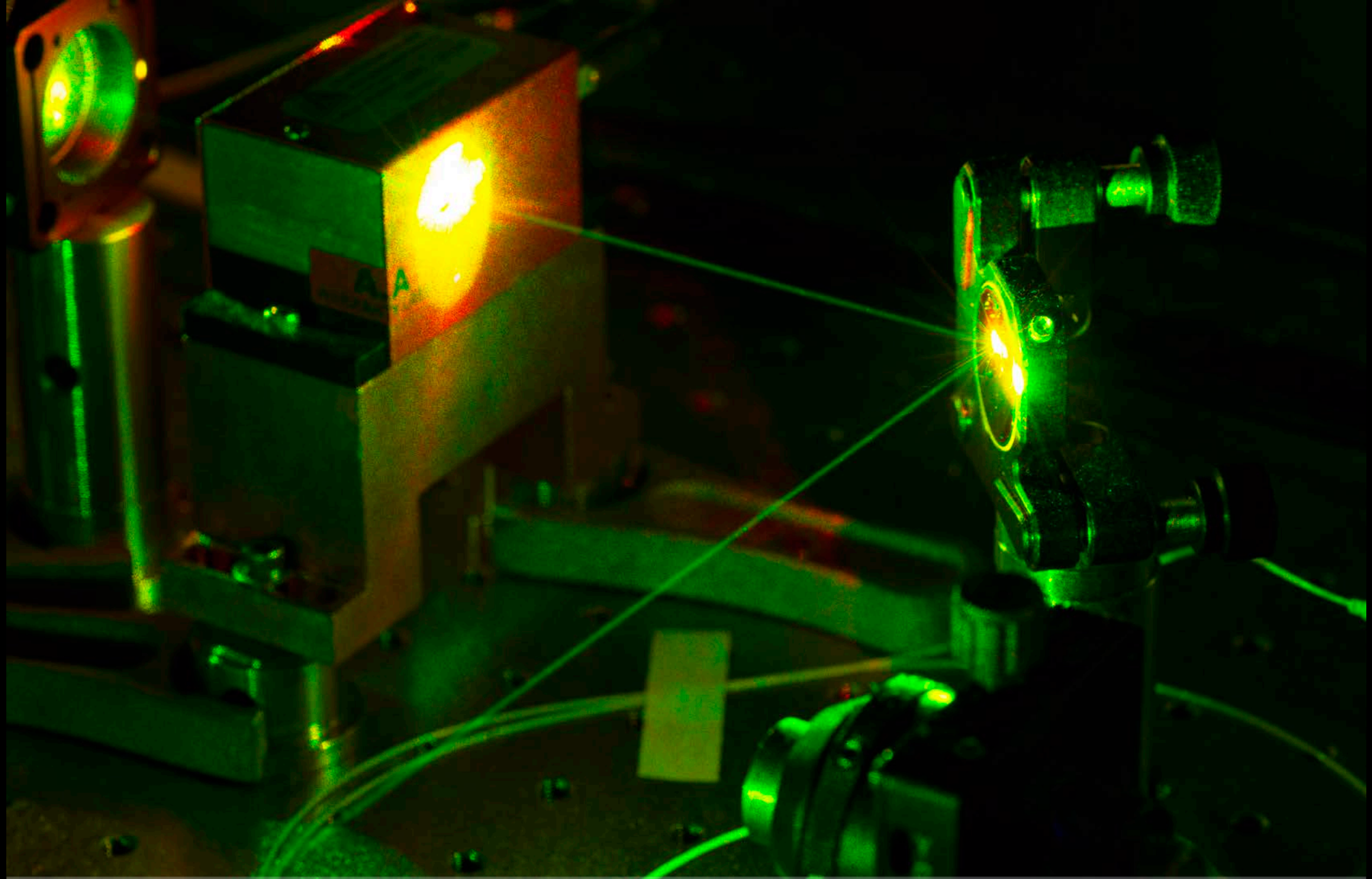
Our signal is so strong it will blow your mind! – Joseph S. Wolenski

Zeiss LSM 800 Airyscan Confocal Microscope – Joseph S. Wolenski

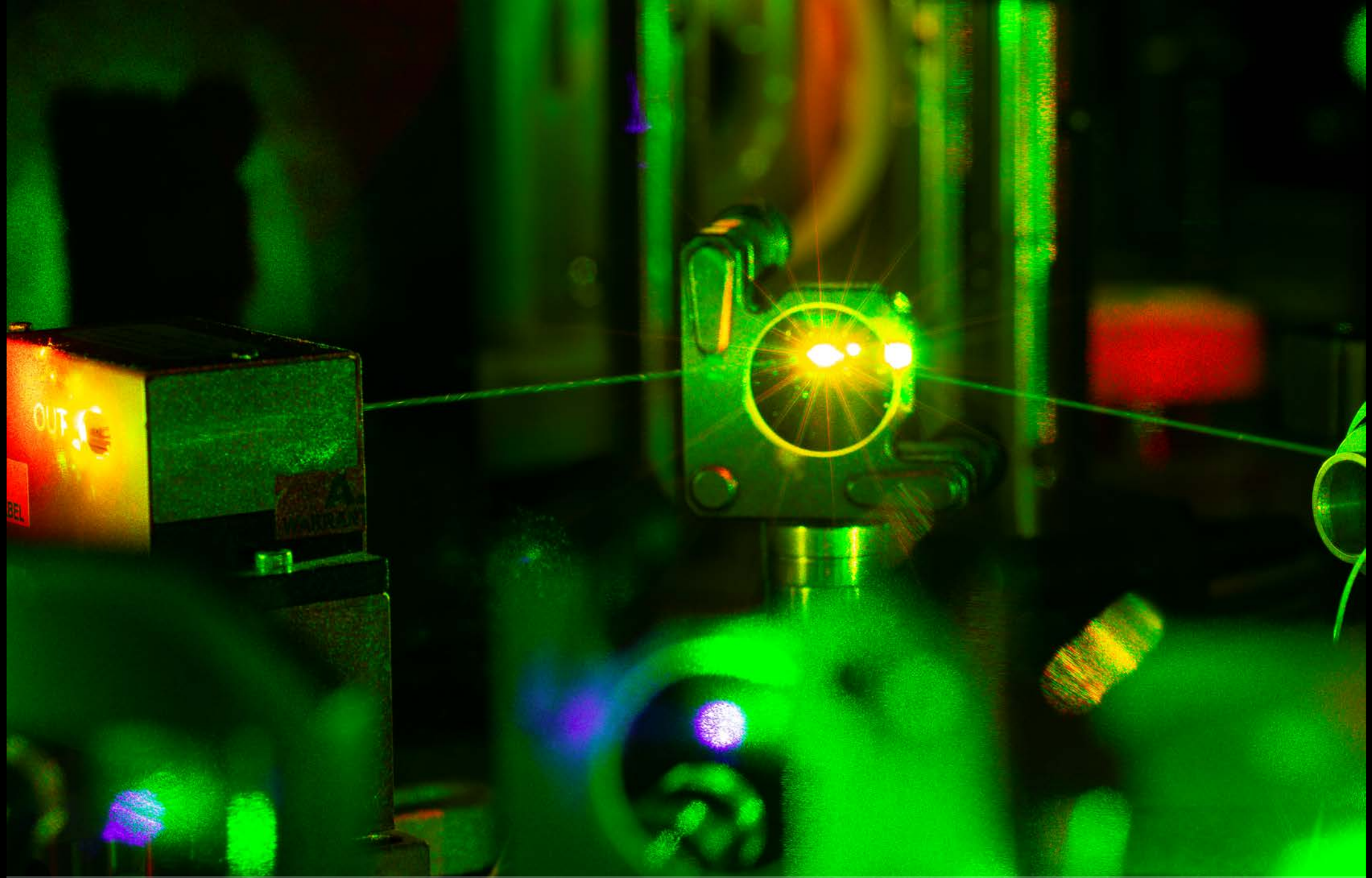


Finishing a Strauss solvent storage flask. – Daryl Smith

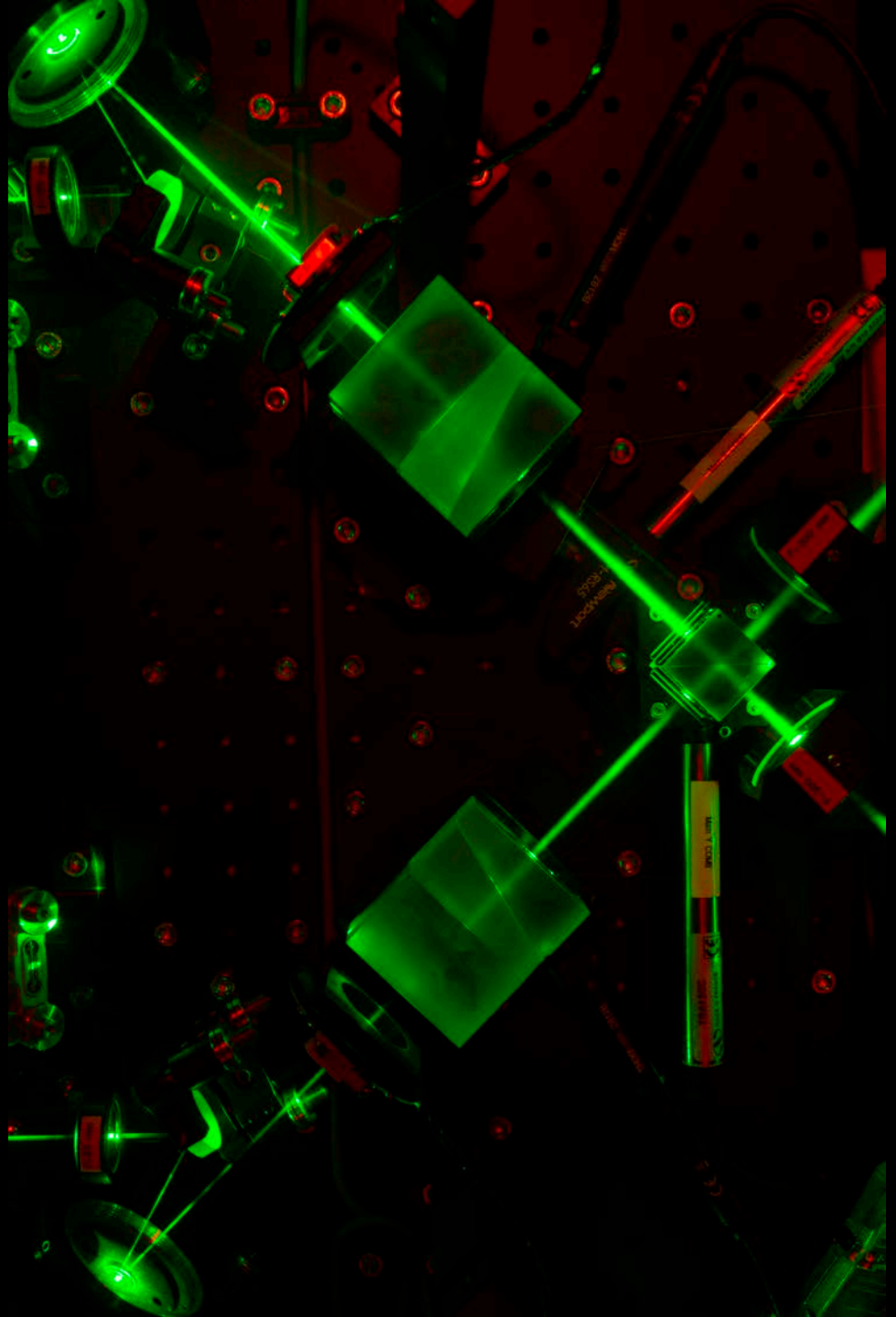
Connecting a stopcock to the bottom of a separatory funnel. – Preston Smith



