



Jefferson Lab

JSA



U.S. DEPARTMENT OF
ENERGY

Workplace Safety in Hybrid Federal Laboratories

Presented to the National Academies of Sciences, Engineering, and Medicine

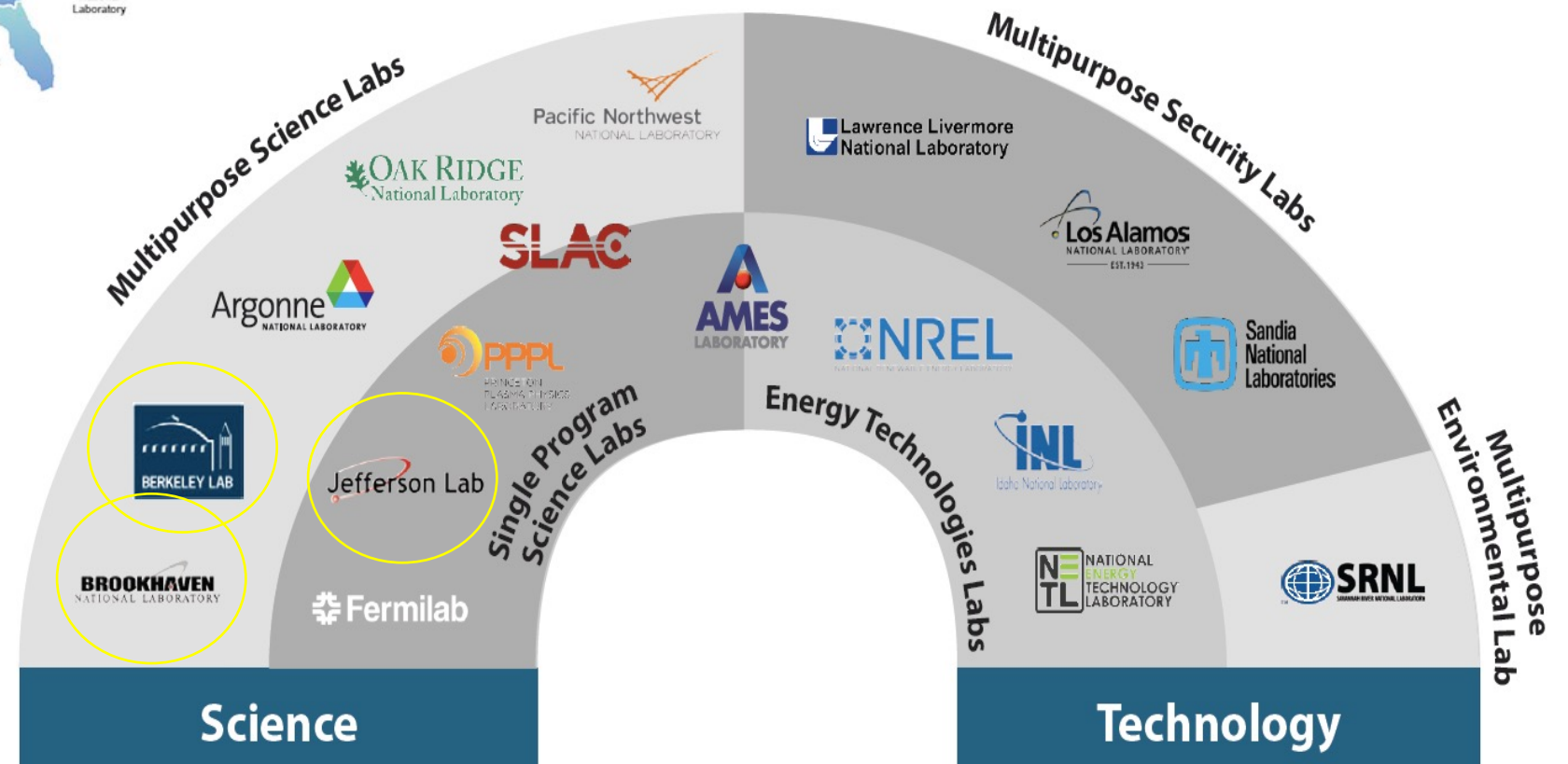
Dr. Johnathon Huff, Chief Operating Officer

