



# Launch Mission Execution Forecast

**Mission:** Falcon 9 mPOWER-B

**Issued:** 27 Apr 2023 / 0845L (1245Z)

**Valid:** 28 Apr 2023 / 1712 – 1840L (2112 – 2240Z)



**Forecast Discussion:** A very active weather pattern will remain in place across Central Florida for the next several days and into the weekend. Strong to severe thunderstorms will develop each day due to a stalled front, plentiful moisture, and several pulses of energy aloft. Friday will be another active day as a low-pressure system develops in the Southeastern US and low-level flow shifts southwesterly. Strong to isolated severe storms will again develop and push through the Spaceport by late afternoon and into the evening. The main concerns are the rules associated with these storms, including the Cumulus Cloud Rule, Surface Electric Fields Rule, Lightning Rule, and Anvil Cloud Rules.

On Saturday, the pattern will again favor another round of afternoon/evening showers and storms. Offshore flow and energy aloft, coupled with sea breeze development, will promote storm development along the east coast of the state. The main concerns are the same concerns as Friday associated with the convection.

		Probability of Violating Weather Constraints <sup>1</sup>				
<b>Launch Day</b>	<b>80%</b>	<b>Primary Concerns:</b> Cumulus Cloud Rule, Surface Electric Fields Rule, Lightning Rule, Anvil Cloud Rules				
	Weather Conditions			Additional Risk Criteria <sup>2</sup>		
	<b>Weather/Visibility:</b> Sct Storms / 7 mi.			<b>Clouds</b>		<b>Upper-Level Wind Shear:</b> Low
	<b>Temp/Humidity:</b> 78°F / 85%	Type	Coverage	Base (ft)	Tops (ft)	<b>Booster Recovery Weather:</b> Low
<b>Liftoff Winds (200'):</b> 220° 15 - 20 mph	Cumulus	Broken	3,000	20,000	<b>Solar Activity:</b> Low	
	Cirrostratus	Broken	25,000	30,000		
		Probability of Violating Weather Constraints				
<b>24-Hour Delay</b>	<b>80%</b>	<b>Primary Concerns:</b> Cumulus Cloud Rule, Surface Electric Fields Rule, Lightning Rule, Anvil Cloud Rules				
	Weather Conditions			Additional Risk Criteria		
	<b>Weather/Visibility:</b> Sct Storms / 7 mi.			<b>Clouds</b>		<b>Upper-Level Wind Shear:</b> Low-Mod
	<b>Temp/Humidity:</b> 77°F / 85%	Type	Coverage	Base (ft)	Tops (ft)	<b>Booster Recovery Weather:</b> Low
<b>Liftoff Winds (200'):</b> 160° 20 - 25 mph	Cumulus	Broken	3,000	20,000	<b>Solar Activity:</b> Low	
	Cirrostratus	Broken	25,000	30,000		
<b>Notes</b>	1. The Probability of Violation (PoV) is the chance of a local safety or customer constraint violation occurring any random time during the launch window.					
	2. 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 <a href="https://www.patrick.spaceforce.mil/Portals/14/Weather/LaunchFAQ.pdf">https://www.patrick.spaceforce.mil/Portals/14/Weather/LaunchFAQ.pdf</a> for more information				
<b>Next Forecast Will Be Issued</b>		As Required				