



# Launch Mission Execution Forecast



**Mission:** Falcon 9 Thuraya-4

**Issued:** 31 Dec 2024 / 1000L (1500Z)

**Valid:** 2 Jan 2025 / 0000 – 0153L (0500 – 0653Z)

**Forecast Discussion:** Weather conditions will be very favorable for both the primary and backup launch windows after a cold front pushes through the area tomorrow. Behind the front, high pressure will build into the southeastern US, and northerly winds will usher in a much cooler, drier air mass. Because of this, there are no significant weather concerns for the primary and backup days.

Launch Day	Probability of Violating Weather Constraints <sup>1</sup>				
	<b>&lt;5%</b>	Primary Concerns: None			
	Weather Conditions			Additional Risk Criteria <sup>2</sup>	
	<b>Weather/Visibility:</b> None / 7 mi.	<b>Clouds</b> Type            Coverage    Base (ft)    Tops (ft) Stratocumulus    Few            2,000        3,000 Cirrus            Scattered    35,000       37,000			<b>Upper-Level Wind Shear:</b> Low
<b>Temp/Humidity:</b> 58°F / 70%				<b>Booster Recovery Weather:</b> Low	
<b>Liftoff Winds (200'):</b> 350° 15 - 20 mph				<b>Solar Activity:</b> Low	
24-Hour Delay	Probability of Violating Weather Constraints				
	<b>&lt;5%</b>	Primary Concerns: None			
	Weather Conditions			Additional Risk Criteria	
	<b>Weather/Visibility:</b> None / 7 mi.	<b>Clouds</b> Type            Coverage    Base (ft)    Tops (ft) Stratocumulus    Few            2,000        3,000 Cirrus            Scattered    35,000       37,000			<b>Upper-Level Wind Shear:</b> Low
<b>Temp/Humidity:</b> 61°F / 75%				<b>Booster Recovery Weather:</b> Low	
<b>Liftoff Winds (200'):</b> 010° 12 - 17 mph				<b>Solar Activity:</b> Low	
Notes	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>		1 Jan 2025			