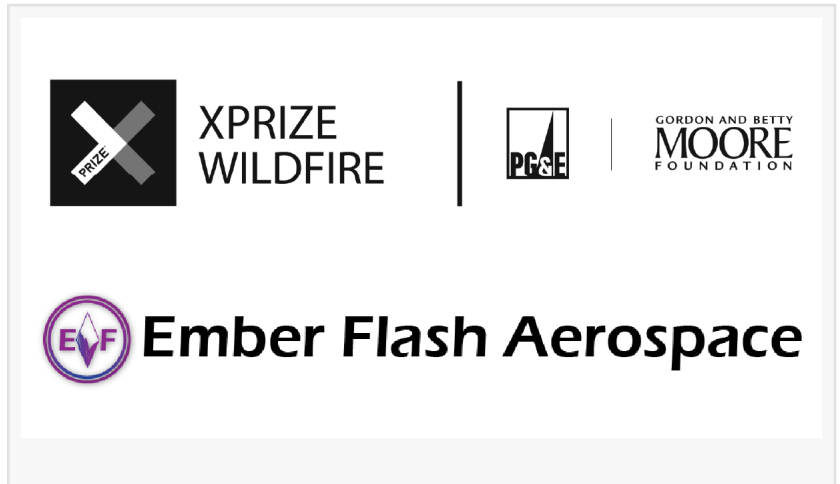


Ember Flash Aerospace Advances to Semi-Finals in the \$11 Million XPRIZE Wildfire Competition

Milestone announced live at the 2025 Esri User Conference in San Diego

SAN DIEGO, CA, UNITED STATES, July 15, 2025 /EINPresswire.com/ -- [Ember Flash Aerospace](#), an innovator in AI-driven wildfire detection and autonomous response, today confirmed that it has been selected to advance to the semi finals of the global [XPRIZE](#) Wildfire competition. The four-year, \$11 million challenge—sponsored by co-title sponsors Pacific Gas and Electric (PG&E) and the Gordon and Betty Moore Foundation—pushes teams to detect, verify, and suppress a dangerous fire within 10 minutes across 1000 km² of rugged terrain.



“

Live demonstrations are crucial—the semi-final tests ensure solutions are not theoretical concepts but practical systems that deliver real-world impact.”

Andrea Santy

“Advancing to the semi-finals validates our belief that wildfire resilience comes from fast, modular engineering—not lab-only science projects,” said Joseph Norris, Co-Founder & CEO. “We’ve transformed readily available optical and particle sensors into Vigilant Detect nodes, fed their data to AI in Vigilant Core, and teamed that intelligence with Raptor UAVs to deliver suppressant. Because each layer follows open standards, we can snap in partner technologies—acoustic arrays today, orbital sensors tomorrow—without touching the core

architecture. The outcome is a plug-and-play system that flags a spark in seconds, launches suppressant within minutes, and scales to any landscape where megafires threaten lives and economies.”

Andrea Santy, Program Director, XPRIZE Wildfire, added, “XPRIZE Wildfire’s goal is to spur innovation that ends destructive wildfires. Live demonstrations are crucial—the semi-final tests

ensure solutions are not theoretical concepts but practical systems that deliver real-world impact.”

The Stakes

Wildfires now cost the U.S. economy \$394 billion – \$893 billion each year in property loss, health impacts, and business disruption. Vigilant’s end-to-end platform cuts the ignition-to-action timeline from hours to minutes—long before small flames become megafires.

Proven Technology Suite

Vigilant Detect - Optical sensors capture images while onboard particle detectors sample air for smoke particulates and other hazardous aerosols; the system flags anomalies in seconds, triangulates coordinates, and auto-alerts responders.

Firewave Acoustic Nodes - Solar-powered pods pinpoint ignition sounds, day or night;

Vigilant Core - fuses the sonic fix with optical data for triple-verified alerts.

Urban Sky - Stratospheric balloons loiter at 40 – 75 k ft, providing broad-area, high-resolution imagery and predictive spread models at a fraction of satellite cost.

FLORIAN® - Incident-Command Platform Field-proven software already used by wildland crews; overlays Vigilant data, tracks personnel in real time, and delivers multi-channel comms with zero new-training friction.

Vigilant Raptor UAV - High-speed, precision-guided drone autonomously deploys suppressant within the XPRIZE 10-minute window.

Dr. Lee Kohlman, Co-Founder & Chief Science Officer, said, “Our Vigilant Detect sensor nodes flood us with optical and atmospheric data, and provide notifications of ignition events; Vigilant Core’s AI-driven engine turns that torrent into instant, actionable intelligence, adding context by integrating many other data sources. By collapsing the gap between spark and suppression from hours to mere seconds, we’re redefining wildfire safety for every community at the forest’s edge.”

What Happens Next

Semifinal Field Trials – 15 semifinalist teams will demonstrate autonomous detect-to-suppress performance under XPRIZE’s in-situ test protocol.

Pilot Expansions – Underway now, we’re installing a new wave of Vigilant Detect nodes in California’s most at-risk wildland-urban interface (WUI) communities, using real-world data to sharpen detection accuracy and coverage.

Partner Integrations – Deepening work with Firewave (acoustic sensing), Urban Sky (stratospheric imaging), and 3AM Innovations (FLORIAN), plus active talks with space-based detection, mobile broadband and pre-fire-mitigation partners—because it takes a community to protect a community.

About XPRIZE

XPRIZE is the recognized global leader in designing and executing large-scale competitions to solve humanity's greatest challenges. For over 30 years, our unique model has democratized crowd-sourced innovation and scientifically scalable solutions that accelerate a more equitable and abundant future. Donate, learn more, and co-architect a world of abundance with us at xprize.org.

About Ember Flash Aerospace

Founded after the 2020 CZU Lightning Complex fires, Ember Flash Aerospace builds integrated wildfire-mitigation systems that unite ultra-fast smoke detection, AI analytics, high-altitude imagery, and precision UAV suppression. The company's mission is to give every community the power to stop small ignitions from becoming megafires. Learn more at www.emberflash.com.

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