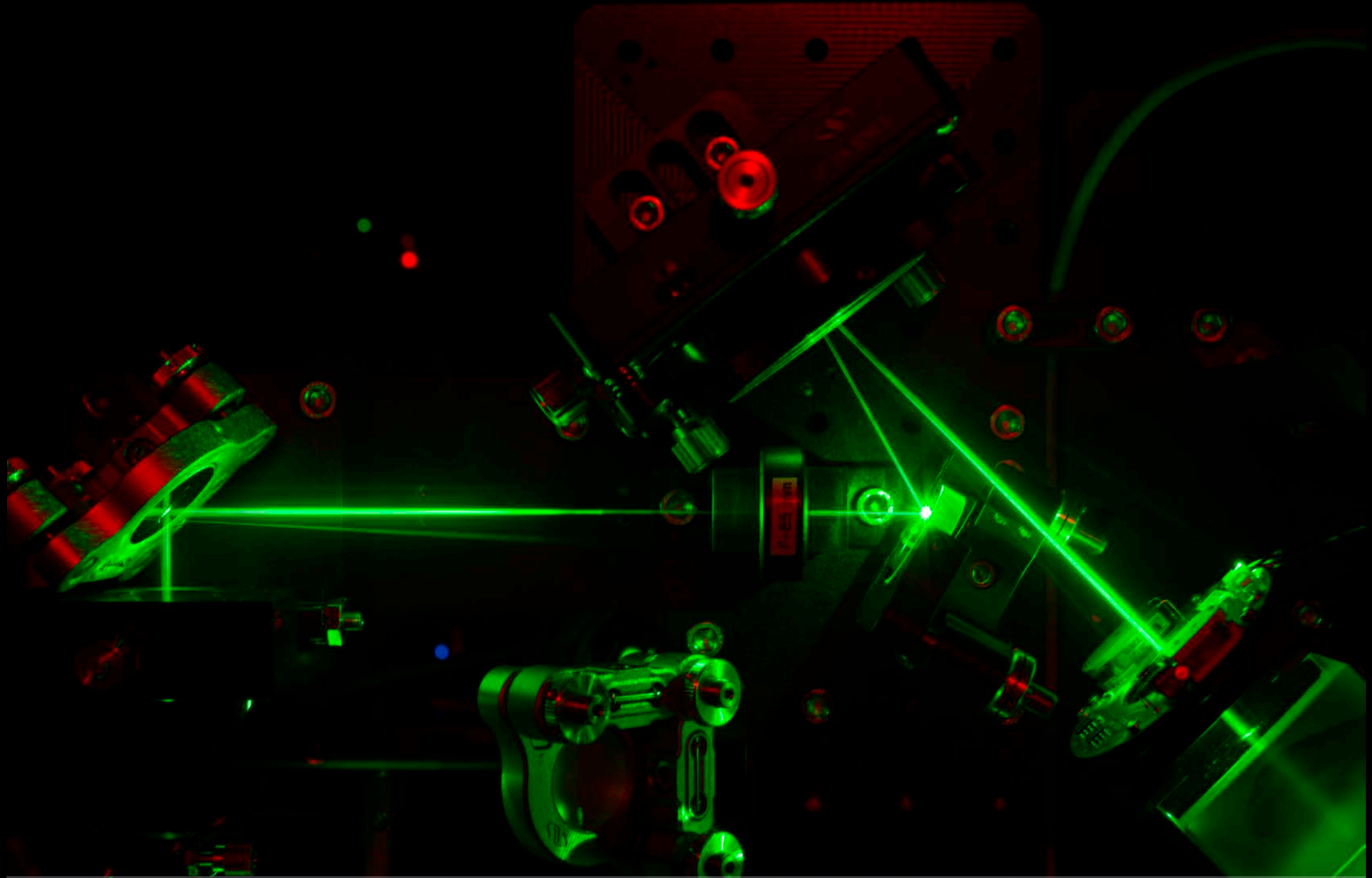
Laser Light 01 – Bewersdorf Lab



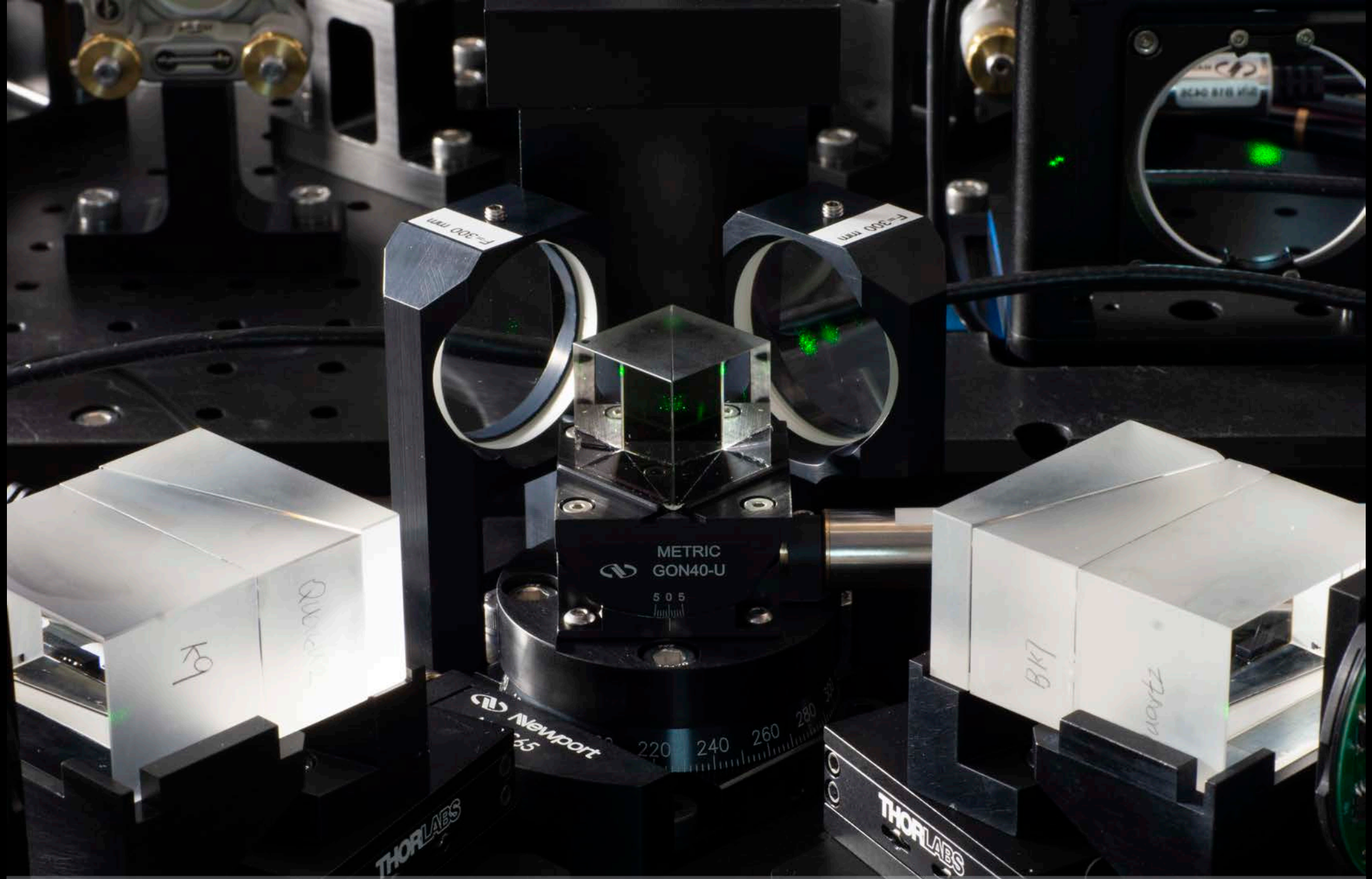
Laser Light 02 – Bewersdorf Lab



4Pi_01 – Bewersdorf Lab



4Pi_02 – Bewersdorf Lab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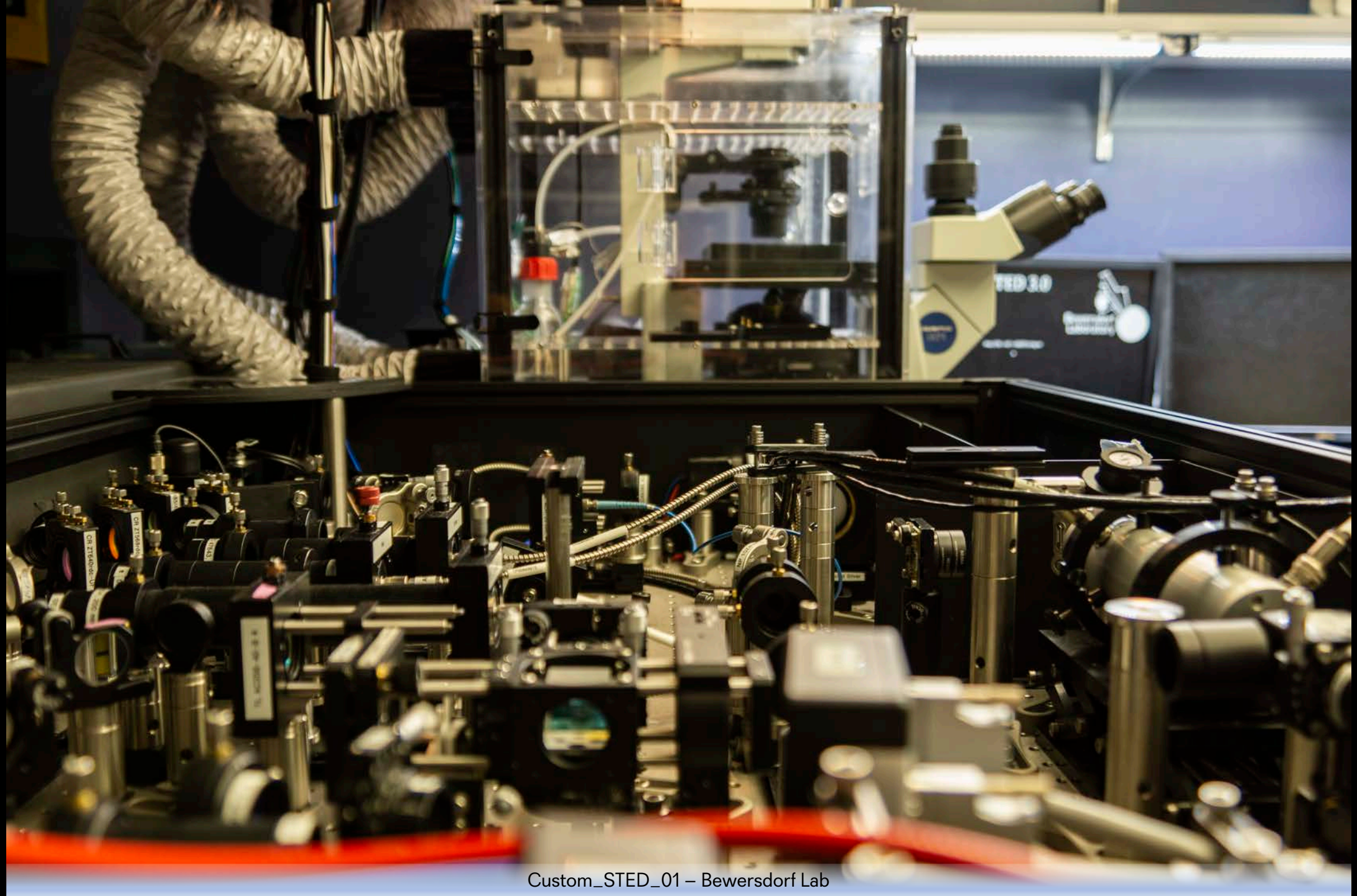
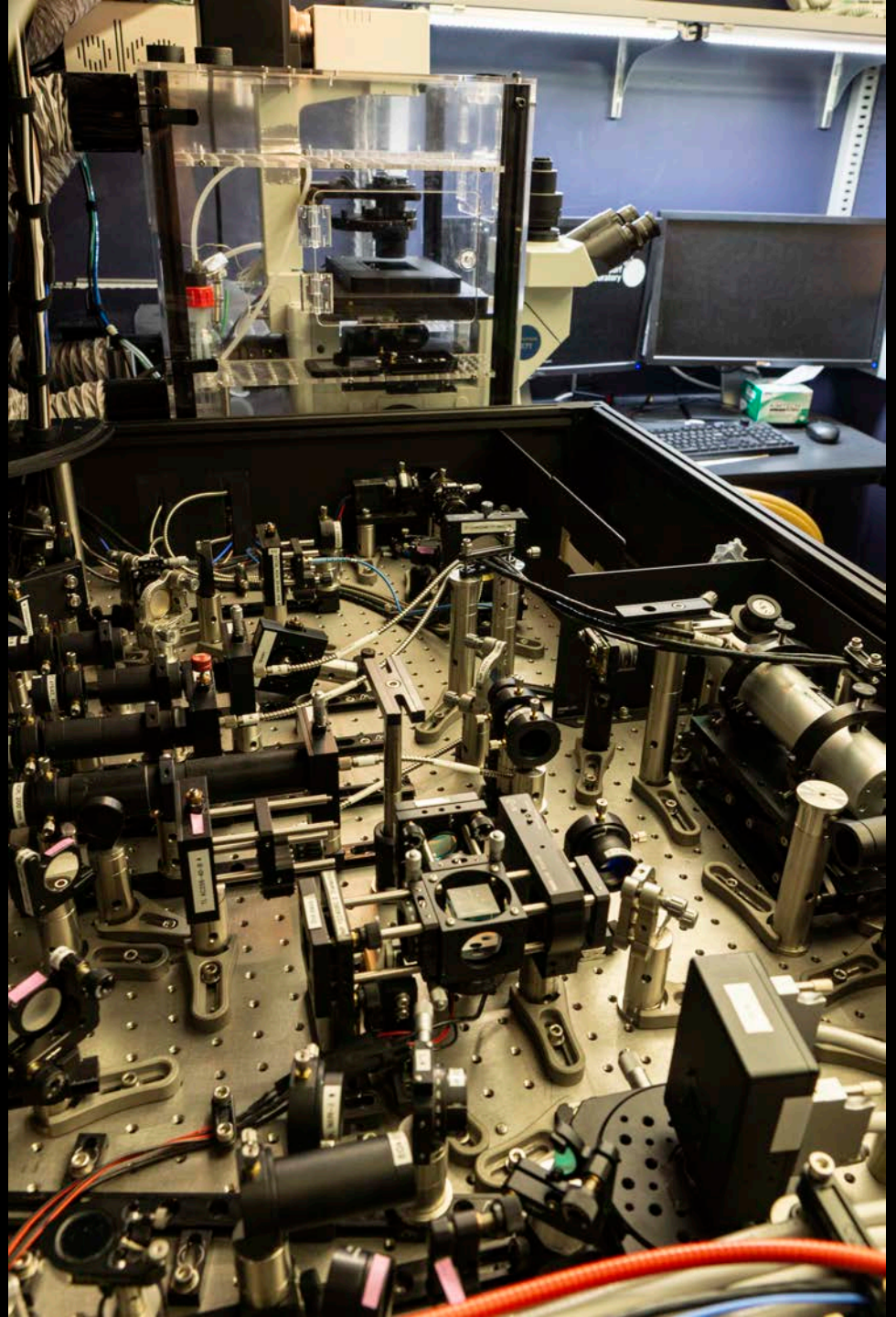
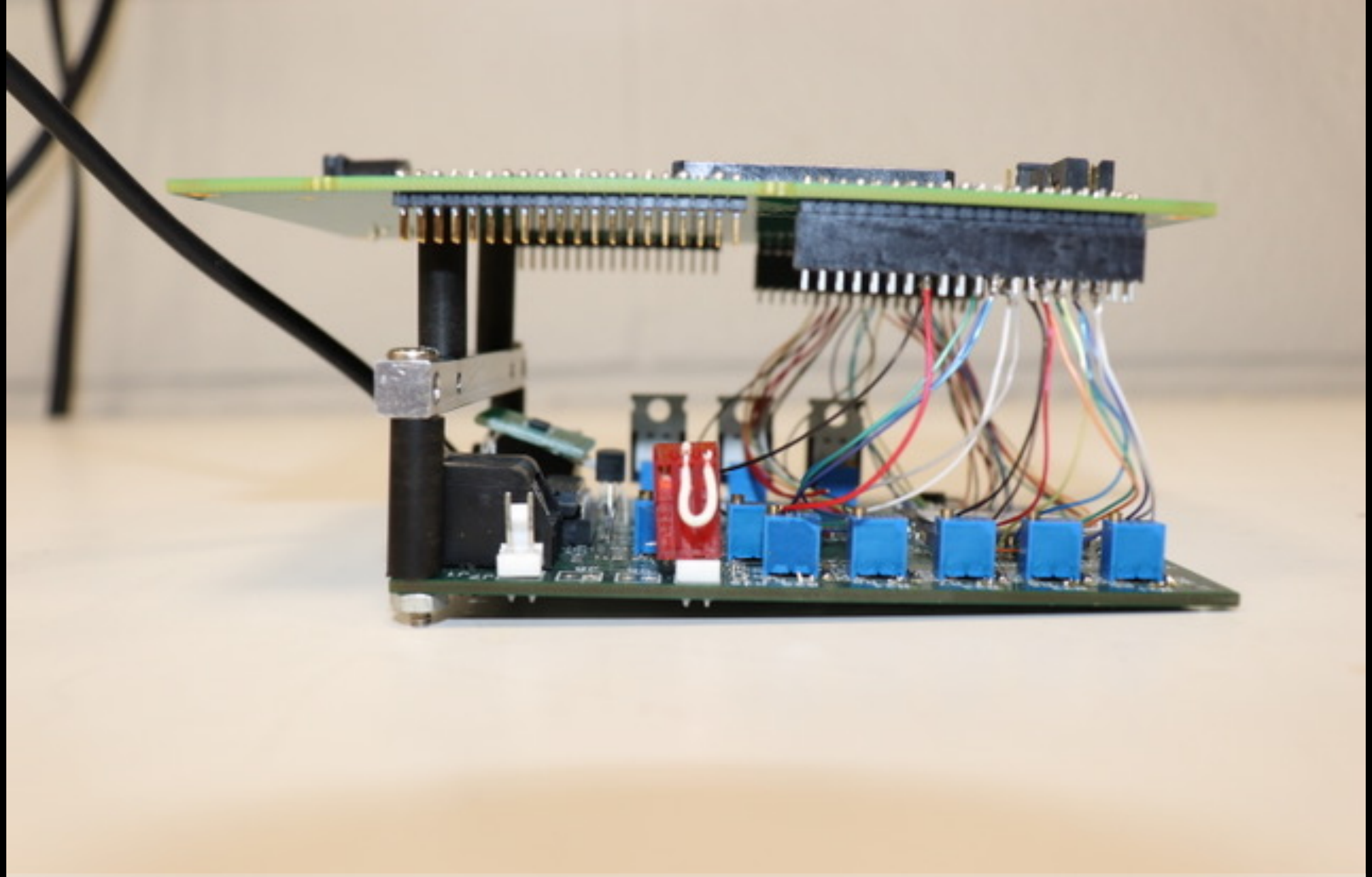


