



**JIFX**  
Joint Interagency Field Experimentation



# NPS Joint Interagency Field Experimentation 23-1 Update

JIFX 23-1 kicked off JIFX's 11th year with an event focused on Expeditionary Energy & Power. Our 159 participants conducting 16 individual and various collaborative experiments filled the week with insightful experimentation across the NPS Field Lab and other facilities at Camp Roberts Army National Guard Base. In addition to allied observers from Canada and the United Kingdom, we hosted US military and government observers representing USD R&E, USCENTCOM, INDOPACOM, USARPAC, NAWC WD, NSW, USASOC, AFSOC, USSOCOM, US Army DEVCOM, and DIU. A complete list of experiments can be found on the following page.

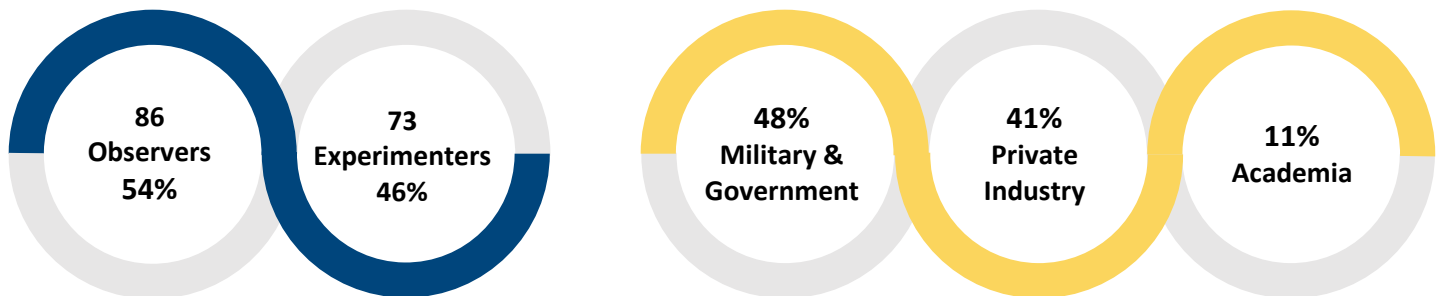
Highlights from the week included a collaborative experiment led by Ascent Solar linking power sources with power users, Yotta Navigation validating precision navigation capability in a GPS-denied environment without recalibration, Rhoman Aerospace and MITRE teaming up for playback experiment tracking, and stakeholders setting up a dozen follow on exchanges with experimenters. All this was capped by the team hosting a celebration of the US Marine Corps' 247th birthday complete with a reading General John Lejeune's Birthday Message and the oldest Marine present serving the first piece of cake to the youngest Marine in attendance. Way to go Kenny and Luis!

At JIFX 23-1, we also published an updated mission statement reflecting our assessment of who we are, what we do, how we do it, and where we fit in the current defense environment.

*The JIFX team leads experimentation in alternative methods to enable rapid technological development by cultivating a community of interest and hosting broadly scoped quarterly collaborative field events which enable DoD, US government, and allied stakeholders to identify, influence, and accelerate early-stage technology development that address national and collective security challenges.*

If you haven't joined our [Community of Interest](#) mailing list, please consider it to stay engaged with event updates. We look forward to seeing you at JIFX 23-2 from 6-10 February 2023 or at another future event!

## Participation By-The-Numbers



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## NPS Joint Interagency Field Experimentation 21-3 Update

