



Launch Mission Execution Forecast

Mission: Falcon 9 NASA Crew-5

Issued: 3 Oct 2022 / 0830L (1230Z)

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 spin off the Mid-Atlantic coast. Ironically, 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. Launch conditions will be favorable, with the primary concerns being the Cumulus Cloud Rule and Flight Through Precipitation. By Thursday and Friday, winds will weaken and stay northeasterly as the high slides further south and flattens into a more west-to-east orientation. Launch weather remains favorable and the concerns are the same as the primary day.

Launch Day		Probability of Violating Weather Constraints ¹																							
Launch Day		10%	Primary Concerns: Cumulus Cloud Rule, Flight Through Precipitation																						
		Weather Conditions				Additional Risk Criteria ²																			
		Weather:	None	<table border="1"> <thead> <tr> <th colspan="4">Clouds</th> </tr> <tr> <th>Type</th> <th>Coverage</th> <th>Base (ft)</th> <th>Tops (ft)</th> </tr> </thead> <tbody> <tr> <td>Cumulus</td> <td>Few</td> <td>2,500</td> <td>5,000</td> </tr> </tbody> </table>				Clouds				Type	Coverage	Base (ft)	Tops (ft)	Cumulus	Few	2,500	5,000	Upper-Level Wind Shear:	Low				
		Clouds																							
Type	Coverage	Base (ft)	Tops (ft)																						
Cumulus	Few	2,500	5,000																						
Visibility:	7 miles					Ascent Corridor Weather:	Moderate																		
Temp/Humidity:	76°F / 60%					Booster Recovery Weather:	Low																		
Liftoff Winds (200'):	030° 12 - 17 mph					Solar Activity:	Low																		
24-Hour Delay		Probability of Violating Weather Constraints																							
24-Hour Delay		10%	Primary Concerns: Cumulus Cloud Rule, Flight Through Precipitation																						
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Cumulus	Few	2,500	5,000																						
Visibility:	7 miles					Ascent Corridor Weather:	Low																		
Temp/Humidity:	77°F / 55%					Booster Recovery Weather:	Low																		
Liftoff Winds (200'):	010° 7 - 12 mph					Solar Activity:	Low																		
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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		4 Oct 2022																							