



Launch Mission Execution Forecast

Mission: Falcon 9 Starlink 6-4

Issued: 29 May 2023 / 1100L (1500Z)

Valid: 01 Jun 2023 / 0704-0956L (1104-1356Z)



Forecast Discussion: A rainy pattern will return to Florida starting late Wednesday and extend through at least Saturday. This is due an upper-level trough that will deepen over the eastern Gulf of Mexico, combined with a surface trough over south Florida and associated low developing along it sometime mid to late week. Deep onshore flow bringing unseasonably high moisture values and instability from troughing aloft will cause scattered showers and a few storms moving onshore around the Spaceport in the morning on the primary launch day, with numerous thunderstorms focused inland in the afternoon and evening. On Friday the pattern remains the same, though coverage is expected to be higher, with a deepening surface low somewhere around South Florida or the Bahamas, and the upper-level trough axis moving into the Florida peninsula. Both days, scattered to broken mid-level cloudiness is expected to move in from the west, downstream of the upper-level trough axis, bringing a slight secondary Thick Cloud Layers concern.

Launch Day	Probability of Violating Weather Constraints ¹				
	55%	Primary Concerns: Cumulus Cloud Rule, Surface Electric Fields Rule, Thick Cloud Layers Rule			
	Weather Conditions			Additional Risk Criteria ²	
	Weather/Visibility: Sct Showers / 7 mi.	Clouds		Upper-Level Wind Shear: Low	
Temp/Humidity: 76°F / 90%	Type	Coverage	Base (ft)	Tops (ft)	Booster Recovery Weather: Low
Liftoff Winds (200'): 090° 12 - 17 mph	Cumulus	Scattered	3,000	20,000	Solar Activity: Low
	Altostratus	Broken	8,000	14,000	
24-Hour Delay	Probability of Violating Weather Constraints				
	70%	Primary Concerns: Cumulus Cloud Rule, Surface Electric Fields Rule, Thick Cloud Layers Rule			
	Weather Conditions			Additional Risk Criteria	
	Weather/Visibility: Showers / 7 mi.	Clouds		Upper-Level Wind Shear: Low	
Temp/Humidity: 76°F / 90%	Type	Coverage	Base (ft)	Tops (ft)	Booster Recovery Weather: Low
Liftoff Winds (200'): 040° 12 - 17 mph	Cumulus	Broken	3,000	25,000	Solar Activity: Low
	Altostratus	Broken	10,000	18,000	
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 30 May 23