



# Launch Mission Execution Forecast

**Mission:** Falcon 9 Starlink 4-34

**Issued:** 17 Sept 2022 / 2030L (18/0030Z)

**Valid:** 18 Sept 2022 / 2016 – 2035L (19/0016 – 0035)



**Forecast Discussion:** What is left of the very persistent frontal boundary that has been across the Florida peninsula for the past week has now degenerated into an inverted trough oriented southwest to northeast across the Cape. Models remain consistent in showing a weak low developing along the northern end of the surface trough, offshore North Florida, which in combination with the eastward slide of the upper-level trough will help usher in a slightly drier airmass into Central Florida. This will bring a small improvement in lowering rain chances Sunday afternoon and evening. Southwesterly upper-level flow will still bring the potential for anvils from inland convection to move into the area during the count, but lighter winds and drier air will make their persistence less likely than previous days. The primary weather concerns for a Sunday evening attempt will be the anvil clouds rules and disturbed weather rule.

The remnant low-level inverted trough will hang around for another day into Monday, with the upper-level trough continuing to weaken on its slow slide eastwards. Much more notable drying is expected in the mid and upper levels with this shift, with the region shifting into a more sea breeze driven pattern with lowering rain chances. Though the southwesterly steering component will be light, it will bring a higher potential for what storms do develop to drift back towards the coast. Cumulus from this activity, as well as anvils from inland storms will be the primary weather concerns for a Monday evening launch.

Launch Day		Probability of Violating Weather Constraints <sup>1</sup>					
Launch Day	<b>60%</b>	Primary Concerns: Anvil Cloud Rules, Disturbed Weather 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> 78°F / 80%	Type	Coverage	Base (ft)	Tops (ft)	<b>Booster Recovery Weather:</b>	Low
<b>Liftoff Winds (200'):</b> 110° 10 - 15 mph	Cumulus	Scattered	3,500	12,000	<b>Solar Activity:</b>	Low	
	Altostratus	Broken	17,000	25,000			
24-Hour Delay		Probability of Violating Weather Constraints					
24-Hour Delay	<b>50%</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> 78°F / 80%	Type	Coverage	Base (ft)	Tops (ft)	<b>Booster Recovery Weather:</b>	Low
<b>Liftoff Winds (200'):</b> 080° 5 - 10 mph	Cumulus	Scattered	3,500	18,000	<b>Solar Activity:</b>	Low	
	Altostratus	Scattered	21,000	24,000			
Notes	<ol style="list-style-type: none"> <li>The Probability of Violation (PoV) is the chance of a local safety or customer constraint violation occurring anytime during the launch window.</li> <li>Additional Risk Criteria, which are not included in the PoV, are mission-specific constraints that may not include all phenomena within each risk factor.</li> </ol>						
	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						
Next Forecast Will Be Issued		As Needed					