August 15, 2023

Agenda

- National Laboratories Overview
- Jefferson Lab Overview
- COVID-19 and the New Normal
- New Normal at Jefferson Lab
- Opportunities in the New Normal
- Summary

U.S. Department of Energy National Laboratories



Jefferson Lab Overview

Jefferson Lab is one of the Department of Energy's 10 Office of Science Laboratories

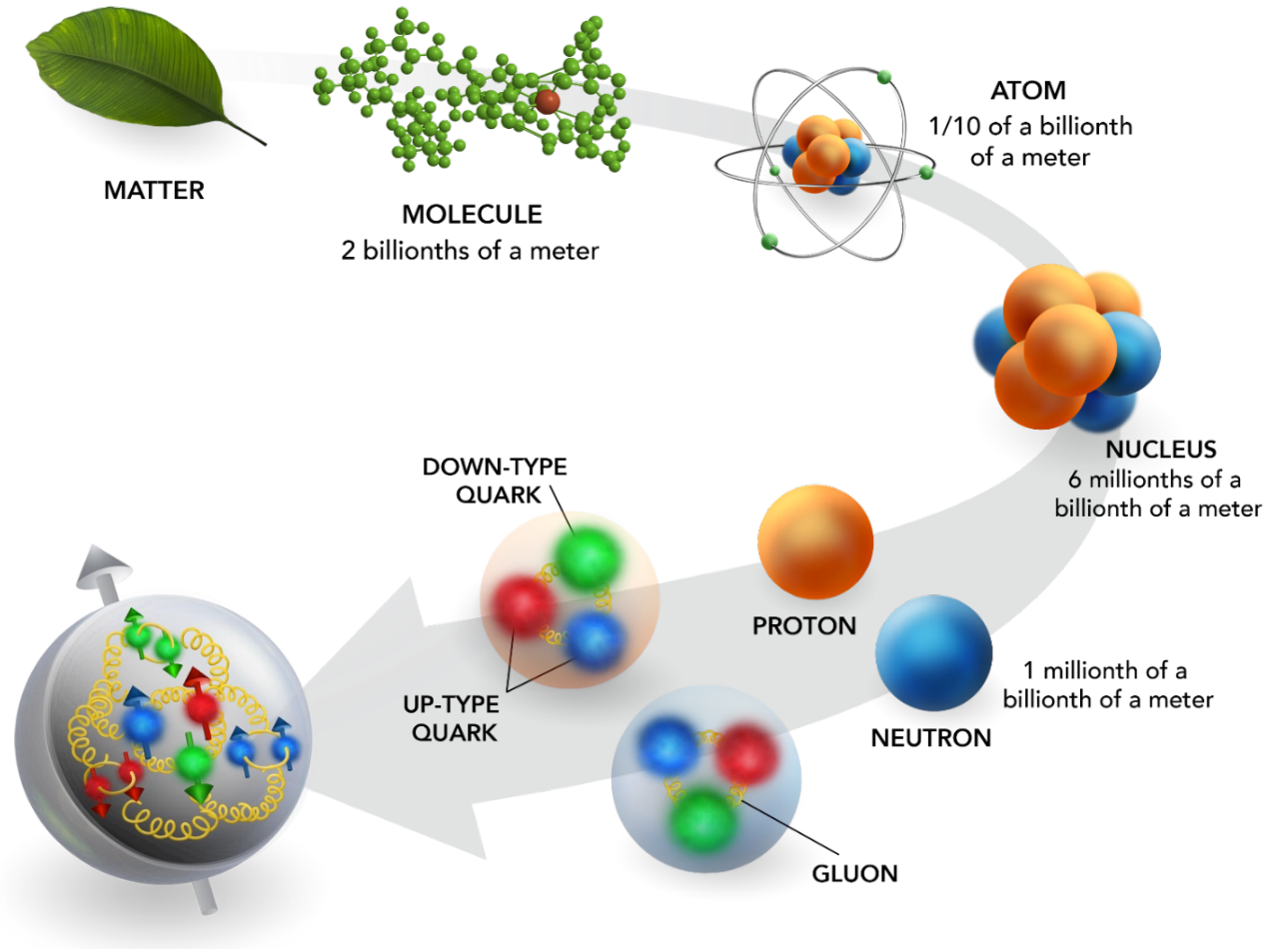
- Created in the 1980s to build and operate the Continuous Electron Beam Accelerator Facility (CEBAF), a world-unique scientific user facility used by more than 1,800 scientists from around the world.
- Our mission is to explore the fundamental science of protons, neutrons and atomic nuclei using CEBAF, theory and supercomputing.



