



NAVALX



JIFX  
Joint Interagency Field Experimentation



## NPS Joint Interagency Field Experimentation 25-1 Update

The Naval Postgraduate School (NPS), in support of the OUSD(R&E) Innovation & Modernization office and NavalX, executed JIFX 25-1 at the NPS Field Laboratory on McMillan Airfield, Camp Roberts, CA from 4-7 November 2024.

Technologists from 18 small businesses along with scientists from NPS and NAWC-WD Point Mugu and China Lake attended the event to explore capabilities related to uncrewed systems & counter-measures to those systems. Stakeholders participated from NavalX, USCENTCOM, USTRANSCOM, USSTRATCOM, USSOCOM, NSW, NSWC Carderock, DoN SEC, FLEETWERX, USAF, AFSOC, Army DEVCOM, DIU, DTRA, NAMC, MSU MilTech, the Foreign Commercial Service, and the UK StratCom jHUB.

Highlights included NPS' Vessel Detection experiment on Lake San Antonio, the inaugural flight of Knightwerx' KWX ALPHA Micro VTOL UAS, NAWC-WD data collection, a collaborative experiment between Hadean and Neurocom. Additionally, Mr. Troy Clarke, Inland Empire NavalX TechBridge Director, introduced the Crucible program; Ms. Rachel Serra, Army Futures Command, provided an overview of the Ground Vehicle Systems Center (GVSC) rapid development support mechanisms; and Mr Robert Boyd showcased the DoN SBIR Experimentation Cell program.

The next JIFX event is scheduled for 3-7 February 2025. We invite innovators, technologists, and operators to propose technologies to explore with relevant defense applications, particularly those which provide solutions that support resilience, efficiency, and continuous functionality during campaigns and prolonged missions. New proposals for flying or emitting technologies are due by 21 November 2024. Proposals can be submitted here <https://www.nps.edu/web/fx/experiment-proposal>.

182  
Total  
Participants

30%  
Stakeholders

70%  
Technologists

20  
Unique  
Technologies

57  
Aircraft  
Sorties

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Quad ID	Experiment Title	Organization	Vulcan Scout Card ID
A-04	Automated Flight of Next-Gen Transitioning Micro VTOL UAS	<a href="#">Knightwerx Inc</a>	<a href="#">16469</a>
A-05	UAV Autonomy, GPS-Denied Navigation, Precision Target/Object Relative Maneuver	<a href="#">Rhoman Aerospace</a>	<a href="#">11550</a>
A-06	ATAK Live Mapping with UxO Detection	<a href="#">GreenSight</a>	<a href="#">16942</a>
A-07	Hybrid Electric Propulsion for Long-Endurance UAVs	<a href="#">Burgess Aerospace Innovations</a>	<a href="#">18591</a>
A-09	SA4 - Secure Advanced Aerial Attributable Asset	<a href="#">GreenSight</a>	
B-01	Phalanx Shield Multi-Domain Sensor System	<a href="#">Innovative Algorithms</a>	<a href="#">3517</a>
B-02	Development & Assessment of Off-Road Autonomous-Driving and GPS-Denied Mapping Capabilities	<a href="#">BlueSpace.ai</a>	<a href="#">14088</a>
B-07	CBRNE Threat Detections, Avoidance, and Engagements via HoloWarrior MUM-T kits for vehicles	<a href="#">VR Rehab Inc.</a>	
B-10	OverDrive Autonomous Uncrewed Ground Vehicle	<a href="#">Overland AI</a>	<a href="#">16365</a>
B-14	Transfer Learning for Vessel Detection in Different Environments	<a href="#">Naval Postgraduate School</a>	

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B-15	Maritime Domain Awareness Using Autonomous Vessels at Scale	<a href="#">HavocAI</a>	<a href="#">16909</a>
C-01	Natural Fiber Composites Ballistic Resilience Testing	<a href="#">Applied Bioplastics</a>	
C-02	Atolla Tech Lidar-based C-UAS Detection	<a href="#">Atolla Tech</a>	<a href="#">10330</a>
C-03	VESA – Counter UxS	<a href="#">Empirical Systems Aerospace, Inc. (ESAero)</a>	<a href="#">11615</a>
C-11	Detecting Surrogate Platforms (DSP) 2.0	<a href="#">Naval Air Warfare Center Weapons Division (NAWCWD)</a> / Joint Electronic Advanced Technology (JEAT)	
F-01	ZombieCam One austere surveillance with AI	<a href="#">Chiral Software, Inc.</a>	
G-06	Hadean - AI-powered Spatial Computing Platform	<a href="#">Stucan Solutions Corp</a>	<a href="#">17146</a>
M-01	Narrative Intelligence: Actionable Insights for Information Operations	<a href="#">Clara Copilot</a>	<a href="#">16451</a>
M-02	Thermal Optic Steel Target Heater	Targeting Solutions USA	
M-03	Tactile Human Machine Interface Device for Situational Awareness and Hazard Alerts	<a href="#">Neurocom</a>	<a href="#">18329</a>

