



# Launch Mission Execution Forecast



**Mission:** Falcon 9 Starlink g8-5

**Issued:** 3 Jun 2024 / 1145L (1545Z)

**Valid:** 4 Jun 2024 / 2004 – 2330L (5/0004 – 0330Z)

**Forecast Discussion:** Overall, weather conditions will be quite favorable for Tuesday evening’s launch attempt. An area of high pressure centered off the Carolina coast will bring persistent easterly flow in the low levels for the first half of the week. The onshore flow, combined with seasonably dry air, will limit the coverage of afternoon convection near the Space Coast. The showers and thunderstorms that do develop will be focused towards the western half of the Florida peninsula on Tuesday. The combination of the dry air and relatively weak winds in the upper levels will also limit the ability of any anvil clouds to make it back towards the east coast. Thus, the only concern is the small chance of a low-topped shower coming off the Atlantic waters, invoking a slight Cumulus Cloud Rule risk.

On Wednesday, the pattern begins to transition as a front dips into the Southeastern US, pushing the ridge axis farther south and increasing moisture over Florida. Low level winds will remain southeasterly, but steering level flow and upper level winds will become more westerly. Because of these factors, the sea breeze collision will again occur well inland, but shower/storm coverage will likely be higher with an increased threat the storms and associated anvil clouds will be able to migrate back towards the east coast. However, after sunset, the weather violation risk will begin to decrease as convective activity wanes. The POV is higher at the opening of the window with the added risk of the Anvil Cloud Rules compared to Tuesday evening’s attempt.

<b>Launch Day</b>	Probability of Violating Weather Constraints <sup>1</sup>					
	<b>10%</b>	Primary Concerns: Cumulus Cloud Rule				
	Weather Conditions				Additional Risk Criteria <sup>2</sup>	
	<b>Weather/Visibility:</b> None / 7 mi.	<b>Clouds</b>			<b>Upper-Level Wind Shear:</b> Low	
	<b>Temp/Humidity:</b> 79°F / 75%	Type	Coverage	Base (ft)	Tops (ft)	<b>Booster Recovery Weather:</b> Low
<b>Liftoff Winds (200'):</b> 110° 12 - 17 mph	Cumulus	Scattered	3,000	8,000	<b>Solar Activity:</b> Low	

<b>24-Hour Delay</b>	Probability of Violating Weather Constraints					
	<b>20→10%</b>	Primary Concerns: Anvil Cloud Rules, Cumulus Cloud Rule				
	Weather Conditions				Additional Risk Criteria	
	<b>Weather/Visibility:</b> None / 7 mi.	<b>Clouds</b>			<b>Upper-Level Wind Shear:</b> Low	
	<b>Temp/Humidity:</b> 80°F / 80%	Type	Coverage	Base (ft)	Tops (ft)	<b>Booster Recovery Weather:</b> Low
<b>Liftoff Winds (200'):</b> 130° 12 - 17 mph	Cirrostratus	Scattered	28,000	33,000	<b>Solar Activity:</b> Low	

**Notes**

- The Probability of Violation (PoV) is the chance of a local safety or customer constraint violation occurring any random time 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

<b>Next Forecast Will Be Issued</b>	As Required
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