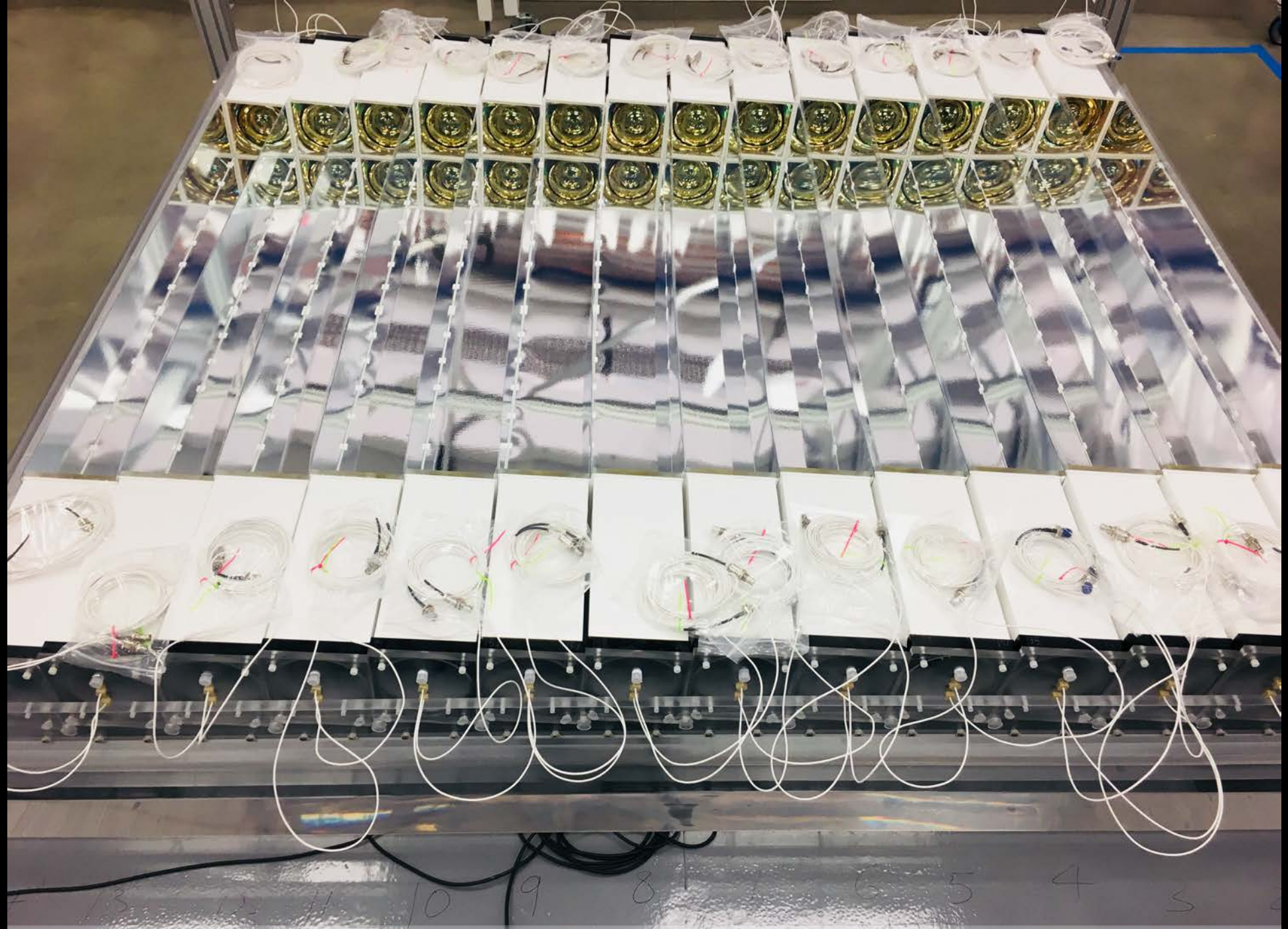
Custom_STED_01 – Bewersdorf Lab



Custom_STED_02 – Bewersdorf Lab

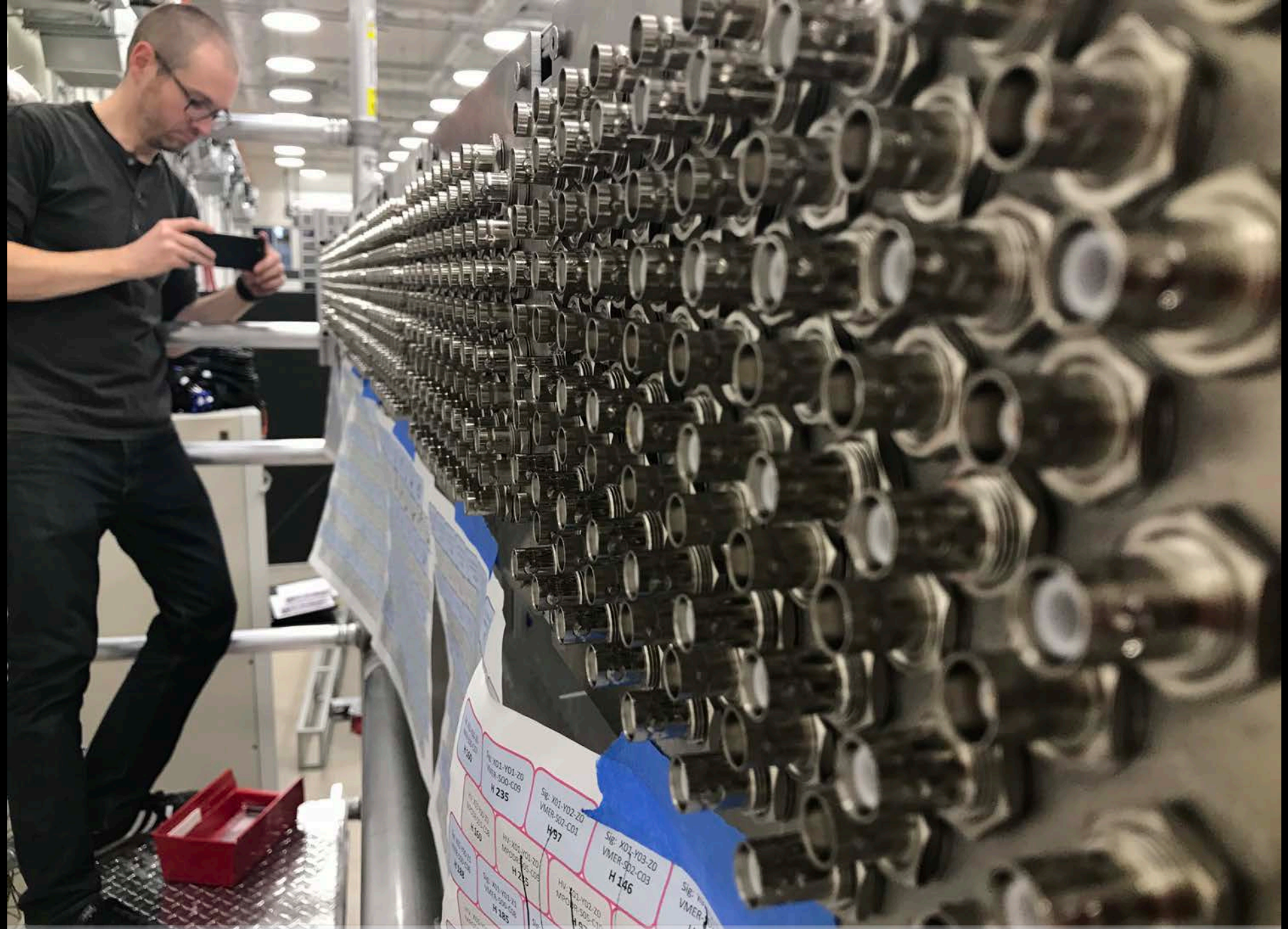


Veni, vidi, photographed: monolithic CMOS silicon sensor with FPGA readout and control - K. Yvonne B.

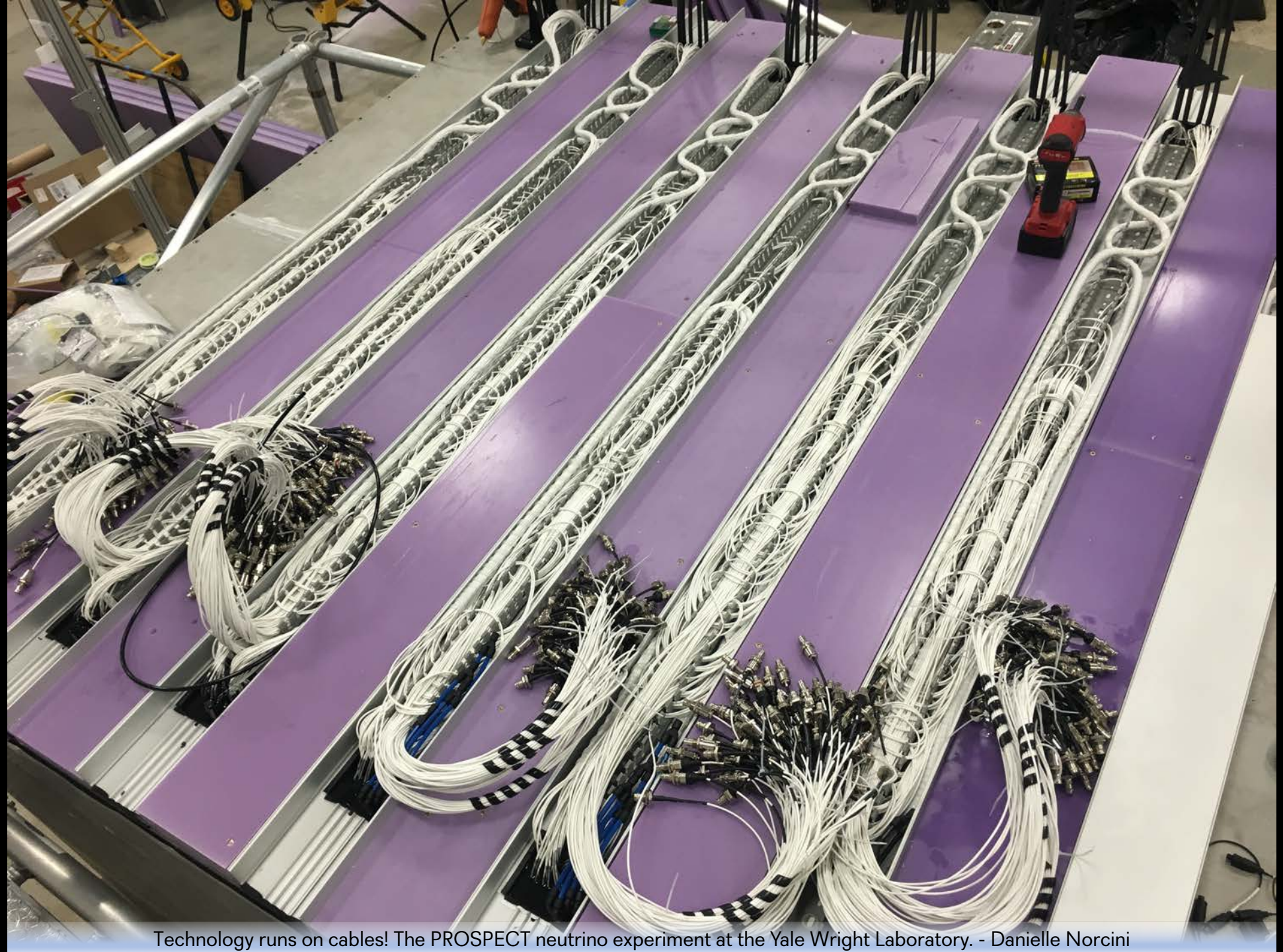


Bird's-eye view of the first layer of the PROSPECT neutrino detector built at the Yale Wright Laboratory. – Danielle Norcini

