



Launch Mission Execution Forecast

Mission: Falcon 9 NASA Crew-7

Issued: 23 Aug 2023 / 0900L (1300Z)

Valid: 25 Aug 2023 / 0344Z - 0355L (0744Z - 0755Z)



Forecast Discussion: An upper level disturbance is sliding southwest across the state this morning as the surface high move off the coast of the northeastern US continues to push a boundary down the east coast. Today will bring an increase in the chance for showers as this boundary moves into North Florida late today, especially as east-northeast flow increases. There is more model support for this boundary stalling out closer to the Spaceport late Thursday, which would leave additional moisture and lift in the vicinity for Atlantic shower development heading into the primary launch window early Friday morning. This activity still looks to be in the form of low topped onshore moving showers as the air aloft remains fairly dry. This limits the threat for storms, making the Cumulus Cloud Rule the main weather concern with occasional elevations in the electric field with the few that can make it taller.

The boundary washes out on Friday, with high pressure behind it weakening across the state. Without the boundary, weakening east-northeast flow and drier than normal conditions will continue to bring a small threat for Atlantic showers into the weekend, though lower than Friday morning. The primary weather concern for the backup windows early Saturday and Sunday mornings will remain the Cumulus Cloud Rule.

Launch Day		Probability of Violating Weather Constraints ¹				
Launch Day	15%	Primary Concerns: Cumulus Cloud Rule, Surface Electric Field Rule				
	Weather Conditions			Additional Risk Criteria ²		
	Weather/Visibility: None / 7 mi.	Clouds			Upper-Level Wind Shear:	Low
	Temp/Humidity: 80°F / 79%	Type	Coverage	Base (ft)	Tops (ft)	Ascent Corridor Recovery: Low
Liftoff Winds (200'): 060° 12 - 17 mph	Cumulus	Scattered	2,500	10,000	Solar Activity: Low	
24-Hour Delay		Probability of Violating Weather Constraints				
24-Hour Delay	10%	Primary Concerns: Cumulus Cloud Rule				
	Weather Conditions			Additional Risk Criteria		
	Weather/Visibility: None / 7 mi.	Clouds			Upper-Level Wind Shear:	Low
	Temp/Humidity: 80°F / 83%	Type	Coverage	Base (ft)	Tops (ft)	Ascent Corridor Recovery: Low
Liftoff Winds (200'): 070° 5 - 10 mph	Cumulus	Scattered	2,500	7,000	Solar Activity: Low	
48-Hour Delay		Probability of Violating Weather Constraints				
48-Hour Delay	10%	Primary Concerns: Cumulus Cloud Rule				
	Weather Conditions			Additional Risk Criteria		
	Weather/Visibility: None / 7 mi.	Clouds			Upper-Level Wind Shear:	Low
	Temp/Humidity: 80°F / 85%	Type	Coverage	Base (ft)	Tops (ft)	Ascent Corridor Recovery: Low
Liftoff Winds (200'): VRB 5 mph	Cumulus	Scattered	2,500	7,000	Solar Activity: Low	
Notes	1. The Probability of Violation (PoV) is the chance of a local safety or customer constraint violation occurring anytime 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 24 Aug 2023