



Launch Mission Execution Forecast



Mission: Falcon 9 CRS-30

Issued: 20 Mar 2024 / 0830L (1230Z)

Valid: 21 Mar 2024/ 1649 – 1700L (2049 – 2100Z)

Forecast Discussion: A cool start to the day will warm to the 70s by afternoon as flow veers onshore. High pressure will linger across the Florida Peninsula today and escape to our east Thursday as an upper-level trough digs through the eastern CONUS. This upper-level trough will generate a low pressure system in the Gulf of Mexico Thursday. As a result, moisture will be on the increase Thursday afternoon, but conditions look optimistic from an LCC perspective as most of the rain and clouds hold off locally until the overnight hours. Primary concerns for a Thursday afternoon launch will be for the Thick Cloud Layers Rule and Cumulus Cloud Rule.

Conditions deteriorate significantly Friday as the Gulf Low shifts into the eastern Gulf and northern Florida, bringing numerous showers and isolated thunderstorms through the peninsula. Liftoff winds at rocket level will be around 30 mph with higher gusts. Concerns for the backup launch window include Anvil Cloud Rules, Liftoff Winds, and the Cumulus Cloud Rule with additional rule violations possible.

		Probability of Violating Weather Constraints ¹				
Launch Day	10%	Primary Concerns: Thick Cloud Layers Rule, Cumulus Cloud Rule				
	Weather Conditions				Additional Risk Criteria ²	
	Weather/Visibility: None / 7 mi.	Clouds			Upper-Level Wind Shear: Low-Mod	
		Type	Coverage	Base (ft)		
Temp/Humidity: 73°F / 50%	Cumulus	Scattered	3,000	5,000	Solar Activity: Low	
Liftoff Winds (200'): 110° 12 - 17 mph	Altostratus	Few	20,000	24,000		
		Probability of Violating Weather Constraints				
24-Hour Delay	85%	Primary Concerns: Anvil Cloud Rules, Liftoff Winds, Cumulus Cloud Rule				
	Weather Conditions				Additional Risk Criteria	
	Weather/Visibility: Num Showers / 7 mi.	Clouds			Upper-Level Wind Shear: Low-Mod	
		Type	Coverage	Base (ft)		
Temp/Humidity: 73°F / 70%	Cumulus	Broken	2,000	12,000	Solar Activity: Low	
Liftoff Winds (200'): 150° 30 - 35 mph	Altostratus	Broken	15,000	25,000		
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 https://www.patrick.spaceforce.mil/Portals/14/Weather/LaunchFAQ.pdf for more information				
Next Forecast Will Be Issued		As Required				