It takes people to build amazing instruments. The PROSPECT neutrino experiment team at the Yale Wright Laboratory. - Danielle Norcini



Preparing to connect over 600 cables to the PROSPECT reactor antineutrino detector at Wright Laboratory. – Jeremy Gaison

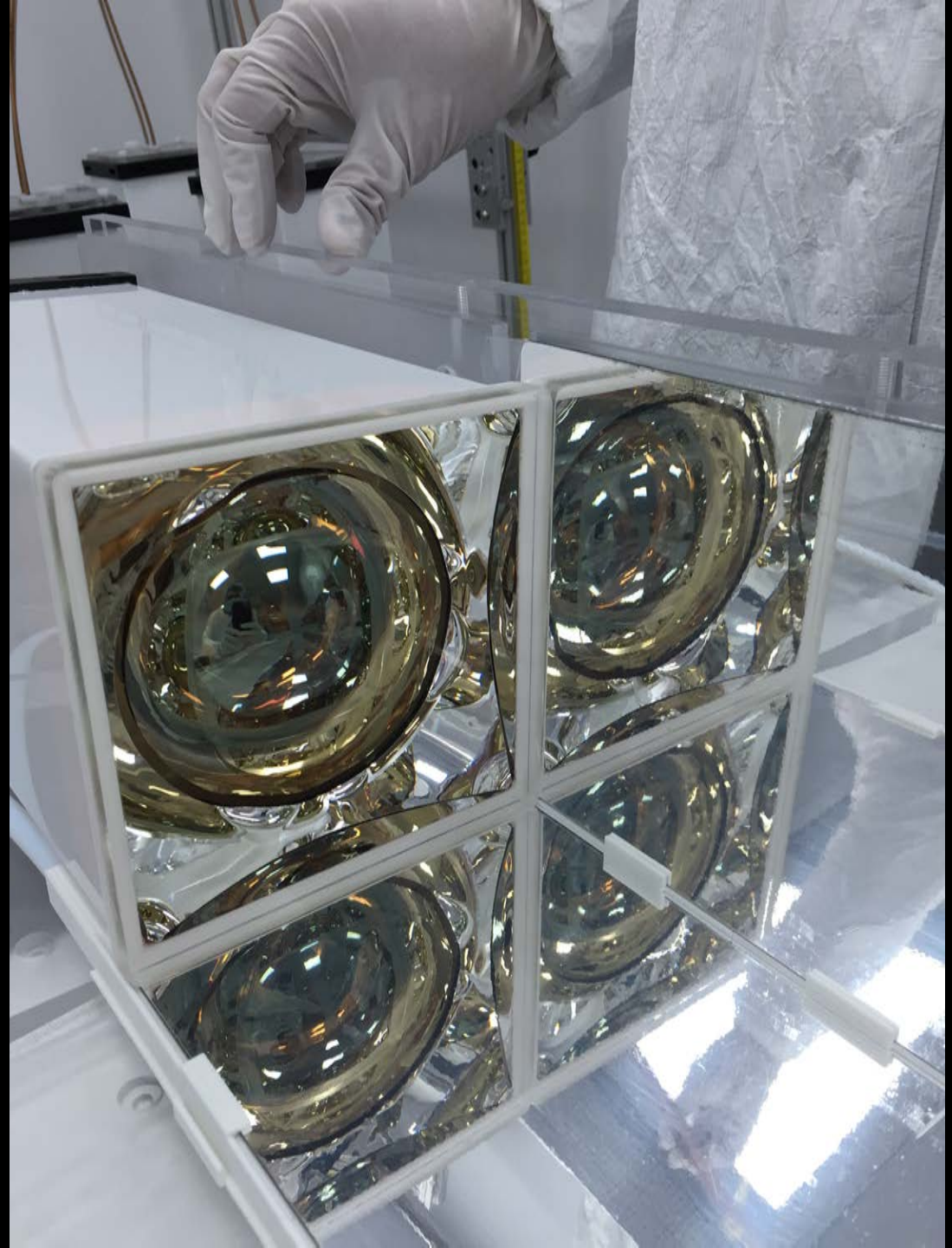


Technology runs on cables! The PROSPECT neutrino experiment at the Yale Wright Laboratory. - Danielle Norcini

Big instruments = big cranes. The PROSPECT neutrino experiment at Yale Wright Laboratory.- Danielle Norcini

The eyes of the PROSPECT neutrino experiment at Yale Wright Laboratory. - Danielle Norcini

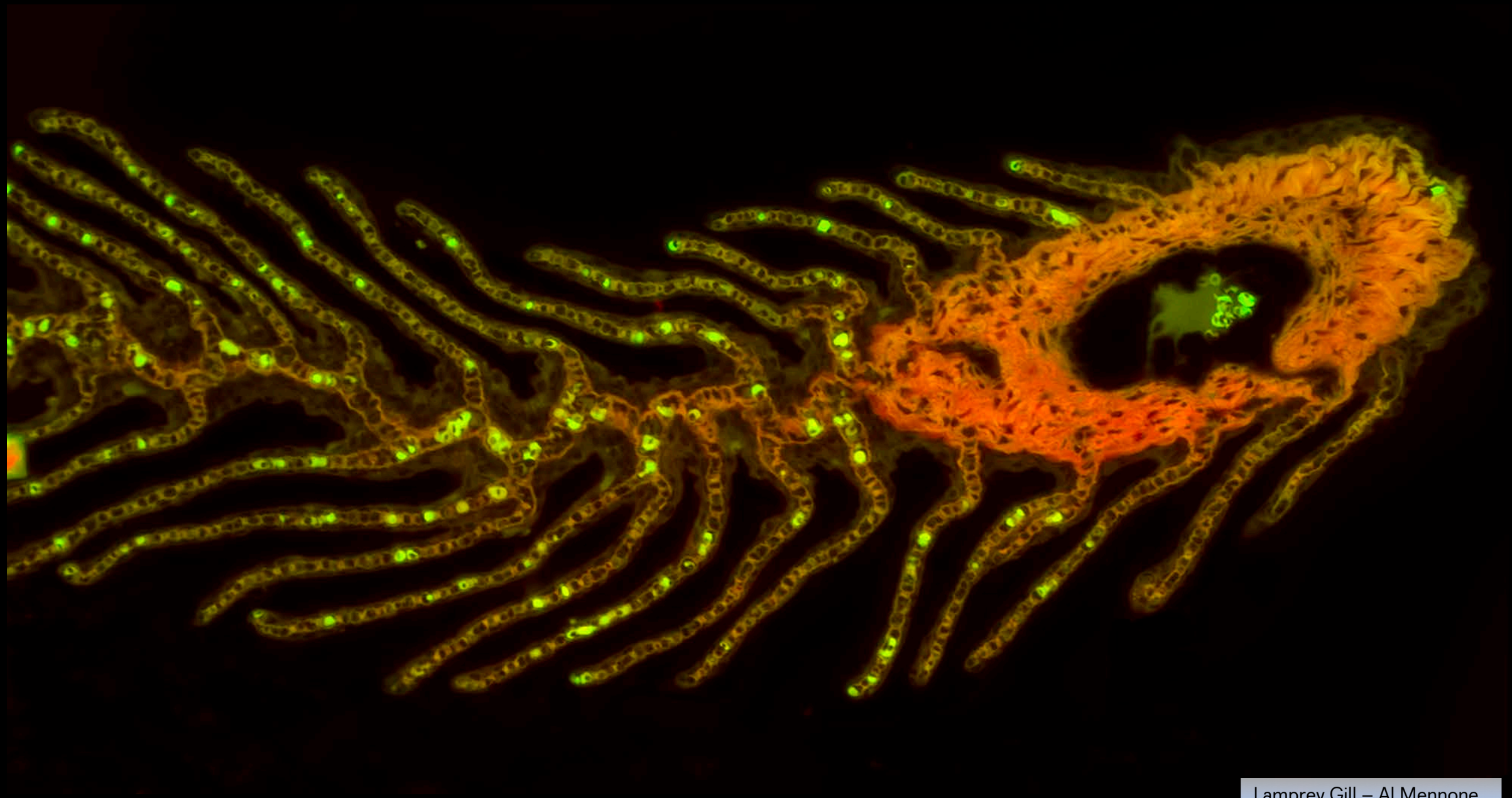
Preparing an optical reflector for the PROSPECT-50 prototype antineutrino detector in a cleanroom in Wright Laboratory.– Jeremy Gaison



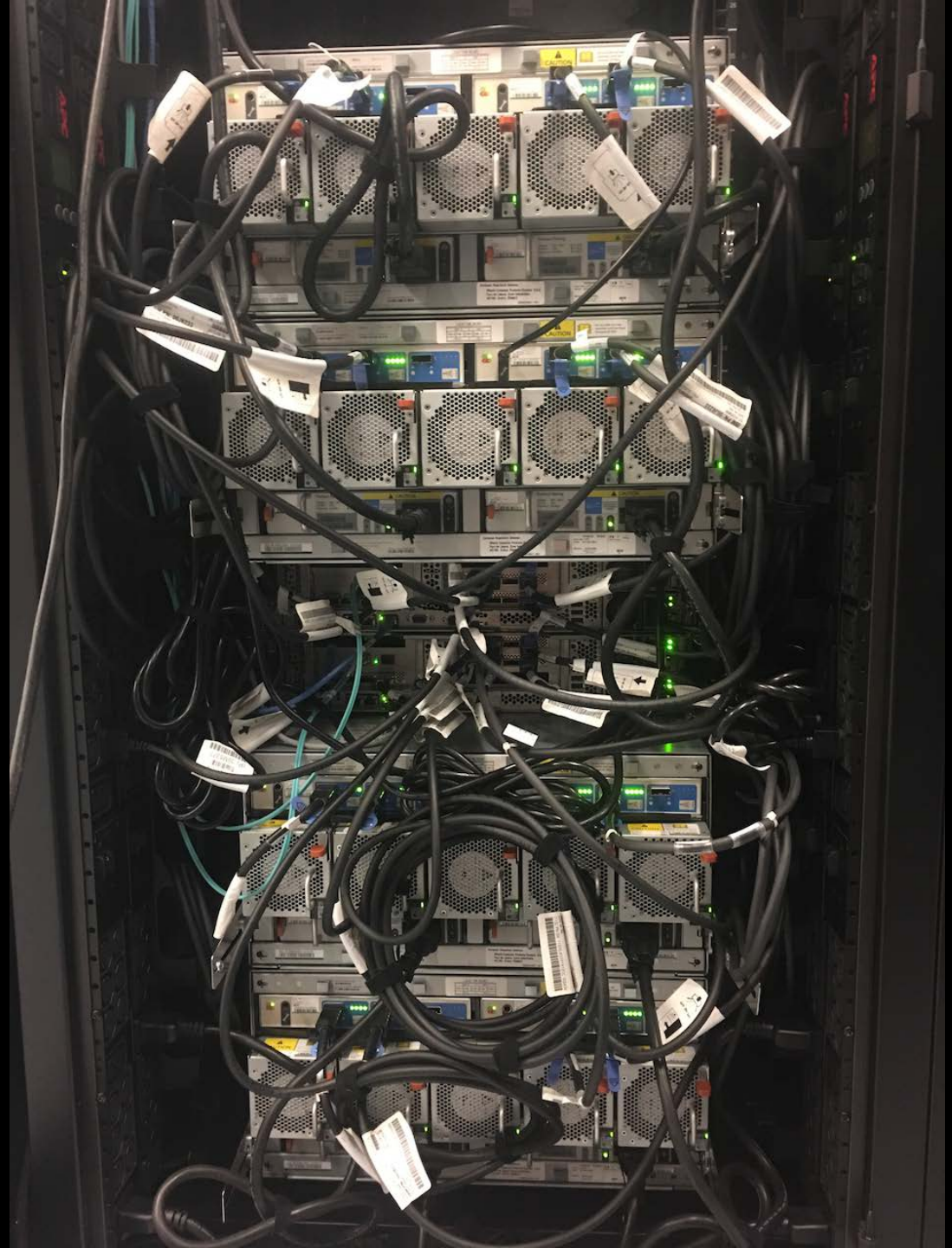
Photomuliplier tube being staged in a highly reflective volume to detect light from charged particle interactions. – Jeremy Gaison

Graduate Student Danielle Norcini and Research Scientist Ke Han coupling a light guide to a photomultiplier tube to increase the light collection of a test detector for the PROSPECT neutrino experiment. - Thomas Langford