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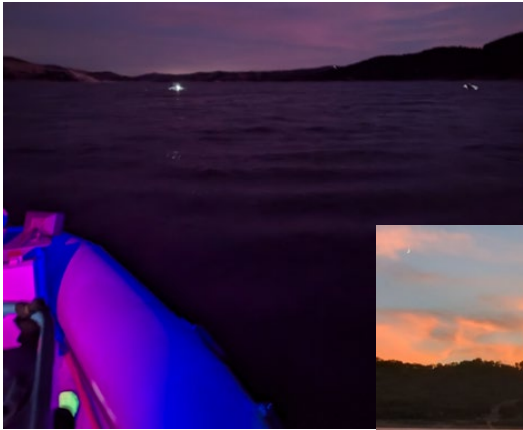
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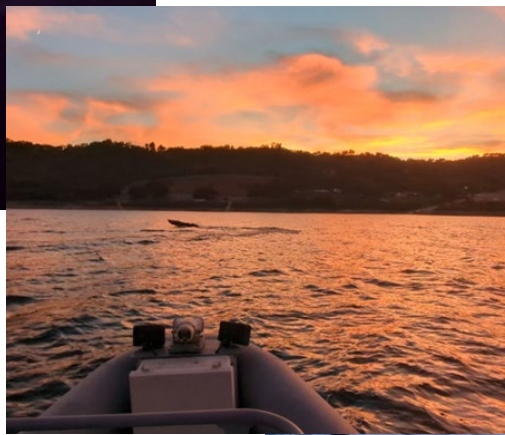
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**B-14: Naval Postgraduate School.** Researchers gathered imagery of low visibility autonomous vessels on Lake San Antonio in various light conditions to validate a neural network trained on synthetic imagery.



**A-07: Burgess Aerospace Innovations** collects data to optimize performance of its hybrid-electric propulsion system.

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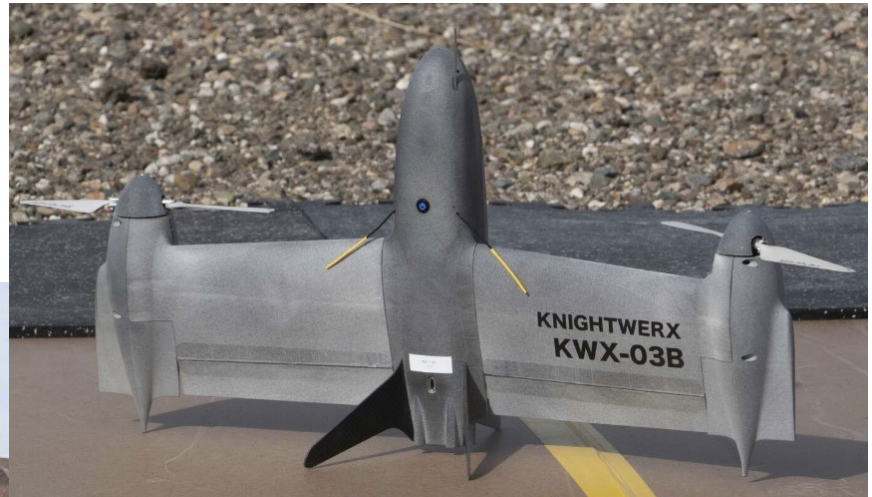


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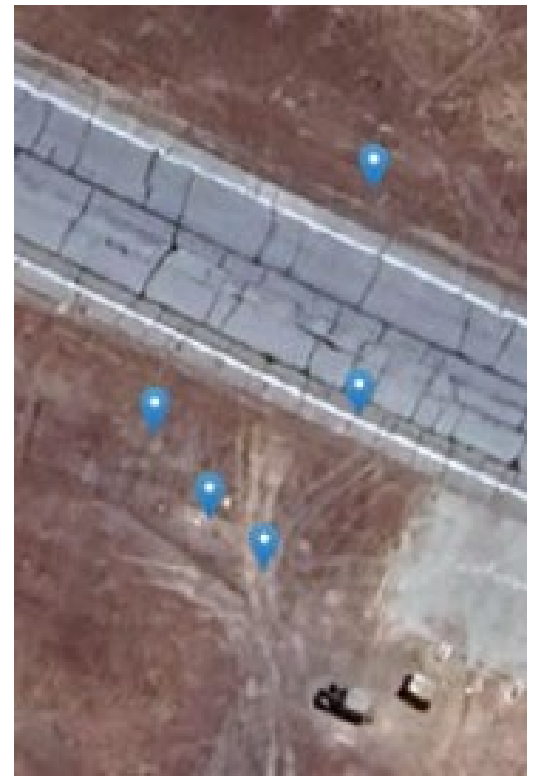


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**A-04: Knightwerx** launches its ALPHA prototype Micro UAS to validate the system's stability, speed, and endurance in comparison to fielded quad copter systems.