We Explore Matter at the Most Fundamental Level

We seek answers to fundamental questions:

- Why is no quark ever found alone?
- What does the interior of a proton “look” like?
- Why is the proton mass so much greater than its “parts”?
- How does the force that holds protons and neutrons together arise from the force between quarks?

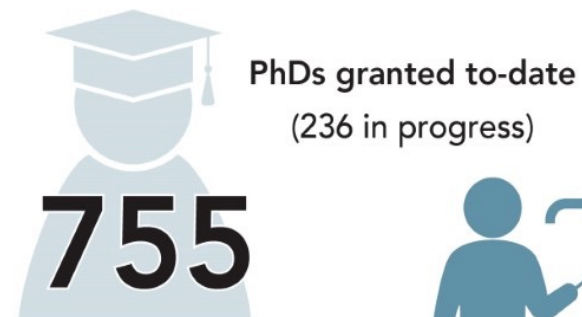


Jefferson Lab by the Numbers

LAB POPULATION



EDUCATION



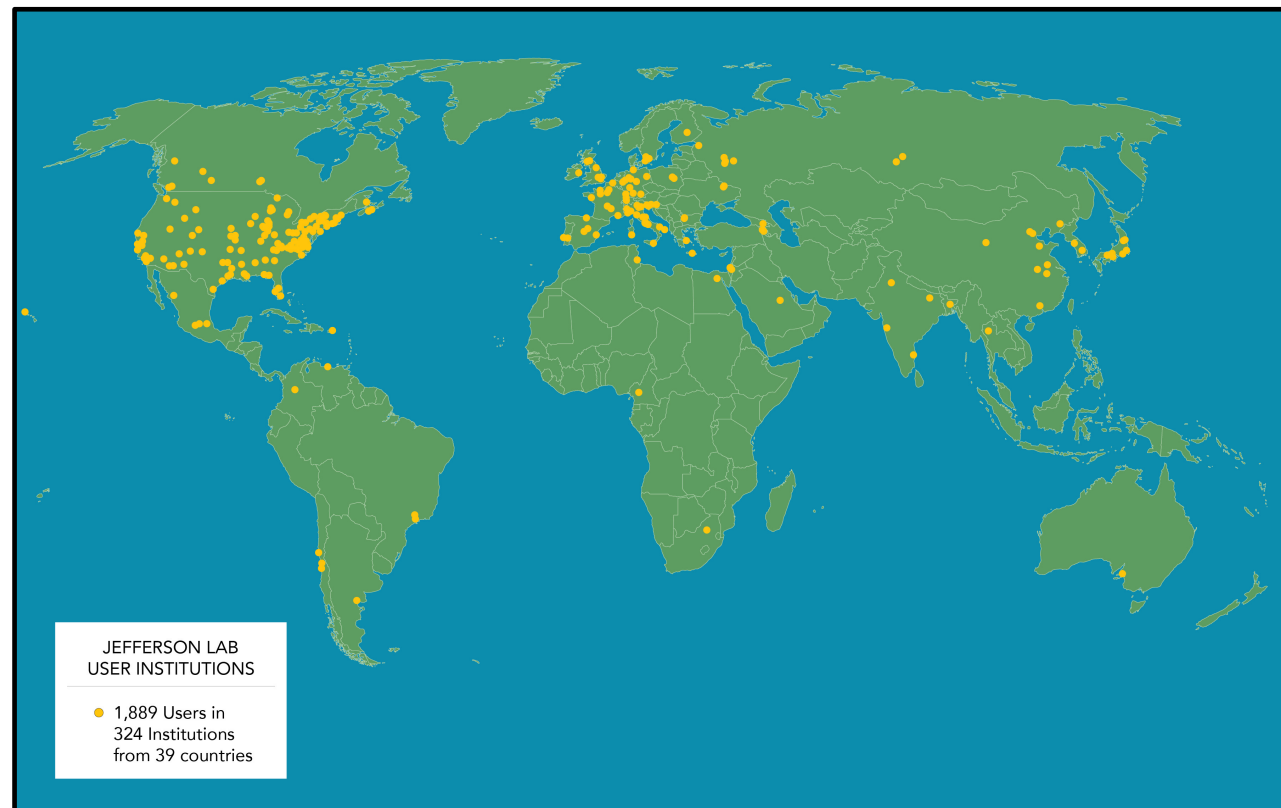
24 joint faculty with
12 universities

OUTCOMES



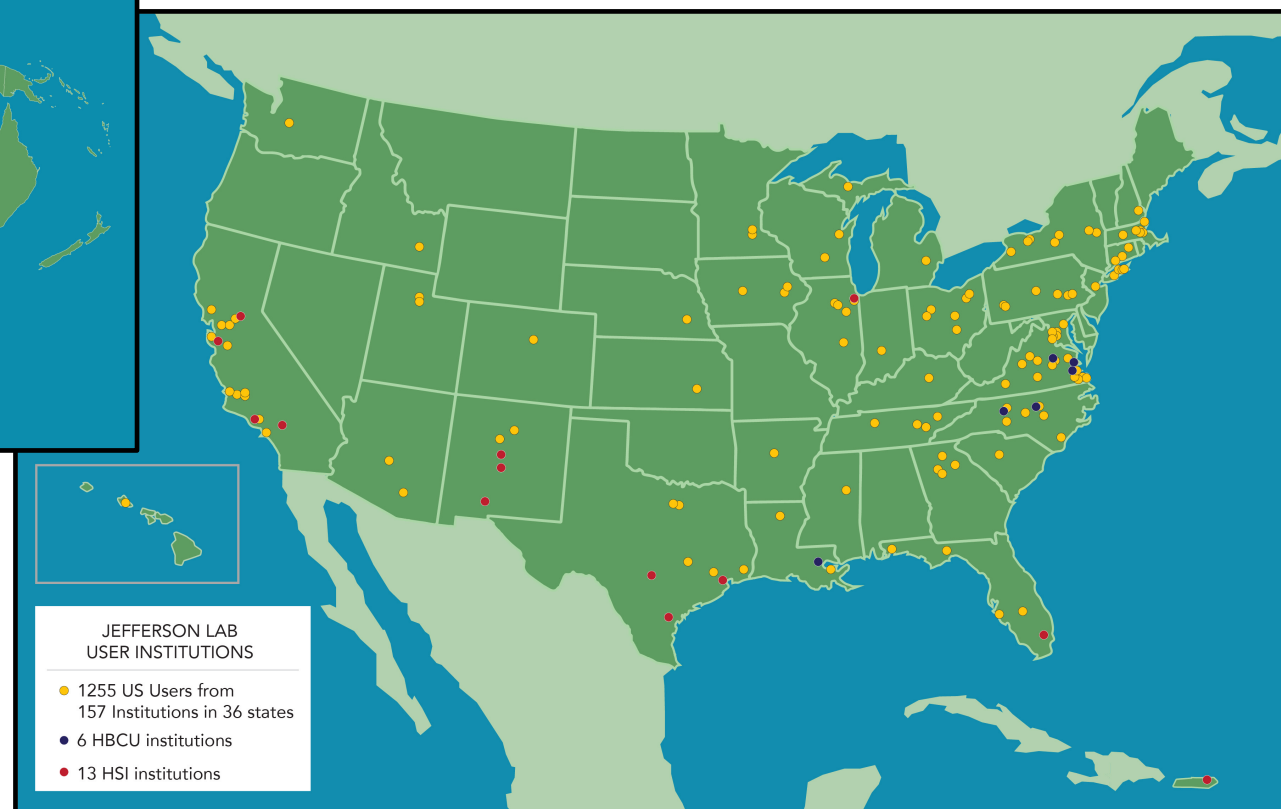
K-12 programs serve more
than 12,000 students &
1,000 teachers annually