Silverberry Scaly Hair – Al Mennone



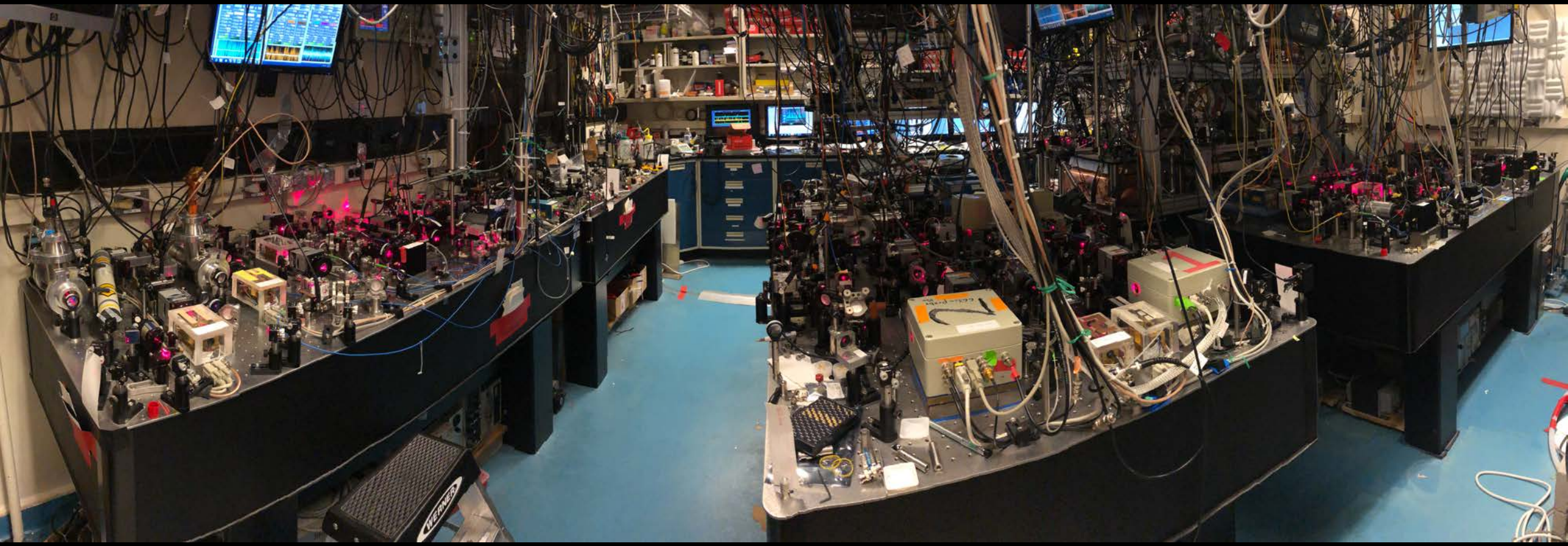
Lamprey Gill – Al Mennone



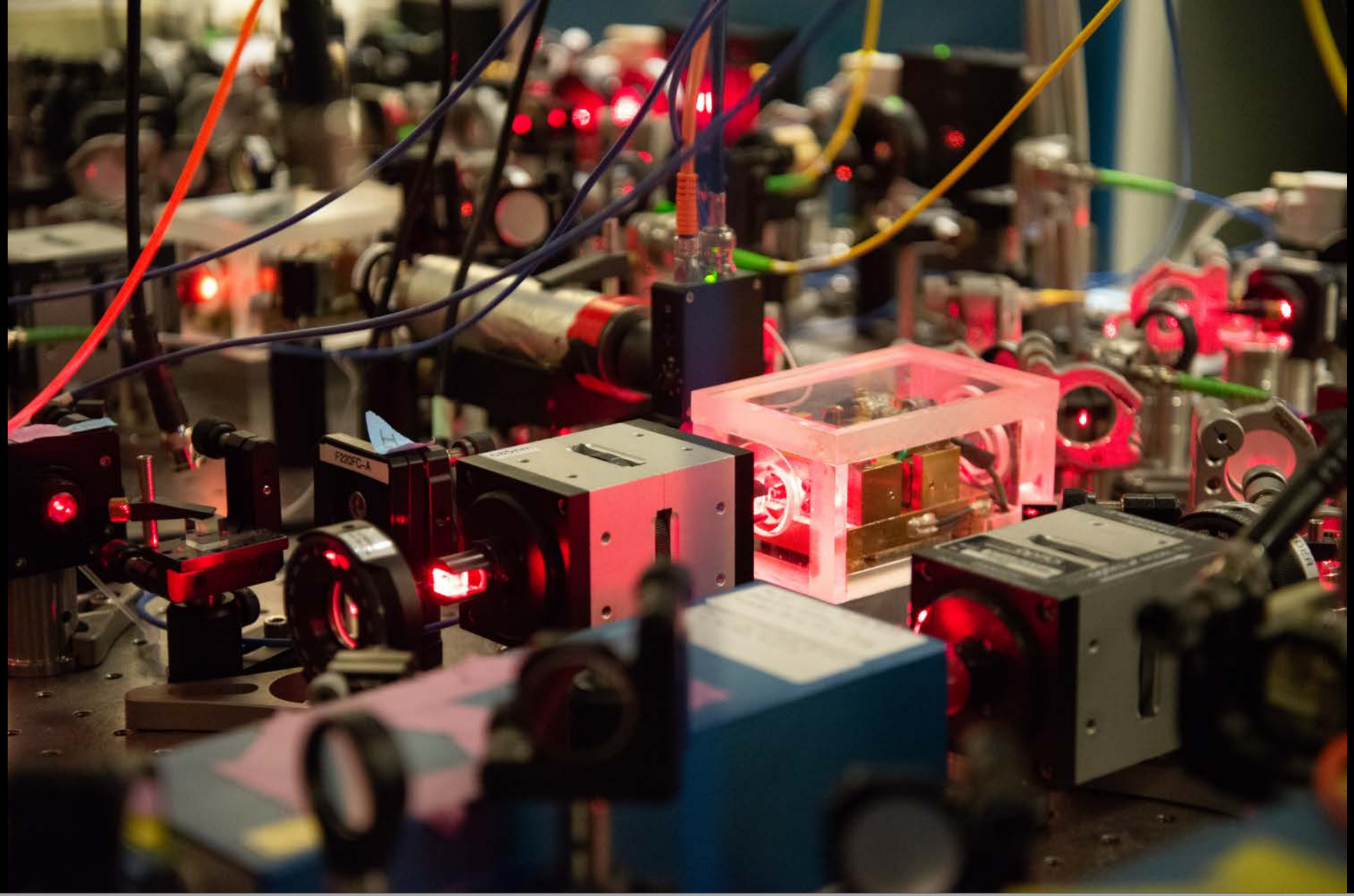
This is the back side of the cabling for our High Performance Computing backup solution. The machines in the middle attach to boxes holding hundreds of hard drives, which in turn hold our backups. The front of the rack is very clean looking; we hide the details in the back of the rack. - David Backeberg

This is the same High Performance Computing backup solution. We have a clean-looking front side of the solution, with blinking green lights indicating levels of activity.
- David Backeberg

Installation of a high-voltage divider board on the SBND field cage module. - Domenico Franco for SBND collaboration



Apparatus for laser cooling and trapping of molecules. Twelve tunable lasers are frequency stabilized to ~1 part per billion and used to slow, cool, trap, and image molecules at temperatures as low as 50 millionths of a degree above absolute zero, inside a vacuum chamber maintained at less than one trillionth of atmospheric pressure. Six additional injection-seeded lasers and four tapered amplifiers provide the high laser power required, and a multitude of optical elements and cables provide the precise alignment and frequency control needed to successfully cool and trap molecules. - Matthew Steinecker



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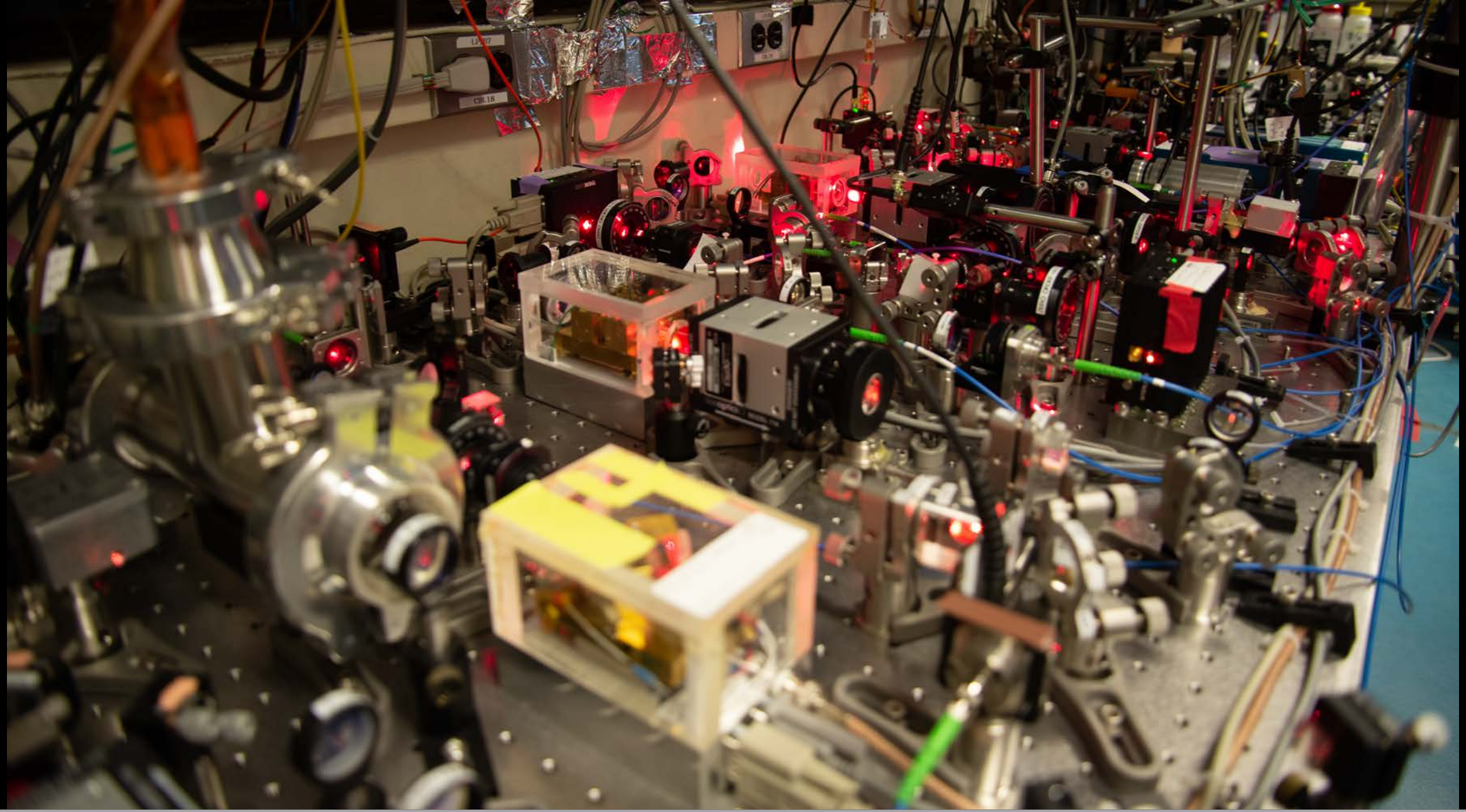

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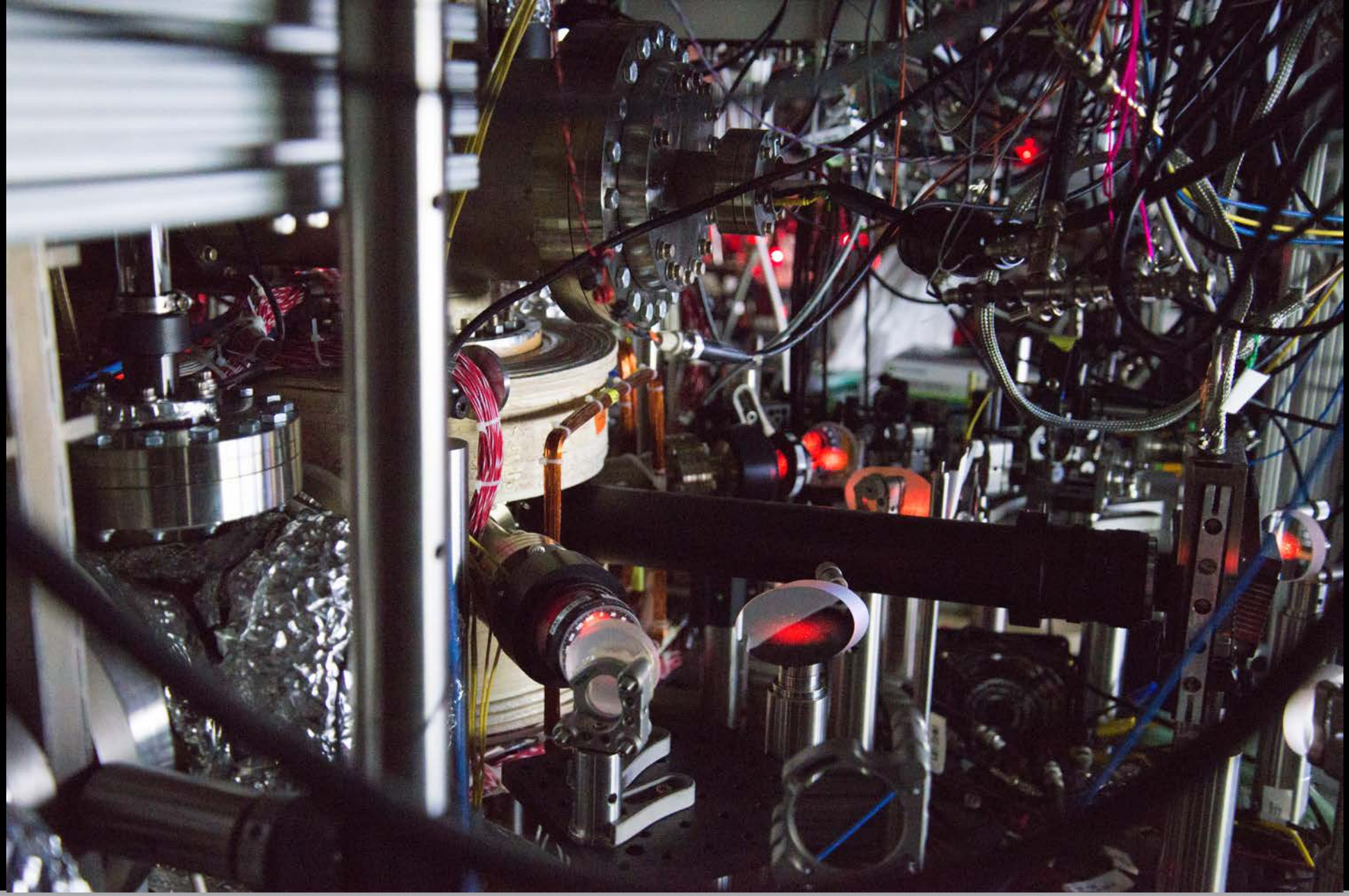

