



Launch Mission Execution Forecast

Mission: Falcon 9 CRS-31

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Forecast Discussion: Surface high pressure currently situated across the Northeast U.S. will shift east out into the northwestern Atlantic over the next few days, with a tropical cyclone likely developing across the Caribbean Sea. The resultant strengthening and deepening onshore flow locally will support intermittent showers rolling off the Atlantic and onto the Spaceport. Atmospheric moisture within this flow is likely to substantially increase going into midweek, yielding a greater concentration of showers and higher threat for launch violations on the backup opportunities. However, winds will remain elevated through the week, and gusts associated with any showers will further exacerbate these winds. Consequently, the probability of violation for weather constraints is somewhat greater than November climatology for the primary launch day, and much higher than normal for the backup launch opportunities.

Launch Day	Probability of Violating Weather Constraints ¹					
	30%	Primary Concerns: Cumulus Cloud Rule, Liftoff Winds, Flight Through Precipitation				
	Weather Conditions				Additional Risk Criteria ²	
	Weather/Visibility: Isol Showers / 7 mi.	Clouds			Upper-Level Wind Shear: Low	
	Type	Coverage	Base (ft)	Tops (ft)		
Temp/Humidity: 75°F / 85%	Cumulus	Scattered	2,000	12,000	Booster Recovery Weather: Low-Mod	
Liftoff Winds (200'): 080° 23 - 28 mph					Solar Activity: Low	
24-Hour Delay	Probability of Violating Weather Constraints					
	60%	Primary Concerns: Cumulus Cloud Rule, Flight Through Precipitation, Liftoff Winds				
	Weather Conditions				Additional Risk Criteria	
	Weather/Visibility: Sct Showers / 7 mi.	Clouds			Upper-Level Wind Shear: Low	
	Type	Coverage	Base (ft)	Tops (ft)		
Temp/Humidity: 76°F / 90%	Cumulus	Broken	2,000	16,000	Booster Recovery Weather: Low-Mod	
Liftoff Winds (200'): 100° 23 - 28 mph					Solar Activity: Low	
48-Hour Delay	Probability of Violating Weather Constraints					
	40%	Primary Concerns: Cumulus Cloud Rule, Flight Through Precipitation, Liftoff Winds				
	Weather Conditions				Additional Risk Criteria	
	Weather/Visibility: Isol Showers / 7 mi.	Clouds			Upper-Level Wind Shear: Low	
	Type	Coverage	Base (ft)	Tops (ft)		
Temp/Humidity: 76°F / 90%	Cumulus	Scattered	2,000	15,000	Booster Recovery Weather: Low-Mod	
Liftoff Winds (200'): 120° 23 - 28 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 Required