LPI

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SCIENTIFIC LIGHTNING SOLUTIONS, LLC

Dr. Carlos T. Mata
Chief Technology Officer

"Building Operational Resilience: Protecting Assets and Operations from Lightning Strikes."

Presenter: Dr. Carlos Mata

Special Guest: Tim Harger, LPI-IP Program Manager

Duration: 45 minutes (35 minutes presentation + 10 minutes Q&A)

Who could benefit from this webinar: Facility managers, architects, and engineers involved in new builds or renovations in lightning-prone areas - and anyone just curious!

Webinar Objectives from Dr. Carlos Mata:

1) Educate on Lightning Protection Fundamentals

- Provide participants with a clear understanding of how lightning protection systems (LPS) work, their key components, and their role in safeguarding facilities from lightning-related damage.

2) Highlight the Importance of Risk Assessment

- Emphasize the critical need for conducting thorough lightning risk assessments and how this step forms the foundation of resilient infrastructure.

3) Explain the Differences Between Compliance and Non-Compliance Systems

- Demonstrate the value of investing in compliance with lightning protection standards and illustrate the potential risks and costs of non-compliant systems through real-world examples.
  - Increased Safety and Risk Mitigation
  - Compliance with Industry Standards
  - Documented Failures of Non-Compliant Systems
  - Higher Installation and Maintenance Costs
  - Proven Effectiveness in High-Risk Environments

4) Promote Operational Resilience in the Age of Automation

- Discuss how increased automation and electronics in modern facilities have heightened the risk from lightning, and outline strategies for building lightning-resilient infrastructure to avoid operational downtime.

5) Stress the Importance of Maintenance and Inspection

- Show participants the need for regular inspection and maintenance of lightning protection systems to ensure continued performance, focusing on aging infrastructure and typical maintenance challenges.

6) Encourage Post-Weather Event Inspections

- Advocate for post-storm inspections as part of an ongoing resilience strategy, even when not mandated by standards, to minimize risk and prevent long-term system damage.

7) Provide Practical Insights through Case Studies

- Use case studies to illustrate real-world challenges, solutions, and outcomes, helping participants translate theory into actionable practices for their own facilities.

8) Empower Participants with Tools for Long-Term Resilience

- Equip participants with actionable steps and strategies for improving the operational resilience of their facilities against lightning strikes, ensuring long-term safety and compliance.

About Dr. Carlos Mata

Dr. Mata received his Ph.D degree in Electrical Engineering from the University of Florida. He was the lightning subject matter expert and technical lead of Kennedy Space Center's Advanced Electronics and Technology Development Laboratory for 12 years. He directed the program that designed the lightning protection and lightning instrumentation systems for NASA's Launch Complex 39B, perhaps the most sophisticated lightning protection and monitoring system in the world. Dr. Mata is the recipient of many awards, including NASA's Distinguished Public Service Medal and the NASA KSC Engineer/Scientist of the Year Award. Dr. Mata has also worked extensively with the International Center for Lightning Research and Technology (ICLRT) to evaluate and refine lightning instrumentation systems used to monitor high-tech vehicles, payloads, and high-value assets at the Kennedy Space Center, Cape Canaveral Air Force Base, and other Department of Defense locations.