



Launch Mission Execution Forecast

Mission: Falcon 9 NASA CRS-28

Issued: 4 June 2023 / 1100L (1500Z)

Valid: 5 June 2023 / 1142-1153L (1542-1553Z)



Forecast Discussion: High pressure settling into the southeastern US is pushing a weak boundary into Central Florida late this morning with a weak low along this boundary offshore NE Florida. A few showers and storms are possible into early afternoon before increasing north-northeast flow shifts better chances inland into the late afternoon. The actual front is expected to push through slowly late tonight into Monday morning with another round of morning showers. Some showers may linger into the launch window midday Monday, but the main weather concern will be the brisk northeasterly flow which may pose a liftoff wind concern.

High pressure settles over the area by Tuesday, pushing the persistent deep moisture south of the area. A similar pattern will continue into Wednesday. The development of the east coast seabreeze should just be getting started by the backup launch window midday Wednesday, which will likely be a little to early for significant convective development. However, there will be building cumulus that will pose the main launch concern. The ridge axis will be suppressed to the south by Thursday with modest southwesterly flow holding back seabreeze development near the coast. There may be a few showers starting to develop by the midday launch window on Thursday.

Launch Day	Probability of Violating Weather Constraints ¹					
	40%	Primary Concerns: Flight Through Precipitation, Cumulus Cloud Rule, Liftoff Winds				
	Weather Conditions				Additional Risk Criteria ²	
	Weather/Visibility: Isold Showers / 7 mi.	Clouds		Upper-Level Wind Shear: Low		
	Type	Coverage	Base (ft)	Tops (ft)		
Temp/Humidity: 79°F / 70%	Cumulus	Scattered	3,000	10,000	Booster Recovery Weather: Mod	
Liftoff Winds (200'): 030° 17 - 22 mph	Altostratus	Scattered	14,000	18,000	Solar Activity: Low	
48-Hour Delay	Probability of Violating Weather Constraints					
	10%	Primary Concerns: Cumulus Cloud Rule				
	Weather Conditions				Additional Risk Criteria	
	Weather/Visibility: None / 7 mi.	Clouds		Upper-Level Wind Shear: Low		
	Type	Coverage	Base (ft)	Tops (ft)		
Temp/Humidity: 82°F / 65%	Cumulus	Scattered	3,000	8,000	Booster Recovery Weather: Low-Mod	
Liftoff Winds (200'): VRB 5 mph					Solar Activity: Low	
72-Hour Delay	Probability of Violating Weather Constraints					
	15%	Primary Concerns: Cumulus Cloud Rule				
	Weather Conditions				Additional Risk Criteria	
	Weather/Visibility: None / 7 mi.	Clouds		Upper-Level Wind Shear: Low		
	Type	Coverage	Base (ft)	Tops (ft)		
Temp/Humidity: 82°F / 61%	Cumulus	Scattered	3,000	8,000	Booster Recovery Weather: Low	
Liftoff Winds (200'): 240° 10 - 15 mph					Solar Activity: Low	
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 Needed