



Launch Mission Execution Forecast

Mission: Falcon 9 NASA CRS-28

Issued: 3 June 2023 / 0630L (1030Z)

Valid: 4 June 2023 / 1207-1218L (1607-1618Z)



Forecast Discussion: The rapidly weakening TS Arlene near the NW coast of Cuba is forecast to dissipate into tonight, with a second trough developing north of the Bahamas. The changes in sensible weather across the Spaceport will be minimal with abundant moisture and upper-level trough still in place. There will be periods of onshore moving showers and storms, with the highest coverage in the first half of the day, before activity focuses more inland in the afternoon. Into Sunday, the model trend has been for a little less precipitation coverage as perhaps another weak low developing along the second trough backs winds more NNW, or offshore. However, there will still be quite a bit of moisture around as surface heating gets started. Showers and storms in the vicinity will still present the primary weather concern for the primary launch window midday Sunday.

High pressure settling into the southeastern US will push a weak boundary through on Monday. Exactly where this boundary reaches by midday will determine how dry conditions may be. For now, it looks like it may be just to the south leading to a lower threat for any convection for the backup window midday Monday. High pressure settles over the area by Tuesday with minimal rain chances and light winds.

Launch Day	Probability of Violating Weather Constraints ¹					
	60%	Primary Concerns: Cumulus Cloud Rule, Flight Through Precipitation, Surface Electric Fields Rule				
	Weather Conditions				Additional Risk Criteria ²	
	Weather/Visibility: Sct Showers / 7 mi.	Clouds			Upper-Level Wind Shear: Low	
	Type	Coverage	Base (ft)	Tops (ft)		
Temp/Humidity: 77°F / 75%	Cumulus	Scattered	2,500	12,000	Booster Recovery Weather: Mod	
Liftoff Winds (200'): 350° 10 - 15 mph	Altostratus	Broken	15,000	20,000	Solar Activity: Low	
24-Hour Delay	Probability of Violating Weather Constraints					
	40%	Primary Concerns: Flight Through Precipitation, Cumulus Cloud Rule, Liftoff Winds				
	Weather Conditions				Additional Risk Criteria	
	Weather/Visibility: Isold Showers / 7 mi.	Clouds			Upper-Level Wind Shear: Low	
	Type	Coverage	Base (ft)	Tops (ft)		
Temp/Humidity: 77°F / 77%	Cumulus	Scattered	3,000	10,000	Booster Recovery Weather: Low-Mod	
Liftoff Winds (200'): 020° 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: 80°F / 55%	Cumulus	Scattered	3,000	5,000	Booster Recovery Weather: Low	
Liftoff Winds (200'): 050° 5 - 10 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				