



Launch Mission Execution Forecast

Mission: Falcon 9 Starlink 10-2

Issued: 12 June 2024 / 1645L (2045Z)

Valid: 13 June 2024 / 1646 – 2046L (2046 – 14/0046Z)



Forecast Discussion: The area of low pressure that NHC is monitoring for tropical development, 90L, will continue to cross the Central Florida peninsula the rest of today before emerging off the northeast coast of Florida tomorrow morning. The ongoing showers and storms across the Spaceport will wane with sunset, though with a very moist and unstable atmosphere in place, occasional activity overnight can't be ruled out.

Most models show some degree of mid-level dry air wrapping around the low as it moves northeast, which may initially put a damper on convective development around the Spaceport. This is likely to be in conjunction with the former stationary boundary being dragged into the vicinity. How quickly this plays out will be key for weather for Thursday afternoon's launch window. Slower movement of the boundary and low will mean better moisture lingers and more storms in the vicinity. Quicker movement brings drier conditions and stronger northeasterly flow likely focusing storms more inland of the Spaceport. Currently models suggest better launch weather at the beginning and end of the window with conditions less favorable in the middle. Anvil clouds from any activity in the vicinity will be the main weather concern.

Models are reasonably in agreement that whatever flavor of surface low offshore Florida moves further away on Friday. Though moisture won't be quite as high as earlier in the week, it will still be more than sufficient for numerous showers and storms during the afternoon. With steering flow more out of the north or northeast, there will be a tendency for this activity to drift inland of the Spaceport. However, with anvil level flow still out of the west-northwest, these will remain the primary concern with the threat diminishing through the count.

Launch Day	Probability of Violating Weather Constraints¹					
	75%	Primary Concerns: Anvil Cloud Rules, Cumulus Cloud Rule, Surface Electric Fields Rule				
	Weather Conditions				Additional Risk Criteria²	
	Weather/Visibility: Sct. Storms / 6 mi.	Clouds				Upper-Level Wind Shear: Low
	Type	Coverage	Base (ft)	Tops (ft)		
Temp/Humidity: 82°F / 80%	Cumulus	Broken	3,000	15,000	Booster Recovery Weather: Low	
Liftoff Winds (200'): 190° 7 - 12 mph	Cirrostratus	Overcast	30,000	40,000	Solar Activity: Low	

24-Hour Delay	Probability of Violating Weather Constraints					
	60% → 20%	Primary Concerns: Anvil Cloud Rules, Cumulus Cloud Rule				
	Weather Conditions				Additional Risk Criteria	
	Weather/Visibility: Sct. Storms / 7 mi.	Clouds				Upper-Level Wind Shear: Low
	Type	Coverage	Base (ft)	Tops (ft)		
Temp/Humidity: 84°F / 80%	Cumulus	Scattered	3,500	15,000	Booster Recovery Weather: Low	
Liftoff Winds (200'): 120° 7 - 12 mph	Cirrostratus	Overcast	28,000	35,000	Solar Activity: 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

Next Forecast Will Be Issued	As Needed
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