**A-06: Greensight** utilized its One-Way-Lifter platform to explore a new variant of their ATAK Live Mapping UXO Detection algorithms.



Expert Corrections

<p>1</p> <p>Thumbnail Unavailable</p> <p>Marker ID: I2F904c2-2950-4074-9e99-41471195375d6</p> <p>Category: UXO</p> <p>Image: 20241105_184432977545</p> <p>Confidence Value: 0.8123171222081274</p> <p>Status: pending</p> <p>Approve Edit Reject</p>	<p>2</p> <p>Marker ID: I2F904c2-2950-4074-9e99-41471195375d6</p> <p>Category: UXO</p> <p>Image: 20241105_184432999247</p> <p>Confidence Value: 0.8196362734821777</p> <p>Status: pending</p> <p>Approve Edit Reject</p>	<p>3</p> <p>Marker ID: I2F904c2-2950-4074-9e99-41471195375d6</p> <p>Category: UXO</p> <p>Image: 20241105_1844334110099</p> <p>Confidence Value: 0.8229161114692088</p> <p>Status: pending</p> <p>Approve Edit Reject</p>	<p>4</p> <p>Marker ID: I2F904c2-2950-4074-9e99-41471195375d6</p> <p>Category: UXO</p> <p>Image: 20241105_184433831908</p> <p>Confidence Value: 0.8224283456802358</p> <p>Status: pending</p> <p>Approve Edit Reject</p>	<p>5</p> <p>Marker ID: I2F904c2-2950-4074-9e99-41471195375d6</p> <p>Category: UXO</p> <p>Image: 20241105_1844341193790</p> <p>Confidence Value: 0.836492224692208</p> <p>Status: pending</p> <p>Approve Edit Reject</p>	<p>6</p> <p>Marker ID: I2F904c2-2950-4074-9e99-41471195375d6</p> <p>Category: UXO</p> <p>Image: 20241105_1844347031028</p> <p>Confidence Value: 0.8117006421099172</p> <p>Status: pending</p> <p>Approve Edit Reject</p>
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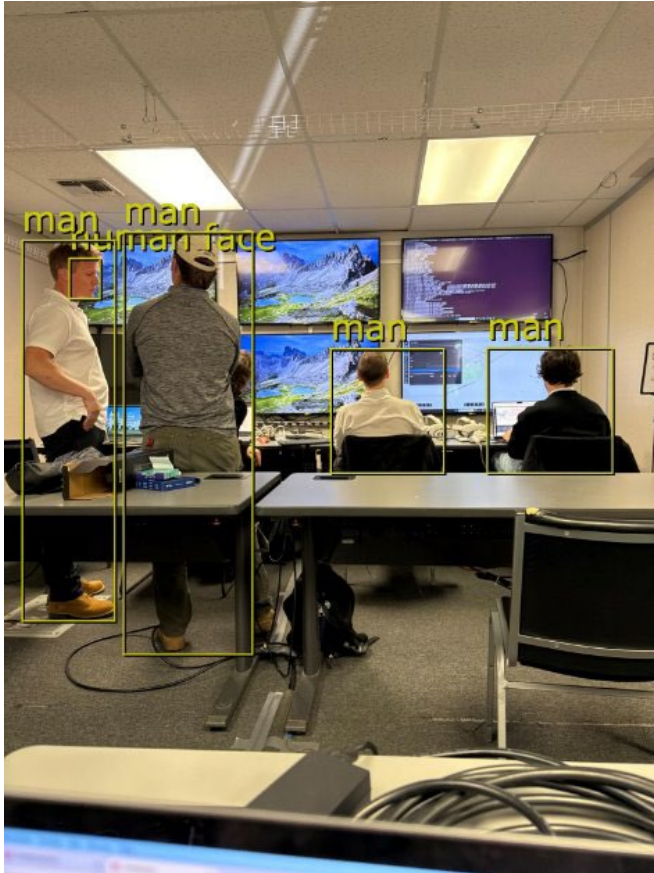
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**F-01: Chiral Software** graphic interface system illustrates how their ZombieCam system AI algorithms provide a streamlined visualization of surveillance data for personnel.

**C-11: NAWC-WD** sensors prepared for data collection in their experiment exploring the capability of fixed focal plane camera systems to find & fix unidentified aerial platforms.



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**G-06: Hadean and M-03: Neurocom,** collaborate to explore the speed and accuracy of the Neurocom helmet mountable tactile interface prototype using Hadean’s integration software and visualization tools.



### Upcoming JIFX Events

Event	Dates	Focus Area	Location
JIFX 25-2	3-7 February 2025	Sustained Operations	NPS Field Laboratory
JIFX 25-3	12-16 May 2025	Command, Control, and Communications	NPS Field Laboratory
JIFX 25-4	11-15 August 2025	Human Machine Integration	NPS Field Laboratory

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