



Launch Mission Execution Forecast

Mission: Falcon 9 IMAP

Issued: 21 Sept 2025 / 0645L (1045Z)

Valid: 23 Sept 2025 / 0720 – 0740L (1120 – 1140Z)



Forecast Discussion: Below normal rain chances will continue for the Spaceport today and most of Monday with the area in between the lingering boundary across the southern half of the state and high pressure nosing down the coast of the eastern US. There will be modest moisture return throughout the day on Monday, especially in the mid and upper levels, with the approach and passage of a weak mid-level disturbance. This feature looks to bring a modest increase in rain chances around the primary launch window Tuesday morning, though the light and likely offshore flow should focus activity offshore. The main launch weather concern continues to be with the mid and upper level clouds from either anvils from eastern Gulf storms or thick mid-level clouds moving up from the south-southwest.

The mid-level feature moves through the Spaceport by the backup window Wednesday morning pushing the mid-upper-level cloud deck to the south and east. Drier air will limit rain chances but not eliminate them completely and there remains low chances for any activity over the Atlantic to move cloud enough to be a concern.

Launch Day	Probability of Violating Weather Constraints ¹						
	25%	Primary Concerns: Thick Cloud Layers Rule, Anvil Cloud Rules, Cumulus Cloud Rule					
	Weather Conditions					Additional Risk Criteria ²	
	Weather/Visibility:	Iso Showers / 7 mi.	Clouds				Upper-Level Wind Shear: Low
	Temp/Humidity:	78°F / 95%	Type	Coverage	Base (ft)	Tops (ft)	Booster Recovery Weather: Low
24-Hour Delay	Liftoff Winds (200'):	VRB 5 mph	Cumulus	Scattered	3,000	10,000	Solar Activity: Low
	Weather Conditions					Additional Risk Criteria	
	Weather/Visibility:	None / 7 mi.	Clouds				Upper-Level Wind Shear: Low
	Temp/Humidity:	78°F / 90%	Type	Coverage	Base (ft)	Tops (ft)	Booster Recovery Weather: Low
	Liftoff Winds (200'):	VRB 5 mph	Cumulus	Scattered	3,500	8,000	Solar Activity: 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 Launch FAQ https://45thweathersquadron.nebula.spaceforce.mil/pages/launchForecastSupport.html for more information						
Next Forecast Will Be Issued			22 Sept 2025				