Jefferson Lab Serves and Vibrant User Community



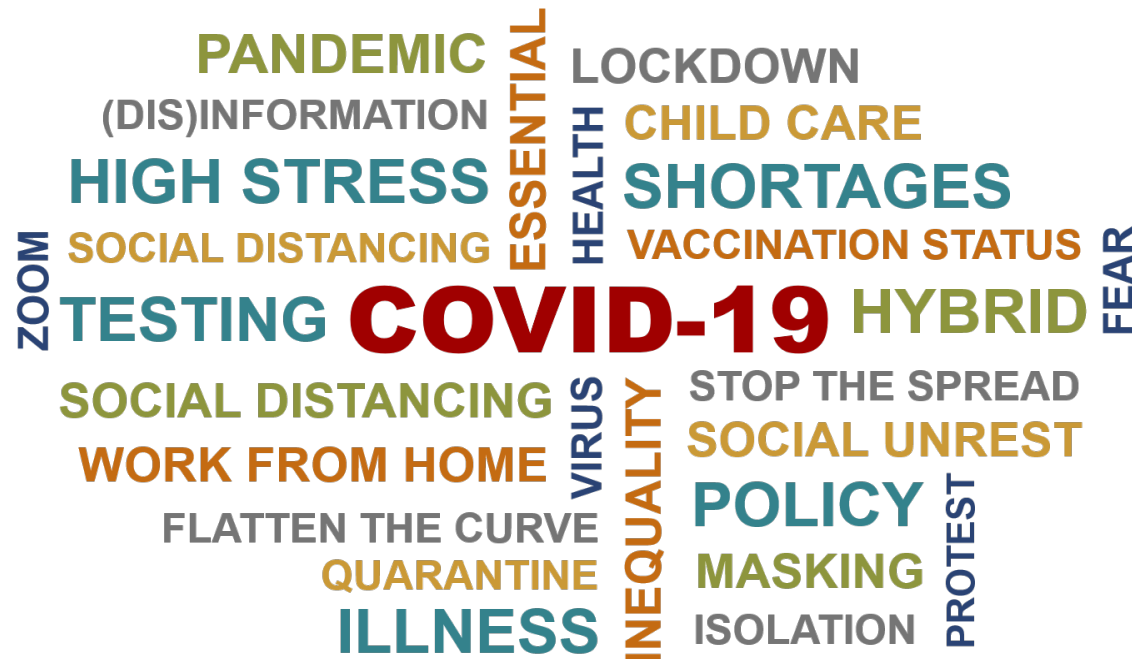
User institutions in the world

User institutions in the USA



COVID-19 and the New Normal

- Suspended on-site operations and transitioned to remote work for the majority of our staff members in March 2020.
- Returned workforce needed to support CEBAF operations and our test lab in June 2020.
- More of the workforce returned for major accelerator maintenance activities in September 2020, and we eventually resumed normal Operations in March 2022.
- **Our approach was effective resulting in low case rate.**



New Normal at Jefferson Lab

Attributes of the New Normal

- Strong desire for flexible work arrangements
 - 57% have remote work agreement; 43% dedicated on-site; 10 people completely virtual
- Increased internal job movement
- Increased attrition – primary driver is retirements
- 300+ new employees
- Rapid change – need to keep a pulse on the culture

Challenges

- Hybrid “Haves and Have-Nots”
- Space configuration
- “The Missing Link” in work processes
- “Brain drain” from retirements

Opportunities for safety

- New hires can bring a fresh perspective to how we look at safety
- Internal job movement allows us to share best practices across the organization
- As change occurs, leaders can integrate safety into their new work practices
- “How we have always done it” is no longer effective so we must find a new way

Opportunities in the New Normal



Keeping a pulse on the culture in the face of rapid change

- Learning about how our workforce prefers engagement allows us to develop the most effective approaches to engaging on safety topics
- Actions: Use this information to drive how we engage when safety related events occur – clearly articulate the ‘Why’ and communicate often



Leading in the new normal

- Preparing our leaders to lead in a hybrid R&D environment and accomplish the mission safely
- Actions: Supervisor training and reinvigorating human performance improvement program