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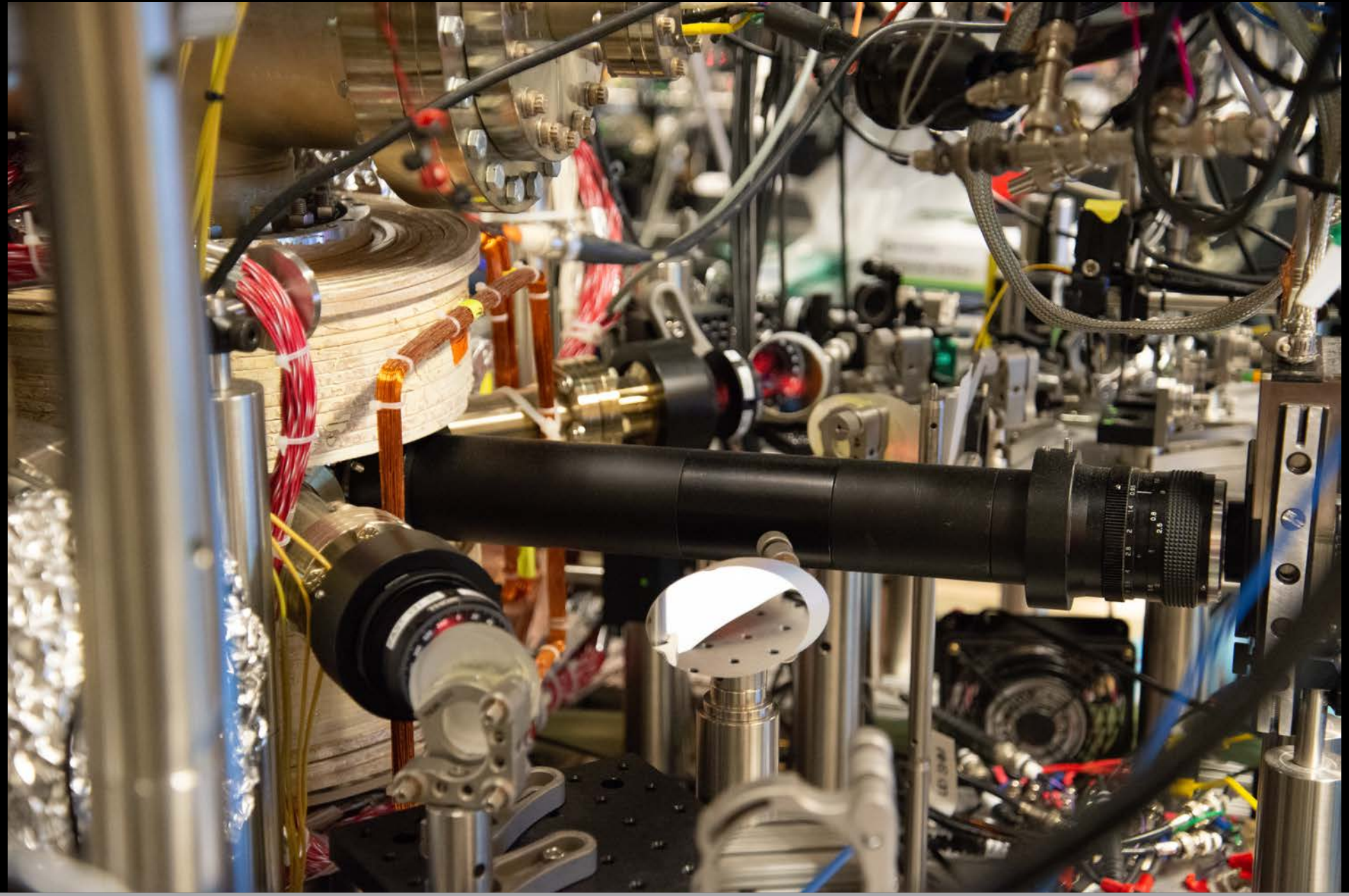

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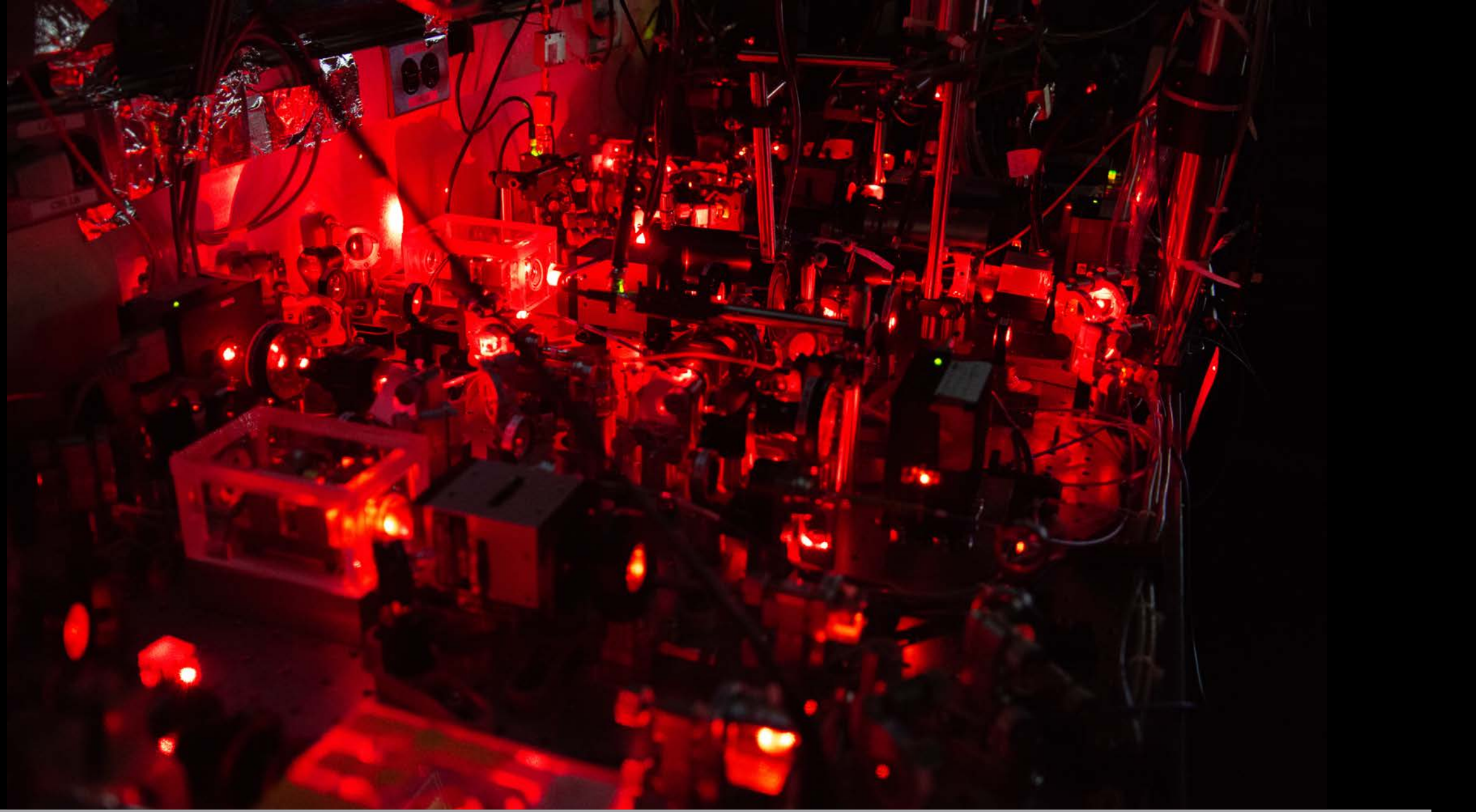

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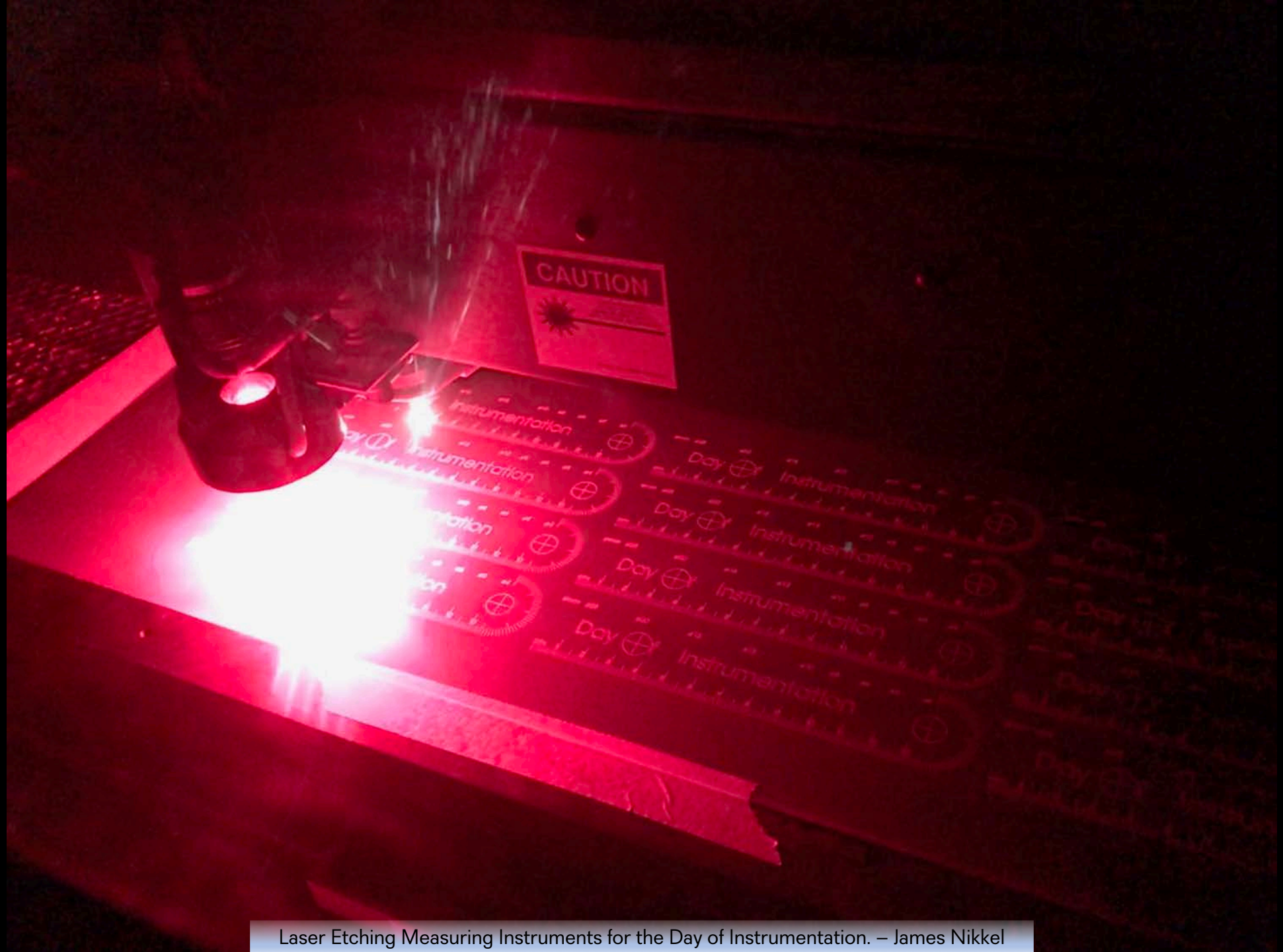
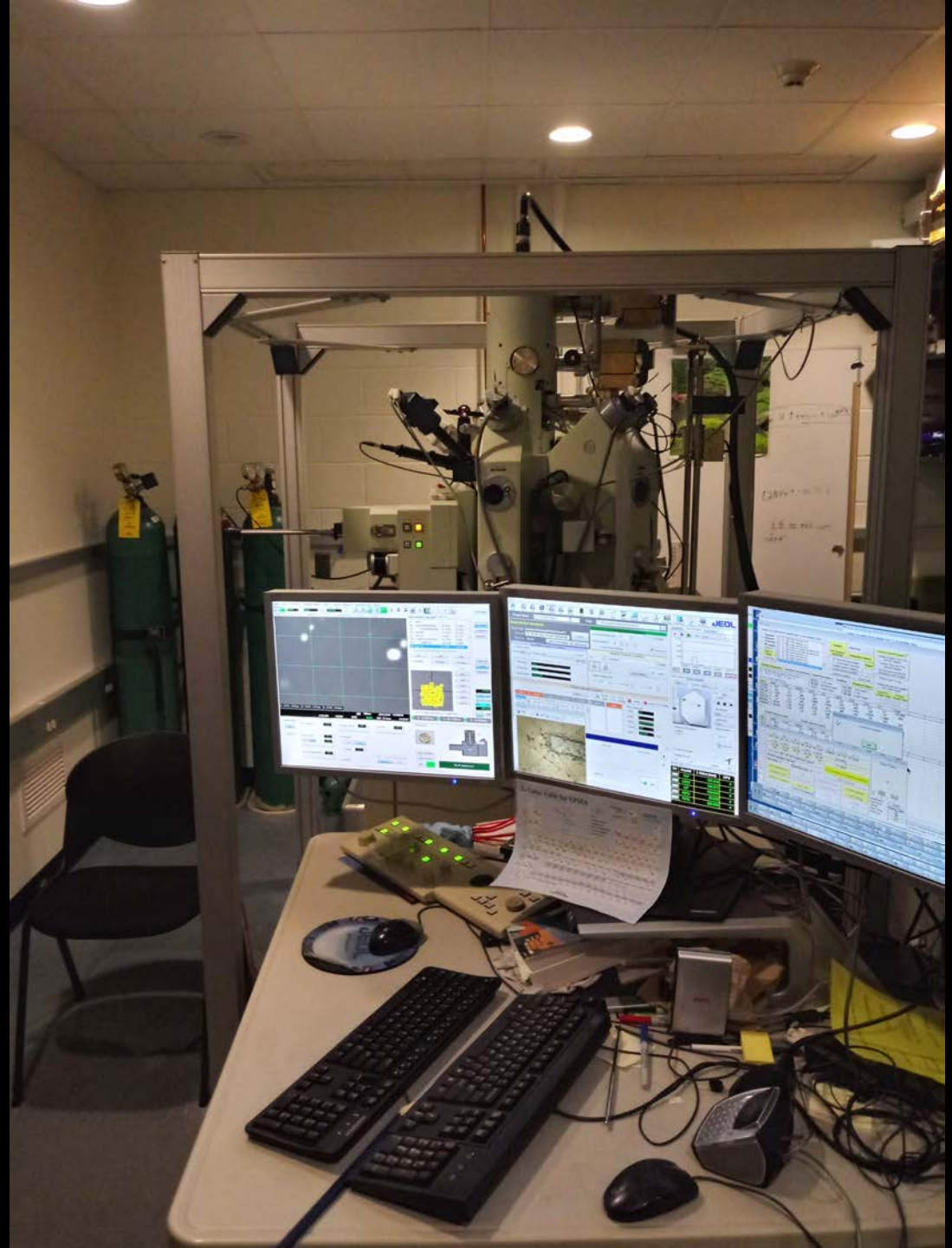
Detail of wire anode wire plane of the SBND's Time Projection Chamber. - SBND Collaboration

