



# Launch Mission Execution Forecast

**Mission:** Falcon 9 Starlink 6-59

**Issued:** 16 May 2024 / 1000L (1400Z)

**Valid:** 17 May 2024 / 1952 – 2330L (17/2352 – 18/0330Z)



**Forecast Discussion:** The frontal boundary that crossed the area this morning will stall out across South Florida later today, getting just far enough south to allow a drier airmass into the Spaceport. Precipitation chances will be very limited this afternoon, with the chance for a brief shower at best as the east coast sea breeze develops and moves inland. For Friday, models now suggest the boundary will return to the north with enough moisture for a few more showers and storms during the afternoon hours on the inland moving sea breeze. Though best chances will be inland of the Spaceport by the late afternoon, west-northwest steering flow will push some of this back towards the coast along with any associated anvil clouds. These will post potential concern for the opening of the primary Friday evening launch window, with an improvement in conditions expected through the window as any convection diminishes.

There is some disagreement on how much moisture return the area will see on Saturday ahead of another frontal boundary moving into the state. Regardless, it still looks like higher coverage than Friday, with an increase in southwesterly flow keeping the east coast sea breeze close to the coast and pushing any inland activity towards the Spaceport. Coverage of showers and storms and associated anvil clouds will diminish through the backup window Saturday evening, though with the approaching front, it's harder to pin down how quickly this occurs.

		Probability of Violating Weather Constraints <sup>1</sup>				
<b>Launch Day</b>	<b>25% → 5%</b>	<b>Primary Concerns:</b> Anvil Cloud Rules, Cumulus Cloud Rule				
	Weather Conditions				Additional Risk Criteria <sup>2</sup>	
	<b>Weather/Visibility:</b> Isold. Showers / 7 mi.	<b>Clouds</b>			<b>Upper-Level Wind Shear:</b> Low	
	<b>Temp/Humidity:</b> 80°F / 83%	Type	Coverage	Base (ft)	Tops (ft)	<b>Booster Recovery Weather:</b> Low
<b>Liftoff Winds (200'):</b> 130° 12 - 17 mph	Cumulus	Scattered	3,500	9,000	<b>Solar Activity:</b> Low	
	Altostratus	Broken	14,000	19,000		
		Probability of Violating Weather Constraints				
<b>24-Hour Delay</b>	<b>60% → 20%</b>	<b>Primary Concerns:</b> Anvil Cloud Rules, Cumulus Cloud Rule				
	Weather Conditions				Additional Risk Criteria	
	<b>Weather/Visibility:</b> Sct. Showers / 7 mi.	<b>Clouds</b>			<b>Upper-Level Wind Shear:</b> Low	
	<b>Temp/Humidity:</b> 82°F / 80%	Type	Coverage	Base (ft)	Tops (ft)	<b>Booster Recovery Weather:</b> Low
<b>Liftoff Winds (200'):</b> 160° 12 - 17 mph	Cumulus	Broken	3,000	12,000	<b>Solar Activity:</b> Low	
	Cirrus	Broken	30,000	35,000		
<b>Notes</b>	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 <a href="https://www.patrick.spaceforce.mil/Portals/14/Weather/LaunchFAQ.pdf">https://www.patrick.spaceforce.mil/Portals/14/Weather/LaunchFAQ.pdf</a> for more information				
<b>Next Forecast Will Be Issued</b>		As Needed				