



Launch Mission Execution Forecast



Mission: Falcon 9 Starlink 4-37

Issued: 15 Dec 2022 / 0830L (1330Z)

Valid: 16 Dec 2022 / 1639 – 1739L (2139 – 2239Z)

Forecast Discussion: Launch conditions will be favorable tomorrow after a cold front pushes through the area today. A squall line associated with the front will weaken as it moves through central Florida this afternoon, but there should still be enough energy for strong to severe storms in the area. After the front pushes through, drier and cooler air will filter in by tomorrow afternoon. The only concern for Friday’s attempt is the negligible risk of a Thick Cloud Layers Rule violation from any lingering mid-level cloud cover.

By Saturday, the front will remain to our south but a mid-level disturbance will bring additional moisture from the Gulf, increasing cloud cover by the afternoon and rain chances by the evening. Therefore, launch conditions will be less favorable on Saturday with the main concern remaining the Thick Cloud Layers Rule.

Probability of Violating Weather Constraints ¹															
<10%	Primary Concerns: Thick Cloud Layers Rule														
Weather Conditions		Additional Risk Criteria ²													
Weather/Visibility: None / 7 mi.	<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>Altostratus</td> <td>Few</td> <td>10,000</td> <td>12,000</td> </tr> </tbody> </table>	Clouds				Type	Coverage	Base (ft)	Tops (ft)	Altostratus	Few	10,000	12,000	Upper-Level Wind Shear: Low	
Clouds															
Type	Coverage	Base (ft)	Tops (ft)												
Altostratus	Few	10,000	12,000												
Temp/Humidity: 65°F / 55%		Booster Recovery Weather: Mod-High													
Liftoff Winds (200’): 360° 12 - 17 mph		Solar Activity: Low													

Probability of Violating Weather Constraints																			
40%	Primary Concerns: Thick Cloud Layers Rule																		
Weather Conditions		Additional Risk Criteria																	
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Type	Coverage	Base (ft)	Tops (ft)																
Altostratus	Broken	7,000	12,000																
Cirrostratus	Broken	25,000	30,000																
Temp/Humidity: 68°F / 70%		Booster Recovery Weather: Low-Mod																	
Liftoff Winds (200’): 040° 10 - 15 mph		Solar Activity: Low																	

Notes

- 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 | As required