



# Launch Mission Execution Forecast

**Mission:** Falcon Heavy ViaSat-3.1

**Issued:** 24 Apr 2023 / 0930L (1330Z)

**Valid:** 26 Apr 2023 / 1924 – 2031L (2324 – 27/0031Z)



**Forecast Discussion:** The first in a series of upper-level disturbances is kicking across the central and eastern Gulf of Mexico this morning. The combination of this upper-level feature moving through Florida and two stalled boundaries north and south of the Spaceport will bring an active weather day across the Spaceport by this afternoon. It will be a little quieter on Tuesday with seabreeze driven activity, before the next upper-level disturbance arrives on Wednesday. Storms will develop with the east coast seabreeze Wednesday afternoon, likely lingering around the Spaceport into the start of the primary evening launch window. Depending on exactly how quickly the upper-level feature moves through, there is the potential for improving weather towards the back side of the window. These storms will be the primary weather concern for launch with the Cumulus Cloud Rule, Lightning Rule, and Surface Electric Fields Rule a concern among others.

Models have slowed down the approach of the next upper-level trough, though its approach brings the stalled front to the north into the Spaceport into the afternoon. It still looks like an active afternoon and early evening with showers and storms still on tap. Evening storms will remain the primary weather concern for the backup window with the Cumulus Cloud Rule, Surface Electric Fields Rule, and the Anvil Cloud Rules.

		Probability of Violating Weather Constraints <sup>1</sup>				
<b>Launch Day</b>	<b>60%</b>	Primary Concerns: Cumulus Cloud Rule, Lightning Rule, Surface Electric Fields Rule				
	Weather Conditions				Additional Risk Criteria <sup>2</sup>	
	<b>Weather/Visibility:</b> Sct. Storms / 6 mi.	<b>Clouds</b>			<b>Upper-Level Wind Shear:</b> Low	
	<b>Temp/Humidity:</b> 76°F / 85%	Type	Coverage	Base (ft)	Tops (ft)	<b>Booster Recovery Weather:</b> N/A
<b>Liftoff Winds (200'):</b> 150° 10 - 15 mph	Cumulus	Scattered	2,500	11,000	<b>Solar Activity:</b> Low	
	Cirrostratus	Overcast	24,000	33,000		
		Probability of Violating Weather Constraints				
<b>24-Hour Delay</b>	<b>60%</b>	Primary Concerns: Anvil Cloud Rules, Cumulus Cloud Rule, Surface Electric Fields Rule				
	Weather Conditions				Additional Risk Criteria	
	<b>Weather/Visibility:</b> Sct. Storms / 6 mi.	<b>Clouds</b>			<b>Upper-Level Wind Shear:</b> Low	
	<b>Temp/Humidity:</b> 78°F / 88%	Type	Coverage	Base (ft)	Tops (ft)	<b>Booster Recovery Weather:</b> N/A
<b>Liftoff Winds (200'):</b> 250° 10 - 15 mph	Cumulus	Scattered	3,500	12,000	<b>Solar Activity:</b> Low	
	Cirrostratus	Overcast	24,000	34,000		
<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>		25 Apr 2023				