



Launch Mission Execution Forecast



Mission: Falcon 9 Starlink 8-11

Issued: 4 Sep 2024 / 1400L (1800Z)

Valid: 5 Sep 2024 / 0835 – 1235L (1235 – 1635Z)

Forecast Discussion: Deep moisture will continue pooling across the Florida Peninsula south of a stalled longwave trough. A subtle change in the pattern occurs Thursday as the surface boundary becomes more southerly, and a light offshore component develops in the mid-levels of the atmosphere. This will likely cause coastal showers to creep toward the coastline in the early morning, but by late morning, storms will generate locally on land across the Spaceport as the sea breeze boundary develops and is stubborn to move. In addition, training showers and storms over the same areas may occur due to a very slow storm moment. Conditions are best at the beginning and increases towards the end of the primary launch window.

On Friday, the influence of the ridge axis weakens locally, causing light offshore flow to develop just off the surface. Deep moisture will continue, but the coastline should remain on the drier side until late morning due to the lack of onshore flow. Thunderstorms are likely to generate along the sea breeze boundary by late morning, so conditions are worse at the end of the backup launch window in similar fashion to the day prior.

Launch Day	Probability of Violating Weather Constraints ¹					
	25→40%	Primary Concerns: Cumulus Cloud Rule, Anvil Rules				
	Weather Conditions				Additional Risk Criteria ²	
	Weather/Visibility: Sct Showers / 7 mi.	Clouds		Upper-Level Wind Shear: Low		
	Type	Coverage	Base (ft)	Tops (ft)		
Temp/Humidity: 83°F / 80%	Cumulus	Scattered	2,500	16,000	Booster Recovery Weather: Low-Mod	
Liftoff Winds (200'): 150° 5 - 10 mph	Altostratus	Scattered	22,000	26,000	Solar Activity: Low	

24-Hour Delay	Probability of Violating Weather Constraints					
	20→40%	Primary Concerns: Cumulus Cloud Rule, Anvil Rules				
	Weather Conditions				Additional Risk Criteria	
	Weather/Visibility: Iso Showers / 7 mi.	Clouds		Upper-Level Wind Shear: Low		
	Type	Coverage	Base (ft)	Tops (ft)		
Temp/Humidity: 82°F / 80%	Cumulus	Scattered	2,500	12,000	Booster Recovery Weather: Low	
Liftoff Winds (200'): 190° 5 - 10 mph	Altostratus	Scattered	22,000	26,000	Solar Activity: Low	

Notes

- 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
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