



Launch Mission Execution Forecast



Mission: Falcon 9 Starlink 6-40

Issued: 28 Feb 2024 / 1100L (1600Z)

Valid: 29 Feb 2024 / 1030 – 1230L (1530 – 1730Z)

Forecast Discussion: After another day of benign weather today, cloud cover will increase as a weak boundary approaches central Florida from the north tomorrow morning. A narrow band of light showers will form along the boundary, but any showers that develop will likely be too shallow to cause a weather violation due to very dry air in the mid-levels. There will also be a deck of upper-level cirrus associated with the jet stream, but this cloud layer will be too high to be a significant thick cloud concern. Additionally, today's hi-res model runs are indicating increasing wind gusts behind the boundary, but there is uncertainty regarding the timing and magnitude of the wind surge. Thus, the main concerns for the primary attempt are the Cumulus Cloud Rule violation due to isolated showers and Liftoff Winds.

Conditions become more unfavorable for the backup window on Friday, as the cirrostratus layer thickens and decreases in altitude. This introduces the risk for a thick cloud concern in addition to any Atlantic low-topped showers. The POV increases on the backup day, with the primary risks being the Thick Cloud Layers Rule and Cumulus Cloud Rule.

Launch Day		Probability of Violating Weather Constraints ¹					
		15%	Primary Concerns: Cumulus Cloud Rule, Liftoff Winds				
		Weather Conditions				Additional Risk Criteria ²	
		Weather/Visibility: Isold Showers / 7 mi.	Clouds				Upper-Level Wind Shear: Low
			Type	Coverage	Base (ft)	Tops (ft)	
		Temp/Humidity: 69°F / 88%	Cumulus	Scattered	2,000	6,000	Booster Recovery Weather: Low
		Liftoff Winds (200'): 010° 15 - 25 mph	Cirrostratus	Broken	31,000	35,000	Solar Activity: Low
24-Hour Delay		Probability of Violating Weather Constraints					
		35%	Primary Concerns: Thick Cloud Layers Rule, Cumulus Cloud Rule				
		Weather Conditions				Additional Risk Criteria	
		Weather/Visibility: Isold Shower / 7 mi.	Clouds				Upper-Level Wind Shear: Low
			Type	Coverage	Base (ft)	Tops (ft)	
		Temp/Humidity: 71°F / 80%	Cumulus	Scattered	2,000	8,000	Booster Recovery Weather: Low
		Liftoff Winds (200'): 130° 17 - 22 mph	Cirrostratus	Broken	20,000	30,000	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 any random time 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		As Required					