



Launch Mission Execution Forecast

Mission: Falcon 9 NROL-77

Issued: 8 December 2025 / 0900L (1400Z)

Valid: 9 December 2025 / 1406 – 1428L (1906 – 1928Z)



Forecast Discussion: Breezy north-northwesterly winds will usher in drier air to the Spaceport late today as a reinforcing cold front moves in behind the primary front that arrived this morning. Until then, considerable cloudiness and intermittent light showers are likely to persist through at least midday. Wind speeds will peak late tonight, before diminishing into Tuesday as the post-frontal high moves into the southeastern US. Though an onshore moving stratocumulus deck is likely alongside jet cirrus, neither of these are expected to pose a launch weather concern for the primary and backup launch opportunities.

		Probability of Violating Weather Constraints ¹				
Launch Day	<5%	Primary Concerns: None				
	Weather Conditions				Additional Risk Criteria ²	
	Weather/Visibility: None / 7 mi.	Clouds			Upper-Level Wind Shear: Low	
	Temp/Humidity: 70°F / 60%	Type	Coverage	Base (ft)	Tops (ft)	Solar Activity: Low
Liftoff Winds (200'): 010° 12 - 17 mph	Cumulus	Scattered	3,000	6,000		
	Cirrus	Scattered	35,000	38,000		
		Probability of Violating Weather Constraints				
24-Hour Delay	<5%	Primary Concerns: None				
	Weather Conditions				Additional Risk Criteria	
	Weather/Visibility: None / 7 mi.	Clouds			Upper-Level Wind Shear: Low	
	Temp/Humidity: 72°F / 55%	Type	Coverage	Base (ft)	Tops (ft)	Solar Activity: Low
Liftoff Winds (200'): 270° 5 - 10 mph	Cumulus	Few	3,000	5,000		
	Cirrus	Scattered	35,000	38,000		
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. See Launch FAQ https://45thweathersquadron.nebula.spaceforce.mil/pages/launchForecastSupport.html for more information					
Next Forecast Will Be Issued		As Needed				