



Launch Mission Execution Forecast



Mission: Falcon 9 Starlink 10-9

Issued: 26 July 2024 / 0930L (1330Z)

Valid: 27 July 2024 / 0021 – 0421L (0421 – 0821Z)

Forecast Discussion: The western Atlantic ridge axis is north of the Spaceport with deep onshore flow continuing to drive the east coast seabreeze quickly inland each afternoon. Lingering effects from Saharan dust will keep conditions drier than normal, with lower chances for overnight coastal showers. The primary weather concern for an attempt early Saturday morning is the Cumulus Cloud Rule associated with a stray coastal shower.

Later on Saturday, the Atlantic ridge will be disrupted by a frontal boundary slipping into the state while an upper-level low meandering near the Bahamas moves north. While there looks to be a gradual increase in afternoon storm chances as a result, given the continuing southeasterly flow and typically favorable launch window, the convective potential remains low. Instead, with upper-level flow out of the north to northeast, a mix of frontal cloudiness, convective debris, and anvils will likely be pulled over the Spaceport from any convection to the north. This will create the primary launch weather concerns of Thick Cloud Layers Rule and Anvil Cloud Rules for Sunday morning's launch window.

Launch Day		Probability of Violating Weather Constraints ¹				
Launch Day	15%	Primary Concerns: Cumulus Cloud Rule				
	Weather Conditions				Additional Risk Criteria ²	
	Weather/Visibility: None / 7 mi.	Clouds			Upper-Level Wind Shear: Low	
	Temp/Humidity: 82°F / 90%	Type	Coverage	Base (ft)	Tops (ft)	Booster Recovery Weather: Low
Liftoff Winds (200'): 150° 7 - 12 mph	Cumulus	Few	3,000	10,000	Solar Activity: Low	
	Cirrostratus	Scattered	25,000	30,000		
24-Hour Delay		Probability of Violating Weather Constraints				
24-Hour Delay	25%	Primary Concerns: Thick Cloud Layer Rule, Anvil Cloud Rule				
	Weather Conditions				Additional Risk Criteria	
	Weather/Visibility: None / 7 mi.	Clouds			Upper-Level Wind Shear: Low	
	Temp/Humidity: 82°F / 90%	Type	Coverage	Base (ft)	Tops (ft)	Booster Recovery Weather: Low
Liftoff Winds (200'): 160° 7 - 12 mph	Cumulus	Scattered	3,000	15,000	Solar Activity: Low	
	Cirrostratus	Broken	25,000	30,000		
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				