



Friends & Partners  
— IN AVIATION WEATHER —

FPAW 2024 SPRING MEETING

# THE AVIATION WEATHER COMMUNITY

Understanding weather impacts on aviation to  
enable safe, efficient and reliable operations

**Vertical Flight and Low Altitude Operator Perspectives on  
Gaps in Aviation Weather Information and Education**

5/1/2024 April 30 - May 2, 2024 / Dallas, Texas FPAW Spring 2024



<https://fpaw.aero>





# Low Altitude Weather Perception

VTOL

STOL

UAS

DRONE



# Low Altitude Weather Reality





**Manufactures**

**Pilots**

**Meteorologist**



# 2-Key Questions

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What is the impact of the aircraft on the environment.

What is the impact of the environment on the aircraft.



# Aircraft Shutdown & Rotor Slowdown





Retreating blade tip sailing up and advancing blade tip sailing down.

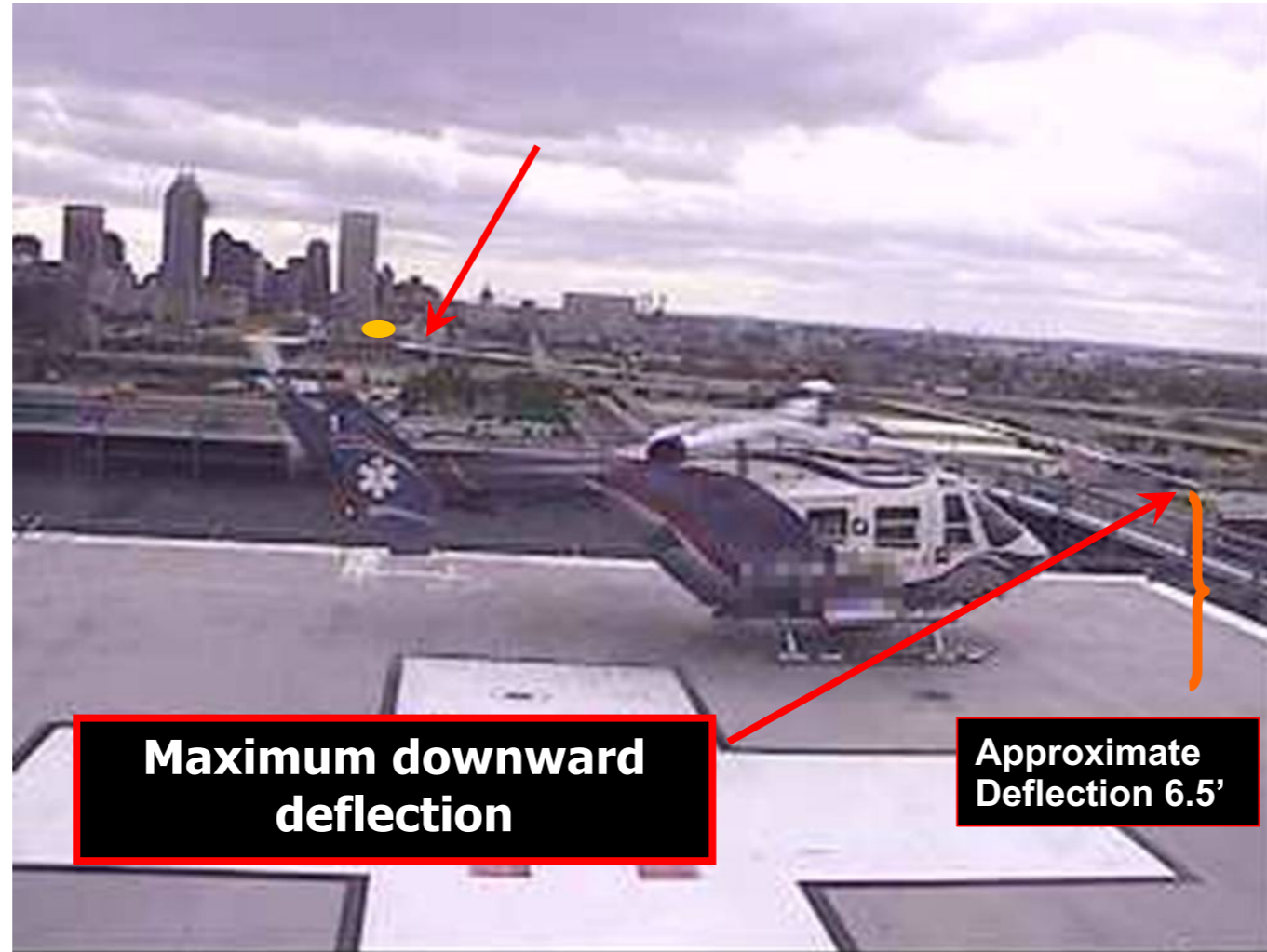


# Retreating Blade Reaches Peak Upward Deflection





# Retreating Blade Begins Decent, Advancing Blade Reaches Max Downward Deflection



# Retreating Blade Continues to Flex Downward





# Blade Continues Down



# Blade Impacts Vertical Stabilizer





# Broken Fin Departs Aircraft



# Broken Fin Departs Aircraft





# Broken Fin Departs Aircraft



# Main rotor and vertical fin damage from two other separate incidents at the same location





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# A Weather Juxtaposition

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# FAA Reutilization Bill

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Sec. 958. Infrastructure supporting vertical flight

This section requires the FAA to update the Vertiport Design Engineering Brief, publish a **performance-based vertiport design advisory circular**, and begin performing the work necessary to update the **Heliport Design Advisory Circular in order to provide performance-based design guidance.**

# What's Next?

