



Launch Mission Execution Forecast

Mission: Falcon 9 Intelsat G-31/G-32

Issued: 6 November 2022 / 0730L (1230Z)

Valid: 8 November 2022 / 1106 – 1307L (1606 – 1807Z)



Forecast Discussion: A strong high pressure area remains anchored north of Bermuda, while a low pressure area with tropical characteristics has developed north of Puerto Rico. The low pressure area has a high chance of developing into a named tropical system as it slowly moves northwards and strengthens. The interaction of these two systems will create strong onshore flow with occasional fast-moving showers, mostly in the overnight and early morning hours. These conditions will continue through early next week with the shower activity becoming more prevalent as the depth and strength of the easterly flow increases. On Tuesday, the low pressure area should reach its northern most position, east of the central Bahamas. The primary weather concerns for a launch attempt Tuesday are Liftoff Winds, and the Cumulus Cloud Rule associated with the strong onshore flow.

On Wednesday, the low pressure area will most likely move towards south Florida, creating the peak pressure gradient and shower activity at the Spaceport. The primary weather concerns for a Wednesday attempt remain Liftoff Winds and the Cumulus Cloud Rule, with the addition of the Disturbed Weather Rule due to the proximity of the low pressure area.

Launch Day	Probability of Violating Weather Constraints ¹							
	70%	Primary Concerns: Liftoff Winds, Cumulus Cloud Rule						
	Weather Conditions					Additional Risk Criteria ²		
	Weather/Visibility:	Isold Showers / 7 mi.	Type	Coverage	Base (ft)	Tops (ft)	Upper-Level Wind Shear:	Moderate
	Temp/Humidity:	82°F / 72%	Cumulus	Few	3,000	12,000	Recovery Conditions:	High
	Liftoff Winds (200'):	040° 28 - 32 mph	Cirrus	Scattered	28,000	30,000	Solar Activity:	Low
24-Hour Delay	Probability of Violating Weather Constraints							
	80%	Primary Concerns: Liftoff Winds, Cumulus Cloud Rule, Disturbed Weather Rule						
	Weather Conditions					Additional Risk Criteria		
	Weather/Visibility:	Showers / 5 mi.	Type	Coverage	Base (ft)	Tops (ft)	Upper-Level Wind Shear:	Low-Mod
	Temp/Humidity:	77°F / 82%	Cumulus	Scattered	3,000	18,000	Recovery Conditions:	High
	Liftoff Winds (200'):	050° 30 - 35 mph	Cirrostratus	Broken	28,000	32,000	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		7 November 2022						