Yale graduate student Tong Liu (in blue helmet) working with other faculty and students on the STAR FMS removal. - Stephen Trentalange

Yale graduate student Tong Liu (lower left) working with another student on unstacking the FMS detector at STAR. – Noah Strand, Valparaiso University



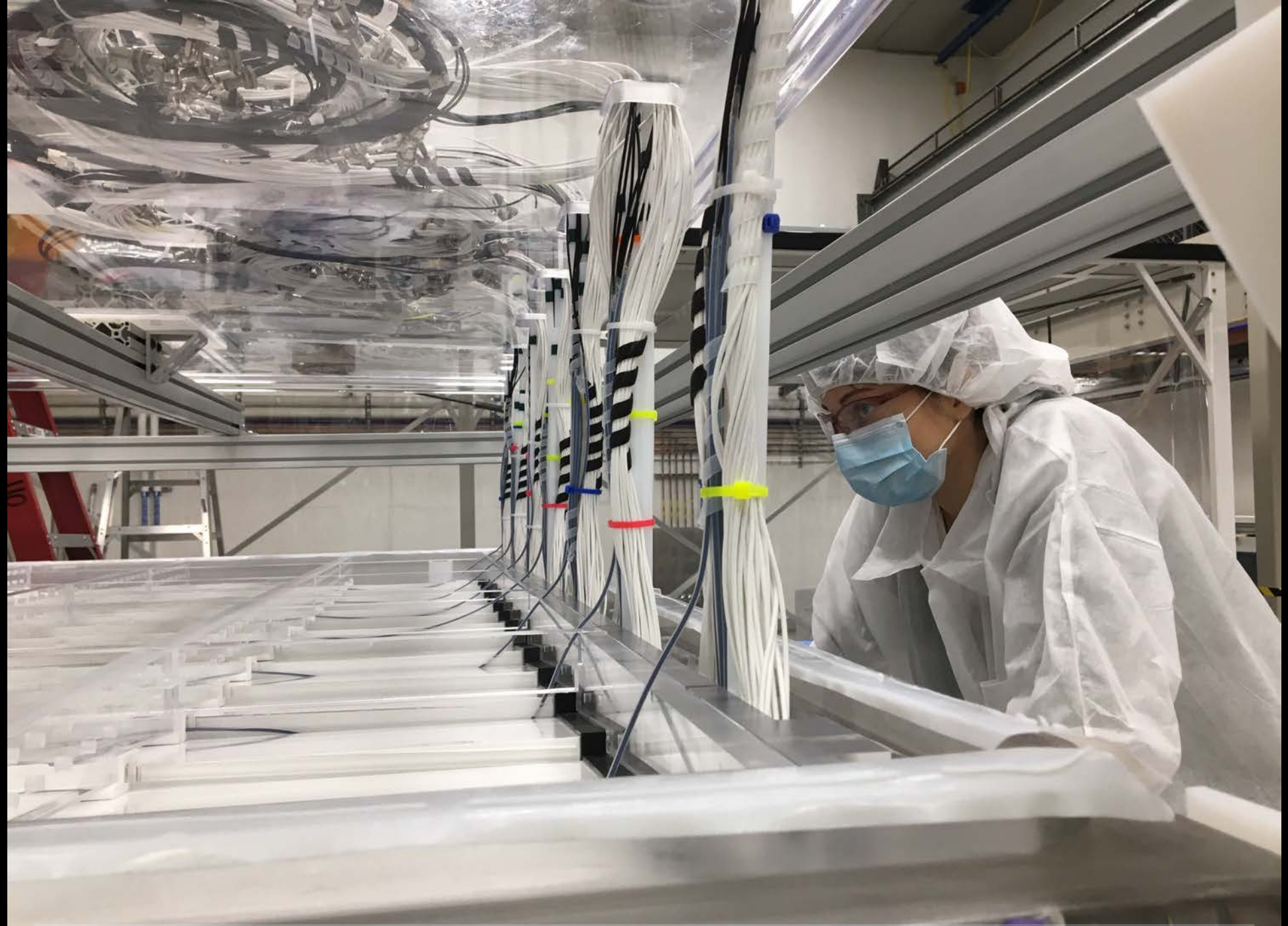
Laser Etching Measuring Instruments for the Day of Instrumentation. – James Nikkel



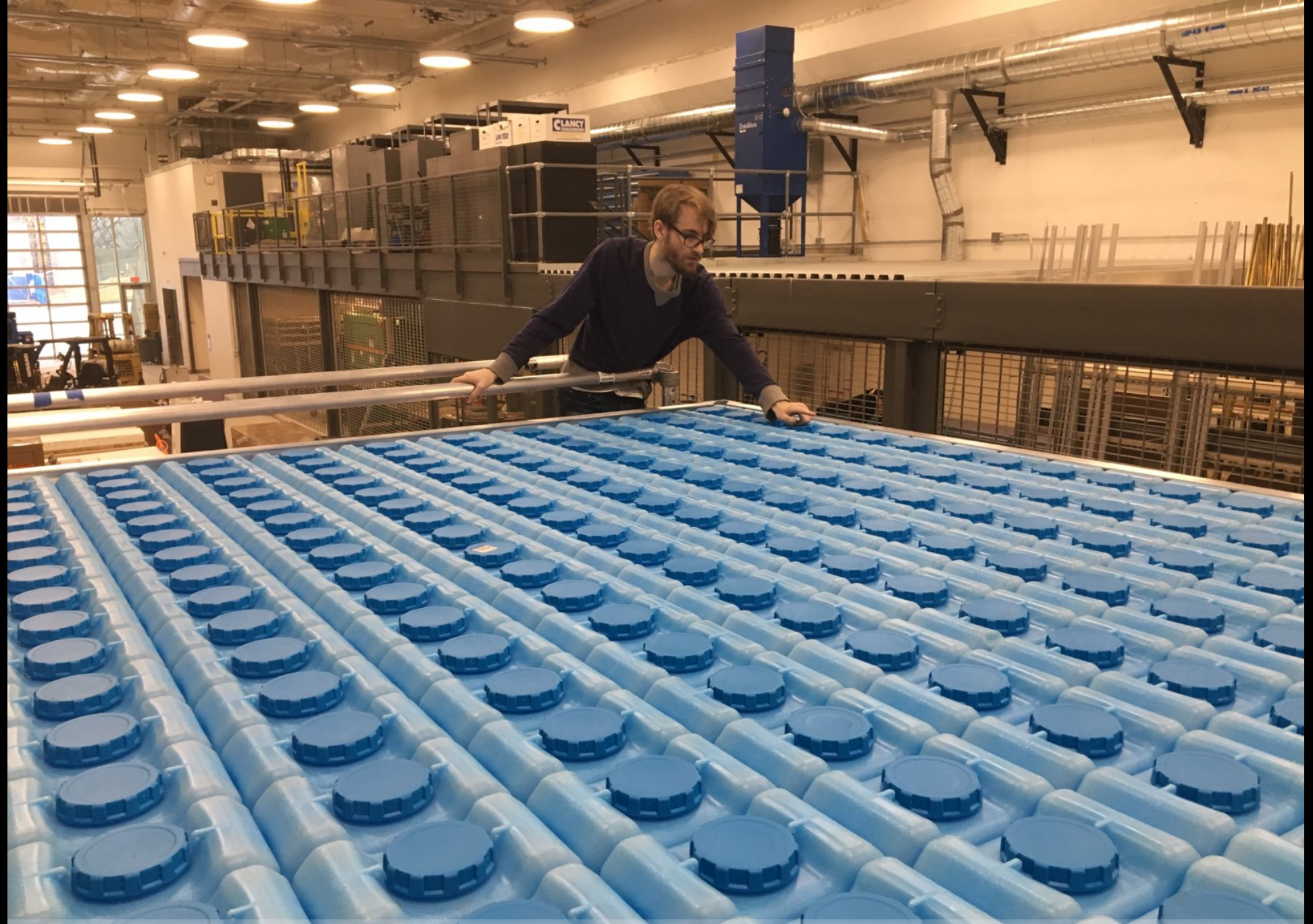
The JEOL 8530 Field Emission Gun (FEG) Electron Microprobe in the Department of Geology & Geophysics - James O. Eckert, Jr.

An image of the Dumbbell Nebula - the remains of a dead star 1,360 light years away in the constellation of Vulpecula. This was taken with the Yale Leitner Family Observatory's 11" Cassegrain telescope during the Yale Summer Program in Astrophysics by TA Nathaniel Kerman.

PROSPECT team assembling their antineutrino detector in one of Wright Laboratory's moveable clean rooms. – Frank Lopez



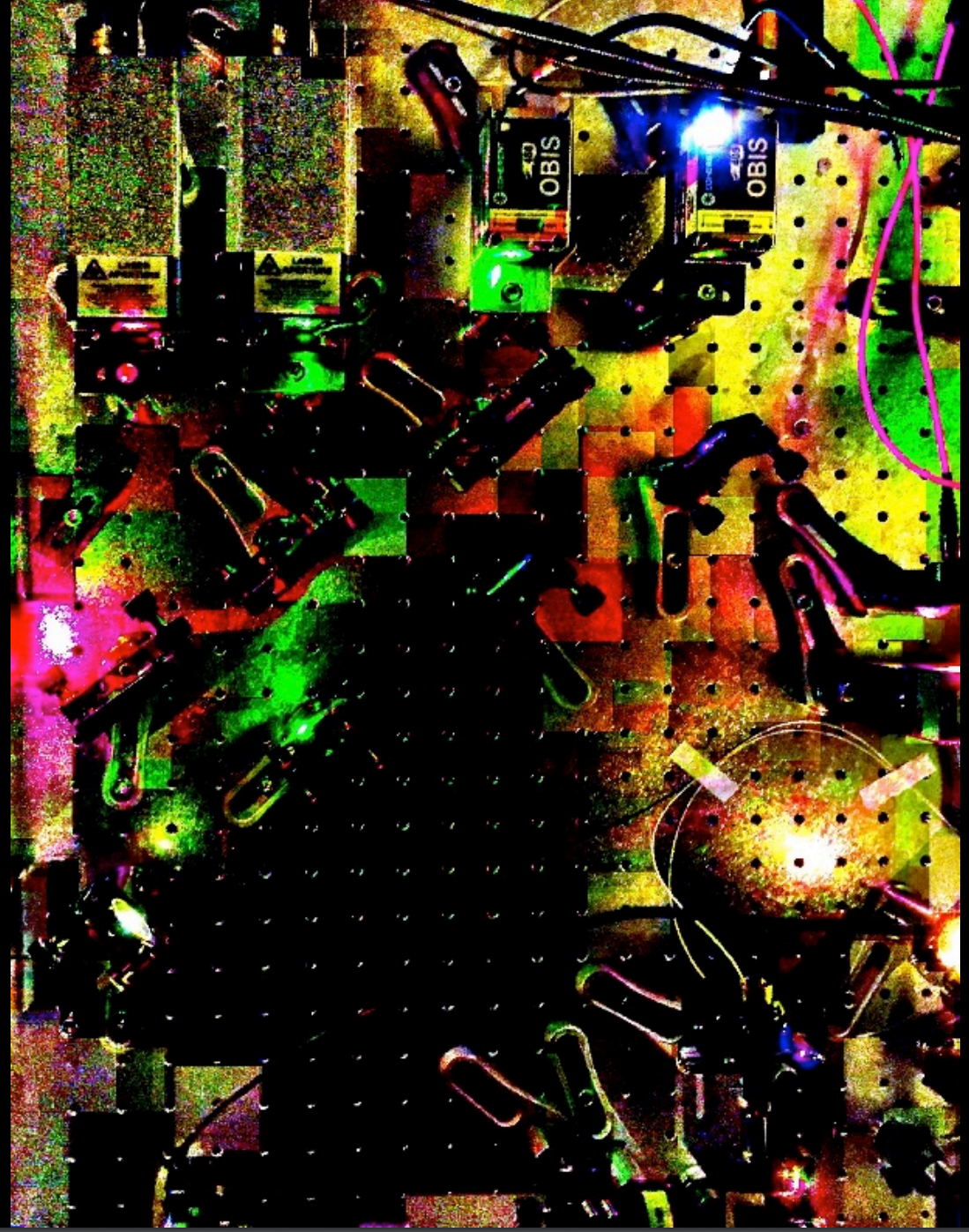
PROSPECT researcher, Danielle Norcini, carefully monitors the placement of the acrylic lid on their antineutrino detector. – Frank Lopez