Daily engagement with our workforce to drive safety culture

- Effectively engaging a hybrid workforce to build relationships and understand where help is needed
- Action: Management Safety Discussions

Keeping a Pulse on the Culture

Completed our second inclusion survey in the last 3 years and integrated safety in our leadership actions



Recognition and Rewards

- Bolster and Reintroduce Employee Recognition and Rewards Program (includes safety leadership award)

Communication & Voice

- Hold regular All Hands meetings (lab wide safety topics and lessons learned discussed)

Growth/Career Development

- Pilot "Just a Cup" mentoring program
- JLab Supervisor Academy

The results of the survey indicated that transparency in decision making and engagement with leadership were valued – this is how we engage on safety topics with our workforce

Keeping a Pulse on the Culture: Fostering a Learning Culture

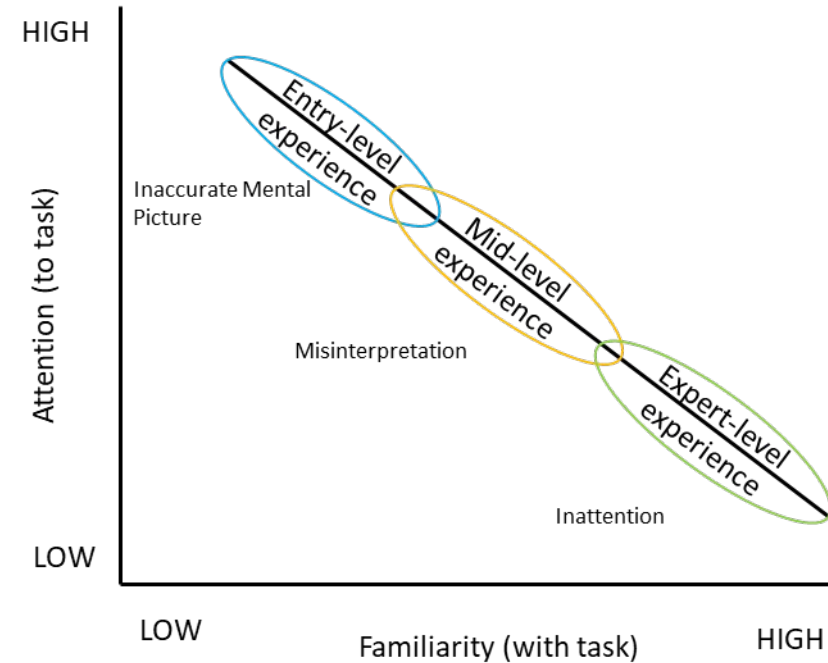
Learning from our events

- Near misses
 - New and experienced employees
- Safety pause/restart
 - All High Hazard Work
 - Lockout/Tagout
- Weekly forum with lab leadership
 - 7 forums to date: ~100 participants each session

Learning from others

- Lab Director forums

HPI Factors: Familiarity vs Attention*



In the new normal, we have many new employees, users, and leaders in new roles; being able to review work in detail and hear directly from leadership has proven to be impactful

*Adapted from DOE-HDBK-1028-2009, Human Performance Improvement Handbook, Volume 1: Concepts and Principles

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Leading in the New Normal

- JLab Supervisor Academy prepares new and experienced leaders with the skills to lead diverse, high performing teams to accomplish the mission safely (pilot completed July 2023)
- Facilitated course: “Leading a Hybrid Team at Jefferson Lab”
- What’s different in the new normal: picking cohorts with supervisors that have teams with various types of remote work agreements



Leading in the New Normal

Reinvigorating Human Performance Improvement (HPI) program:

- Safety events are evaluated from an HPI perspective considering error precursors: time pressure, high workload, lack of knowledge
- We recognize organizational weaknesses contribute to a large portion of safety events
- Continuing our training for all staff on HPI in FY24

Critical for new employees and supervisors/staff in new positions



* Chart adapted from *Dimensions of Diversity: The Diversity Wheel* by Marilyn Loden and Judy Rosener, 1990