Exp. Number	Experiment Title	Organization
A-01	Resilient Navigation	Honeywell
A-04	Novel Aeroservoelastic Scaled Model	M4 Engineering
A-05	Long Range, Heavy Lift Precision Cargo Drop	Toofon
A-07	Autonomous Surveillance & Delivery without GPS Power Efficient Flight & Navigation Algos	Rhoman Aerospace
D-02	Enabling Rapidly Relocatable USMC C2 with 5G Technology	AT&T
E-02	Ghost in the Sky	Raven Works
F-01	Multi-Domain Expeditionary Artificial Intelligence and Behavior Analysis at-the-edge for Tactical Surveillance Application	Gantz-Mountain Intelligence Systems, Inc.
F-02	Expeditionary Power for ISR, Computing and Operation Critical Technologies	Ascent Solar Technologies
G-01	Intelligent Human Motion GPS Denied Trials	Yotta Navigation
G-02	Multi-Institutional All-Domain Command and Control (MIAD-C2)	The Mitre Corporation
I-01	Wildland Respirator	TDA Research, Inc.
I-02	Low-Energy Approach to Improved Battery Performance in Cold Weather	Carver Scientific
J-01	Ballistic Conformal Battery	Cornerstone Research Group
K-01	Solar Electric Generator on a Trailer	Solar Electric Technologies
K-02	Squad Power Management	Cornerstone Research Group
K-03	6-Pack for Austere Uninterrupted Power	Bren-Tronics



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### Experimenter Photos



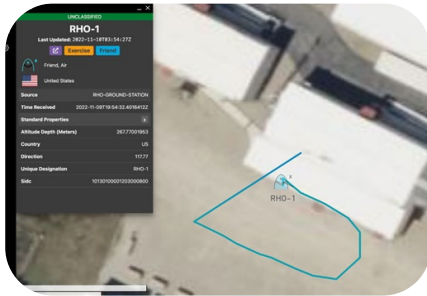
A-04: M4 Engineering, Inc experimented on their all-electric subscale remotely-piloted flight test vehicle.



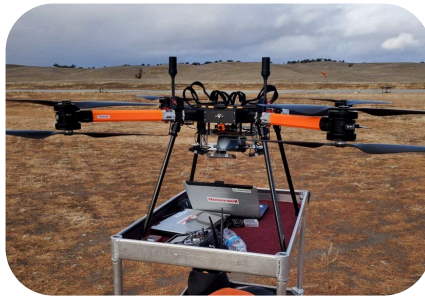
F-01: Gantz-Mountain MT-5 explored ways to optimize power solutions to extend its smart surveillance systems ops.



A-05: Toofon tested payload delivery by carrying a small UGV on their long-range, heavy-lift vehicle.



G-01: MITRE MIAD-C2 is a Cloud based Situational Awareness platform that displayed and databased A-07 Rhoman Aerospace's telemetry data for analysis.



A-01: Honeywell's UAV performed several different trajectory shapes to test their performance without GPS.



K-03: Bren-Tronics set up their austere battery packs for uninterrupted power.



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G-01: Yotta Navigation used an ad-hoc network to visualize CoT data on ATAK devices while deployed in the CACTF tunnels.



Members of 820<sup>th</sup> Base Defense Group put various systems through their paces as they explore capabilities for INDOPACOM applications.



E-02: Ravenworks prepares one of its UAS for flight.



F-01: Ascent Solar readies their compact, flexible solar arrays for a collaborative experiment.



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### Here's how experimenters said the JIFX tenants applied to their activity:

#### Develop Now

Without stakeholder feedback, "we might not have addressed the carbon bed shelf-life issue until much later in the development process. Our experimentation at JIFX 23-1 saved us from having to develop a carbon bed protection scheme months from now."

- TDA Research, Inc

#### Collaboration is Expected

"JIFX is the venue that has opened more doors for us with end-users than any other DoD R&D venue or acquisition event. We made some great connections this week!"

-Gantz-Mountain

#### Failure is Success

"We discovered the Commercial-Off-The-Shelf ad-hoc network did not have enough signal strength in the subterranean environment and are now brainstorming alternative communications."

-Yotta Navigation

### Upcoming Events

Event	Dates	Focus Area	Location
JIFX 23-2	6 – 10 February 2023	Human Performance Monitoring & Situational Awareness	NPS Field Laboratory at Camp Roberts
JIFX 23-3	1 – 5 May 2023	Autonomous Logistics Enabled by AI/ML	NPS Field Laboratory at Camp Roberts
JIFX 23-4	7 – 11 August 2022	Autonomy & Human Machine Teaming	TBD

[Submit an Experiment Proposal](#)



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