Researcher, Benjamin Foust, working on the water-brick shielding layer atop the PROSPECT antineutrino detector.
Much of the assembly was done in the Wright Laboratory high bay space, otherwise known as "the Vault".– Frank Lopez

Polynoidae (scale worm) from Alaska, 2017. - Lourdes Rojas

An artisanal calibration system. - Arina B. Telles



#nofilter - Equipment pictured is owned by the Bewersdorf lab, imaged using JotNot app with the "whiteboard" filter. - A. E.S. Barentine

Black and White: Equipment pictured is owned by the Bewersdorf lab, imaged using JotNot app with the black and white filter.- A. E.S. Barentine

HAYSTAC – Reina Maruyama and Steve Lamoreaux

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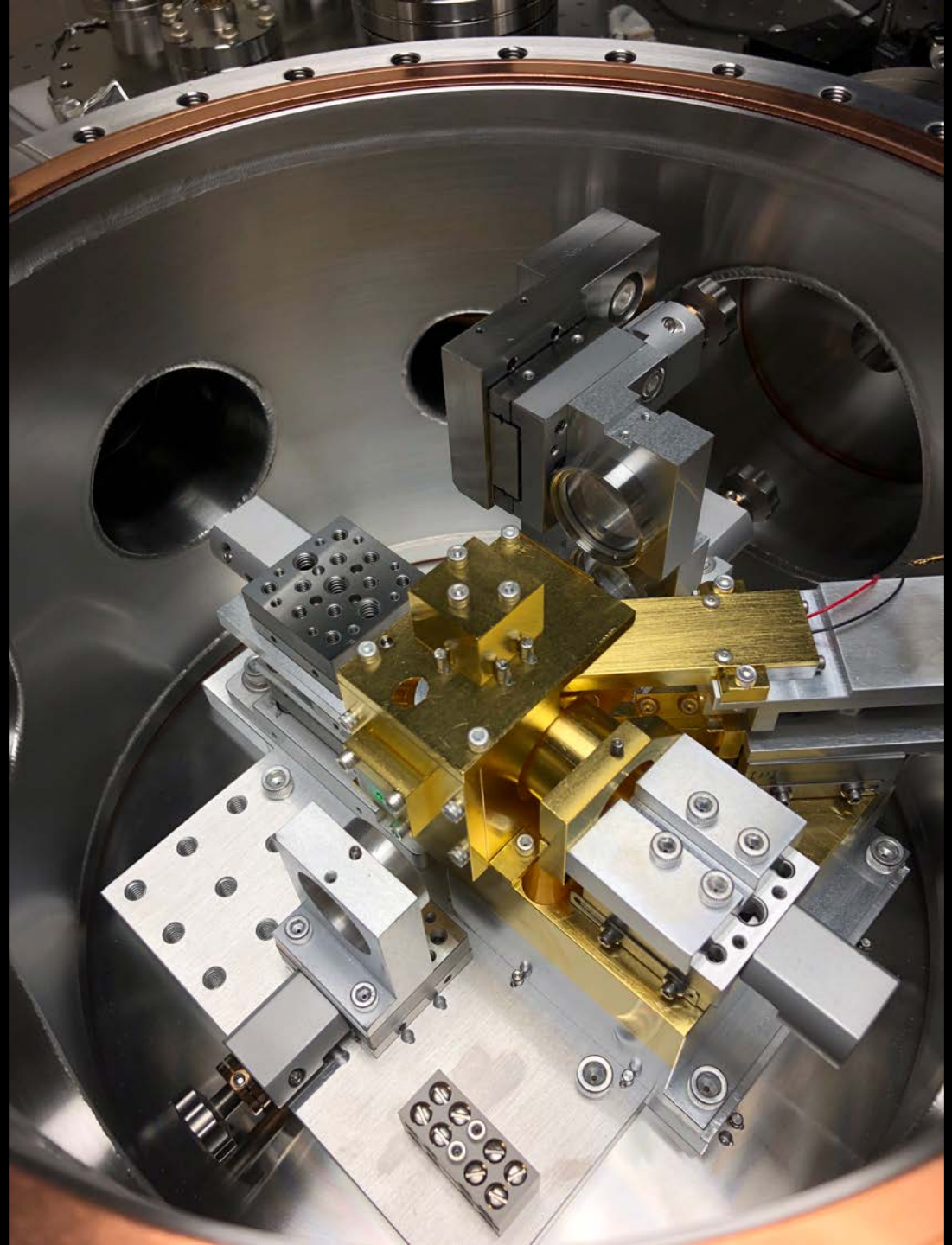
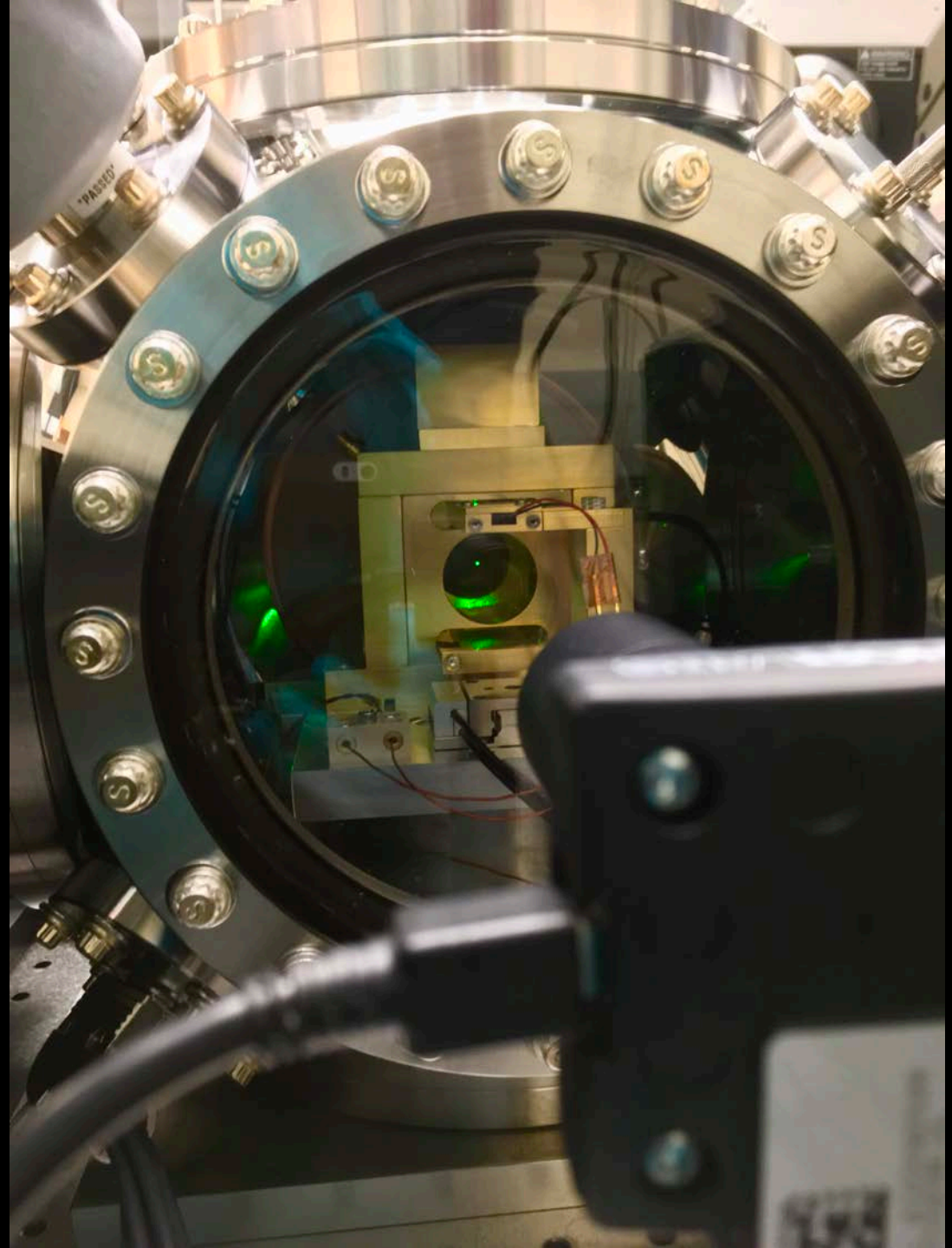
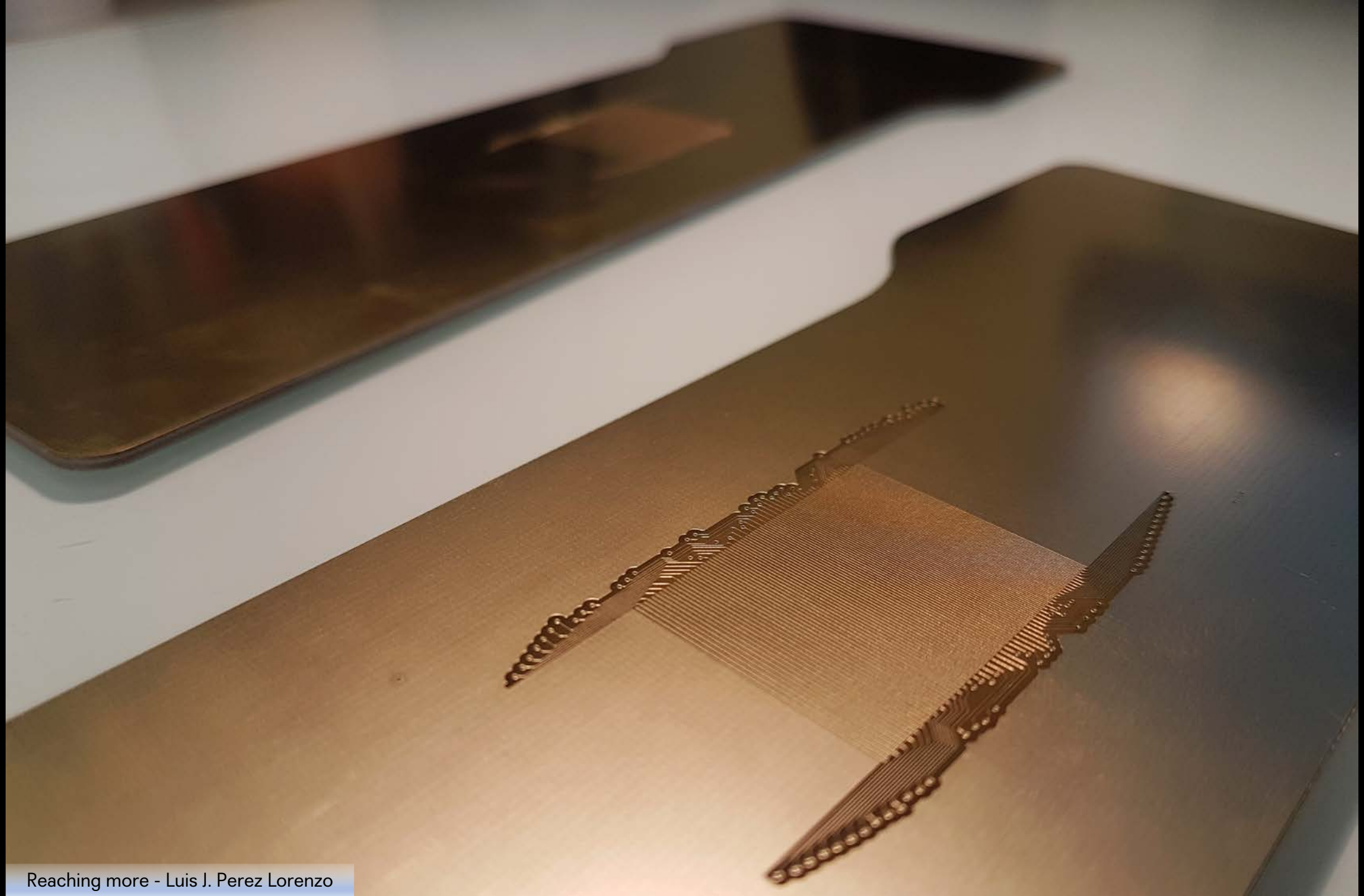


Assembly of a shiny new optical trapping setup- Fernando Henrique Do Rego Monteiro



A trapped sphere in the optical setup shines from the light in the imaging beam. - Fernando Henrique Do Rego Monteiro

Don't worry, we balance the tubes when it's on. – Sumita Ghosh



Reaching more - Luis J. Perez Lorenzo

Yale Liquid Xenon Purity Monitor – Ako Jamil