Opportunities in the New Normal



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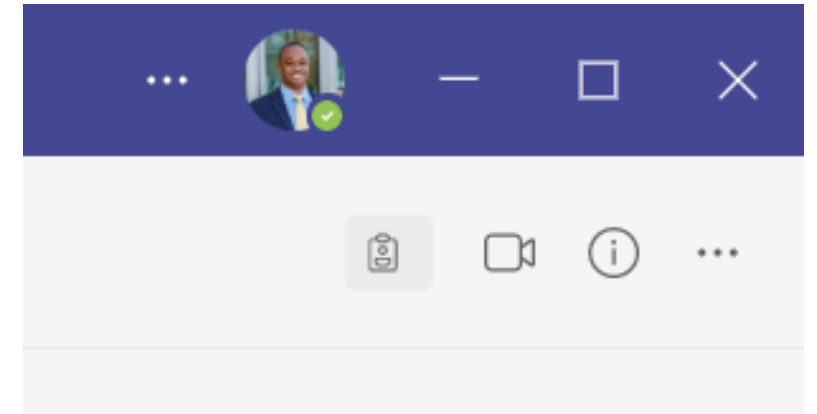
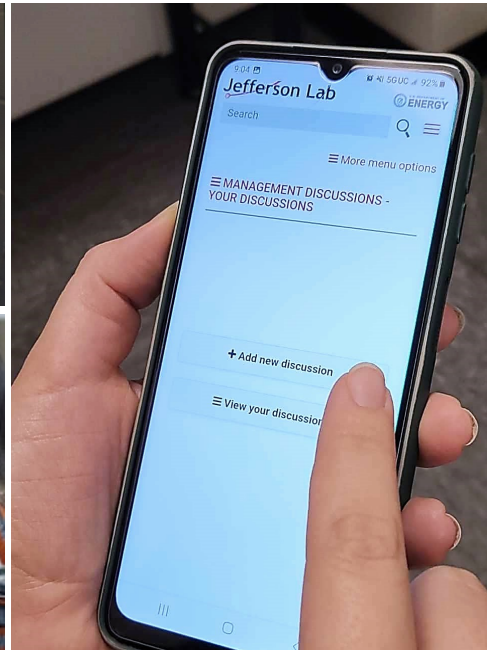
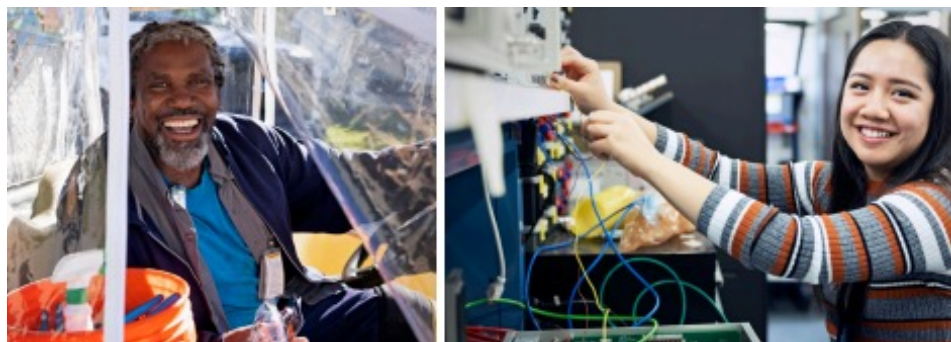


Daily engagement with our workforce to drive safety culture

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Management Safety Discussions

- Reinforces leadership commitment to connecting with employees and understand the resources needed to help do work safely.
- If running 24/7 operations, leaders visiting teams on off-regular hours shifts is impactful.
- Check-ins with our Worker Safety Committee on effectiveness.
- What's different in the new normal: focus on both virtual and in-person walkthroughs.



Summary

- To continue to improve our safety culture, we have focused on:
 - Our team and learning how they want to engage in the new normal.
 - Leadership Engagement.
 - Integrating lessons learned into our work practices.
 - Transparency in Communication.

“Jefferson Lab is committed to conducting operations in a safe manner that will provide our employees, users, subcontractors, vendors and visitors safe and healthy working conditions. To this end, Jefferson Lab considers no activity to be so urgent or important we will compromise our standards for safety and health of individuals or environmental protection.”

-Stuart Henderson, Lab Director

Thank You!



Dr. Johnathon Huff
Chief Operating Officer
Jefferson Lab
jhuff@jlab.org

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