



Launch Mission Execution Forecast

Mission: Falcon 9 Axiom-4

Issued: 24 Jun 2025 / 1430L (1830Z)

Valid: 25 Jun 2025 / 0220 - 0240L (0620 – 0640Z)



Forecast Discussion: No significant changes to today’s update. Deep onshore flow and relatively dry air will introduce a small risk of coastal showers overnight Tuesday into Wednesday morning, but these are expected to be isolated and low-topped. The main concern is the small risk of a Cumulus Cloud Rule and Flight Through Precipitation violation from one of these showers.

Tomorrow into Thursday morning, we will remain in onshore flow, but shower chances will increase as an upper level low and enhanced moisture moves in from the east. The primary concerns are the same as Wednesday’s attempt with a higher probability of violation. By Thursday, the surface ridge axis will slide southwards, moisture will continue to increase, and prevailing low-level winds will shift south to southwesterly. Higher shower and storm coverage is expected during the afternoon and evening hours over the peninsula. This activity will diminish overnight, and the main concerns will be from lingering convective cloud cover.

Ascent corridor conditions are generally favorable early Wednesday, but risk is a bit higher on Thursday and Friday due to wind speeds and rain chances increasing as the Atlantic ridge axis slides southwards.

Launch Day		Probability of Violating Weather Constraints ¹							
		10%	Primary Concerns: Cumulus Cloud Rule, Flight Through Precipitation						
		Weather Conditions				Additional Risk Criteria ²			
		Weather:	Isold Showers	Clouds			Upper-Level Wind Shear:	Low	
		Visibility:	7 miles	Type	Coverage	Base (ft)	Tops (ft)	Ascent Corridor Recovery:	Low
		Temp/Humidity:	79°F / 80%	Cumulus	Scattered	2,500	10,000	Booster Recovery Weather:	Low
		Liftoff Winds (200’):	130° 5 - 10 mph					Solar Activity:	Low
24-Hour Delay		Probability of Violating Weather Constraints							
		25%	Primary Concerns: Cumulus Cloud Rule, Flight Through Precipitation						
		Weather Conditions				Additional Risk Criteria			
		Weather:	Sct Showers	Clouds			Upper-Level Wind Shear:	Low	
		Visibility:	7 miles	Type	Coverage	Base (ft)	Tops (ft)	Ascent Corridor Recovery:	Low-Mod
		Temp/Humidity:	79°F / 80%	Cumulus	Scattered	2,500	14,000	Booster Recovery Weather:	Low
		Liftoff Winds (200’):	120° 7 - 12 mph	Cirrostratus	Scattered	30,000	35,000	Solar Activity:	Low
48-Hour Delay		Probability of Violating Weather Constraints							
		20%	Primary Concerns: Anvil Cloud Rules, Cumulus Cloud Rule, Flight Through Precipitation						
		Weather Conditions				Additional Risk Criteria			
		Weather:	Isold Showers	Clouds			Upper-Level Wind Shear:	Low	
		Visibility:	7 miles	Type	Coverage	Base (ft)	Tops (ft)	Ascent Corridor Recovery:	Low-Mod
		Temp/Humidity:	80°F / 85%	Cumulus	Scattered	2,500	12,000	Booster Recovery Weather:	Low
		Liftoff Winds (200’):	190° 10 - 15 mph	Cirrostratus	Scattered	26,000	35,000	Solar Activity:	Low
Note		<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 Launch FAQ https://45thweathersquadron.nebula.spaceforce.mil/pages/launchForecastSupport.html for more information							
Next Forecast Will Be Issued		As Required							