



Launch Mission Execution Forecast

Mission: Falcon 9 NASA Crew-3

Issued: 10 Nov 2021 /0800L (1300Z)

Valid: 10 Nov 2021 / 2058 - 2108L (11/0158 - 0208Z)



Forecast Discussion: A large area of high pressure across the eastern US will continue its slide into the Atlantic, with deepening easterly flow bringing more clouds into the coast. Passing light showers will be possible through the afternoon and into the launch window. The main weather concerns for this evening's launch will be Cumulus Clouds and Flight Through Precipitation associated with this activity.

The next storm system will wind up across the northern tier of the US, bringing another cold front through the eastern third of the US late week. Deeper moisture arrives as flow becomes southerly, along with better chances for showers, and potentially a storm, Thursday afternoon and evening across Central Florida. Some of this activity may push east off the coast near the Spaceport late evening as steering flow becomes southwesterly. Cumulus Clouds, Flight Through Precipitation, and the Surface Electric Field Rule will all be a concern for a Thursday evening launch attempt.

Models have trended towards a pre-frontal boundary moving through Friday afternoon, bringing slightly better weather conditions by the Friday evening launch window. Cumulus Clouds and Flight Through Precipitation will be the main launch concerns Friday night.

		Probability of Violating Weather Constraints					
Launch Day	30%	Primary Concerns: Cumulus Cloud Rule, Flight Through Precipitation					
	Weather Conditions				Additional Risk Criteria		
	Weather:	Isolated Showers	Clouds			Upper-Level Wind Shear:	Low
			Type	Coverage	Base (ft)	Tops (ft)	
	Visibility:	7 miles	Cumulus	Scattered	3,500	10,000	Ascent Corridor Recovery: Low
Temp/Humidity:	72°F / 78%	Cirrus	Scattered	30,000	35,000	Booster Recovery Weather: Low	
Liftoff Winds (200'):	100° 10 - 15 mph				Solar Activity:	Low	
		Probability of Violating Weather Constraints					
24-Hour Delay	50%	Primary Concerns: Cumulus Cloud Rule, Flight Through Precipitation, Surface Electric Field Rule					
	Weather Conditions				Additional Risk Criteria		
	Weather:	Scattered Showers	Clouds			Upper-Level Wind Shear:	Moderate
			Type	Coverage	Base (ft)	Tops (ft)	
	Visibility:	7 miles	Cumulus	Scattered	3,500	12,000	Ascent Corridor Recovery: Moderate
Temp/Humidity:	70°F / 85%	Cirrus	Broken	25,000	30,000	Booster Recovery Weather: Moderate	
Liftoff Winds (200'):	190° 12 - 17 mph				Solar Activity:	Low	
		Probability of Violating Weather Constraints					
48-Hour Delay	30%	Primary Concerns: Cumulus Cloud Rule, Flight Through Precipitation					
	Weather Conditions				Additional Risk Criteria		
	Weather:	Isolated Showers	Clouds			Upper-Level Wind Shear:	Low
			Type	Coverage	Base (ft)	Tops (ft)	
	Visibility:	7 miles	Cumulus	Scattered	3,000	8,000	Ascent Corridor Recovery: Moderate
Temp/Humidity:	71°F / 85%	Cirrocumulus	Broken	25,000	30,000	Booster Recovery Weather: Low	
Liftoff Winds (200'):	VRB 5 mph				Solar Activity:	Low	
Note: The Probability of Violation (POV) is the chance that a Lightning Launch Commit Criteria (LLCC) or certain user constraints (surface winds, precipitation, and temperatures, etc.) will be violated during the launch window. It does not take into account upper-level wind shear, booster recovery weather, and solar activity.							
Next Forecast Will Be Issued		As Needed					