

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.

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Probability of Violating Weather Constraints								
30% Primary Concerns: Cumulus Cloud Rule, Flight Through Precipitation								
Weather: Isolated Showers Visibility: 7 miles Primary Concerns: Cumulus Cloud Rule, Flight Through Precipitation Clouds Type Coverage Base (ft) Tops (ft) Cumulus Scattered 3,500 10,000						Additional Risk Criteria		
Weather:		Isolated Showers	Туре	Clouds Coverage	Base (ft)	Tops (ft)	Upper-Level Wind Shear:	Low
Visibility:		7 miles	Cumulus	Scattered	3,500	10,000	Ascent Corridor Recovery:	Low
Temp/Humidi	ity:	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 50% Primary Concerns: Cumulus Cloud Rule, Flight Through Precipitation, Surface Electric Field Rule Weather Conditions Additional Risk Criteria								
50% Primary Concerns: Cumulus Cloud Rule, Flight Through Precipitation, Surface Electric Field Rule								
Weather Conditions							Additional Risk Criteria	
Weather:		Scattered Showers	Туре	Clouds Coverage	Base (ft)	Tops (ft)	Upper-Level Wind Shear:	Moderate
Visibility:		7 miles	Cumulus	Scattered	3,500	12,000	Ascent Corridor Recovery:	Moderate
Weather: Visibility: 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 30% Primary Concerns: Cumulus Cloud Rule, Flight Through Precipitation Weather Conditions Additional Risk Criteria								
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Weather Conditions							Additional Risk Criteria	
Weather:		Isolated Showers	Туре	Cloud: Coverage	Base (ft)	Tops (ft)	Upper-Level Wind Shear:	Low
Visibility:		7 miles	Cumulus	Scattered	3,000	8,000	Ascent Corridor Recovery:	Moderate
Weather: Visibility: Temp/Humidity:		71°F / 85%	Cirrocumulus	Broken	25,000	30,000	Booster Recovery Weather:	Low
Liftoff Winds	VRB 5 mph					Solar Activity:	Low	
	30% Weather: Visibility: Temp/Humidi Liftoff Winds 50% Weather: Visibility: Temp/Humidi Liftoff Winds 30% Weather: Visibility: Temp/Humidi	Weather: Visibility: Temp/Humidity: Liftoff Winds (200'): 50% Prima Weather: Visibility: Temp/Humidity: Liftoff Winds (200'): 30% Prima Weather: Visibility: Temp/Humidity: Liftoff Winds (200'):	Probate Weather: Isolated Showers Visibility: 7 miles Temp/Humidity: 72°F / 78% Liftoff Winds (200'): 100° 10 - 15 mph Probate Weather: Scattered Showers Visibility: 7 miles Temp/Humidity: 70°F / 85% Liftoff Winds (200'): 190° 12 - 17 mph Probate 30% Primary Concerns: Cum Weather: Scattered Showers Visibility: 7 miles Temp/Humidity: 70°F / 85% Liftoff Winds (200'): 190° 12 - 17 mph Probate Weather: Isolated Showers Visibility: 7 miles	Probability of Vio 30% Primary Concerns: Cumulus Cloud Ru Weather: Isolated Showers Visibility: 7 miles Cumulus Cirrus Probability of Vio 50% Primary Concerns: Cumulus Cloud Ru Weather Conditions Weather Conditions Weather: Scattered Showers Visibility: 7 miles Cirrus Type Cumulus Cloud Ru Weather Conditions Visibility: 7 miles Cirrus Cirrus Type Cumulus Cirrus Type Cumulus Cirrus Probability of Vio 30% Primary Concerns: Cumulus Cloud Ru Weather: Scattered Showers Type Cumulus Cirrus Visibility: 7 miles Cirrus Weather Conditions Weather: Isolated Showers Visibility: 7 miles Cumulus Cloud Ru Cirrus Cirrocumulus Cirrocumulus	Probability of Violating Weather Conditions Weather: Isolated Showers Visibility: 7 miles Cirrus Scattered Liftoff Winds (200'): 100° 10 - 15 mph Probability of Violating Weather: Scattered Showers Visibility: 7 miles Probability of Violating Weather: Scattered Showers Visibility: 7 miles Veather Conditions Weather: Scattered Showers Visibility: 7 miles Cirrus Scattered Cirrus Scattered Coverage Cumulus Cloud Rule, Flight Town Coverage Cumulus Scattered Cirrus Broken Probability of Violating Weather: Cirrus Broken Weather Conditions Weather: Isolated Showers Visibility: 7 miles Coverage Cumulus Cloud Rule, Flight Town Coverage Cumulus Clou	Probability of Violating Weather 30% Primary Concerns: Cumulus Cloud Rule, Flight Through Rule, Flight Through Rule, Visibility: 7 miles Cumulus Scattered 3,500 Temp/Humidity: 72°F / 78% Cirrus Scattered 30,000 Liftoff Winds (200'): 100° 10 - 15 mph Probability of Violating Weather Probability of Violating Weather Weather Conditions Weather: Scattered Showers Weather: Scattered Showers Cumulus Cloud Rule, Flight Through Rule, Flight Through Rule, Visibility: 7 miles Cumulus Scattered 3,500 Temp/Humidity: 70°F / 85% Cirrus Broken 25,000 Liftoff Winds (200'): 190° 12 - 17 mph Probability of Violating Weather Probability of Violating Weather Weather Conditions Weather Conditions Weather Conditions Weather Conditions Weather Conditions Weather Conditions Weather: Isolated Showers Visibility: 7 miles Coverage Base (ft) Cumulus Scattered 3,000 Coverage Base (ft) Coverage Base (f	Probability of Violating Weather Constraing Propagation	Probability of Violating Weather Constraints Weather Conditions

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 Ne

As Needed