



# Launch Mission Execution Forecast

**Mission:** Falcon 9 Starlink 6-42

**Issued:** 21 Mar 24 /1030L (1430Z)

**Valid:** 22 Mar 24 / 1955-2355L (2355-23/0355Z)



**Forecast Discussion:** High pressure has pushed east of the Space Coast today, as a strong low pressure system develops in the Gulf of Mexico. Conditions will deteriorate through the day Friday as the Gulf Low moves northeast, bringing gusty winds, showers, and isolated thunderstorms across the Central Florida. There will be likely gaps in the unfavorable conditions that can be exploited during the ~4-hour window. The primary weather concerns for a Friday evening launch attempt include Liftoff Winds, as well as the Anvil and Cumulus Cloud Rules.

On Saturday, the low pressure will be tracking up the Eastern Seaboard, leaving the Spaceport with northwesterly winds and isolated, wrap-around showers dependent on the system's exact location. The primary launch weather concerns will be Liftoff Winds and the Cumulus Cloud Rule associated with the isolated showers.

		Probability of Violating Weather Constraints <sup>1</sup>					
<b>Launch Day</b>	<b>75%</b>	<b>Primary Concerns:</b> Liftoff Winds, Anvil Cloud Rule, Cumulus Cloud Rule					
	Weather Conditions				Additional Risk Criteria <sup>2</sup>		
	<b>Weather/Visibility:</b> Showers / 5 miles	<b>Clouds</b>				<b>Upper-Level Wind Shear:</b>	Low-Mod
		Type	Coverage	Base (ft)	Tops (ft)	<b>Booster Recovery Weather:</b>	Low-Mod
<b>Temp/Humidity:</b> 70°F / 90%	Cumulus	Scattered	3,000	15,000	<b>Solar Activity:</b>	Low	
<b>Liftoff Winds (200'):</b> 180° 25 - 30 mph	Altostratus	Broken	15,000	22,000			
		Probability of Violating Weather Constraints					
<b>24-Hour Delay</b>	<b>30%</b>	<b>Primary Concerns:</b> Liftoff Winds, Cumulus Cloud Rule					
	Weather Conditions				Additional Risk Criteria		
	<b>Weather/Visibility:</b> Isold Showers / 7 mi.	<b>Clouds</b>				<b>Upper-Level Wind Shear:</b>	Low-Mod
		Type	Coverage	Base (ft)	Tops (ft)	<b>Booster Recovery Weather:</b>	Low-Mod
<b>Temp/Humidity:</b> 65°F / 90%	Cumulus	Scattered	3,000	10,000	<b>Solar Activity:</b>	Low	
<b>Liftoff Winds (200'):</b> 300° 15 - 20 mph	Cirrostratus	Scattered	25,000	28,000			
<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					