



Launch Mission Execution Forecast

Mission: Falcon 9 mPOWER-A

Issued: 13 Dec 2022 / 0900L (1400Z)

Valid: 16 Dec 2022 / 1621 – 1749L (2121 – 2248Z)



Forecast Discussion: Launch conditions look to be favorable at the end of the week after a strong cold front pushes through the area on Thursday. Over the next few days, the front will trek across the southeast, triggering severe storms from West Texas to the Florida panhandle. It will begin to weaken by the time it gets to Central Florida on Thursday afternoon as it loses upper-level support, but there should still be enough energy for strong to a few severe storms. After the front pushes through, drier and cooler air will begin to filter into the area by Friday afternoon. The only concern for Friday's attempt is the small risk of a Thick Cloud Layers Rule violation from any lingering mid-level cloud cover.

By Saturday, even though the front will remain to our south, a mid-level disturbance will bring in some additional moisture from the Gulf and increase cloud cover in the area. Therefore, launch weather looks marginally less favorable on Saturday with the main concern remaining the Thick Cloud Layers Rule.

Launch Day		Probability of Violating Weather Constraints ¹					
Launch Day	10%	Primary Concerns: Thick Cloud Layer Rule					
	Weather Conditions				Additional Risk Criteria ²		
	Weather/Visibility: None / 7 mi.	Clouds			Upper-Level Wind Shear:	Low	
	Temp/Humidity: 67°F / 70%	Type	Coverage	Base (ft)	Tops (ft)	Booster Recovery Weather: Low-Mod	
Liftoff Winds (200'): 360° 12 - 17 mph	Altostratus	Few	10,000	12,000	Solar Activity: Low		
24-Hour Delay		Probability of Violating Weather Constraints					
24-Hour Delay	30%	Primary Concerns: Thick Cloud Layer Rule					
	Weather Conditions				Additional Risk Criteria		
	Weather/Visibility: None / 7 mi.	Clouds			Upper-Level Wind Shear:	Low	
	Temp/Humidity: 70°F / 60%	Type	Coverage	Base (ft)	Tops (ft)	Booster Recovery Weather: Low-Mod	
Liftoff Winds (200'): 020° 10 - 15 mph	Cirrostratus	Broken	30,000	35,000	Solar Activity: Low		
Notes	<ol style="list-style-type: none"> The Probability of Violation (PoV) is the chance of a local safety or customer constraint violation occurring anytime during the launch window. Additional Risk Criteria, which are not included in the PoV, are mission-specific constraints that may not include all phenomena within each risk factor. 						
	See https://www.patrick.spaceforce.mil/Portals/14/Weather/LaunchFAQ.pdf for more information						
Next Forecast Will Be Issued		14 Dec 2022					