



Launch Mission Execution Forecast

Mission: Falcon 9 NASA Crew-5

Issued: 2 Oct 2022 / 0930L (1330Z)

Valid: 5 Oct 2022 / 1155 - 1205L (1555 - 1605Z)



Forecast Discussion: Seasonably cool, dry air will continue to filter into central Florida in the wake of Hurricane Ian, as its remnants push to the northeast. Ironically, Hurricane Ian brought the end to the wet season across our area, which is characterized by the daily sea breeze driven shower and thunderstorm activity. Northwest flow the first part of the week will gradually veer northerly to northeasterly as a continental high pressure system slides in from the northwest. A weak cold front will move through the area and spark scattered showers late on Tuesday, but it is expected to be well south of the Spaceport by Wednesday. On launch day, the high will be centered over the southeastern US, bringing breezy northeasterly winds. While a few small, short lived coastal showers cannot be ruled out with the onshore flow, very dry air in the mid and upper levels will cap off any significant activity. Therefore, the primary concerns are the Cumulus Cloud Rule and Flight Through Precipitation.

By Thursday and Friday, winds will slightly weaken and stay northeasterly as the high slides further south and flattens into a more west-to-east orientation. The dry air will remain in place and the concerns are the same as the primary day.

Launch Day		Probability of Violating Weather Constraints ¹					
		10%	Primary Concerns: Cumulus Cloud Rule, Flight Through Precipitation				
		Weather Conditions				Additional Risk Criteria ²	
		Weather:	None		Clouds		Upper-Level Wind Shear: Low
		Visibility:	7 miles		Type	Coverage	Ascent Corridor Weather: Mod-High
		Temp/Humidity:	76°F / 60%		Base (ft)	Tops (ft)	Booster Recovery Weather: Low-Mod
		Liftoff Winds (200'):	030° 12 - 17 mph		Cumulus	Scattered 2,500 5,000	Solar Activity: Low
24-Hour Delay		Probability of Violating Weather Constraints					
		10%	Primary Concerns: Cumulus Cloud Rule, Flight Through Precipitation				
		Weather Conditions				Additional Risk Criteria	
		Weather:	None		Clouds		Upper-Level Wind Shear: Low
		Visibility:	7 miles		Type	Coverage	Ascent Corridor Weather: Low
		Temp/Humidity:	77°F / 55%		Base (ft)	Tops (ft)	Booster Recovery Weather: Low
		Liftoff Winds (200'):	040° 10 - 15 mph		Cumulus	Few 2,500 5,000	Solar Activity: Low
48-Hour Delay		Probability of Violating Weather Constraints					
		20%	Primary Concerns: Cumulus Cloud Rule, Flight Through Precipitation				
		Weather Conditions				Additional Risk Criteria	
		Weather:	None		Clouds		Upper-Level Wind Shear: Low
		Visibility:	7 miles		Type	Coverage	Ascent Corridor Weather: Low
		Temp/Humidity:	77°F / 60%		Base (ft)	Tops (ft)	Booster Recovery Weather: Low
		Liftoff Winds (200'):	020° 10 - 15 mph		Cumulus	Scattered 2,500 8,000	Solar Activity: Low
Notes		<ol style="list-style-type: none"> The Probability of Violation (PoV) is the chance of a local safety or customer constraint violation occurring anytime during the launch window. 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		3 Oct 2022					