



# Launch Mission Execution Forecast

**Mission:** Falcon 9 Starlink 6-46

**Issued:** 24 March 2024 / 1215L (1615Z)

**Valid:** 25 March 2024 / 1700 – 2100L (2100 – 26/0100Z)



**Forecast Discussion:** The pressure gradient between the departing area of low pressure over the Atlantic and high nosing down the eastern US coast will continue to bring windy northeasterly flow along with light showers at times. The low will meander across the western Atlantic through the first part of the week, keeping the breezy conditions in place. Models show an extensive low-topped stratocumulus deck piling into the Spaceport going into the primary launch window Monday afternoon, but it is expected that these clouds will pose little to no launch weather threat as they remain relatively warm and the very dry air above the surface limits cloud growth.

Though the next frontal system will be moving through the Central Gulf of Mexico on Tuesday, it will remain far enough west as to not be a concern for the backup window Tuesday afternoon. Locally, it will be another day of breezy conditions out of the southeast with a continued cumulus/stratocumulus deck moving into the coast from the Atlantic. High clouds will be on the increase ahead of the approaching system; however, these look to remain too cold and too thin to pose a significant concern for most of the launch window. There will be a small increase in the threat for Thick Cloud Layer violations going later into the window as the cloud cover increases.

Launch Day		Probability of Violating Weather Constraints <sup>1</sup>					
Launch Day	<5%	Primary Concerns: Cumulus Cloud Rule					
	Weather Conditions				Additional Risk Criteria <sup>2</sup>		
	<b>Weather/Visibility:</b> None / 7 mi.	<b>Clouds</b>				<b>Upper-Level Wind Shear:</b>	Low
	<b>Temp/Humidity:</b> 72°F / 63%	Type	Coverage	Base (ft)	Tops (ft)	<b>Booster Recovery Weather:</b>	Low-Mod
<b>Liftoff Winds (200'):</b> 100° 15 - 20 mph	Stratocumulus	Broken	3,000	5,500	<b>Solar Activity:</b>	Mod	
24-Hour Delay		Probability of Violating Weather Constraints					
24-Hour Delay	5%	Primary Concerns: Thick Cloud Layer Rule					
	Weather Conditions				Additional Risk Criteria		
	<b>Weather/Visibility:</b> None / 7 mi.	<b>Clouds</b>				<b>Upper-Level Wind Shear:</b>	Low
	<b>Temp/Humidity:</b> 76°F / 72%	Type	Coverage	Base (ft)	Tops (ft)	<b>Booster Recovery Weather:</b>	Low-Mod
<b>Liftoff Winds (200'):</b> 130° 15 - 20 mph	Cirrostratus	Scattered	25,000	35,000	<b>Solar Activity:</b>	Low-Mod	
Notes	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.						
Next Forecast Will Be Issued		As Needed					

See <https://www.patrick.spaceforce.mil/Portals/14/Weather/LaunchFAQ.pdf> for more information