



Launch Mission Execution Forecast

Mission: Falcon 9 Starlink L-17

Issued: 4 Feb 2021/ 0900L (1400Z)

Valid: 5 Feb 2021/ 0505 – 0525L (1005 – 1025Z)



Forecast Discussion: After a frosty start to the morning, temperatures will rebound into the upper 60s as winds veer out of the south on the backside of the exiting high pressure ridge. A quick change in the pattern occurs tonight as a cold front approaches the Deep South, causing winds to increase to 20-25 miles per hour during the primary launch window. As a result, the primary concern will be Liftoff Winds. Temperatures will be in the upper 40s during the backup window.

The cold front will slowly slide into the Deep South Friday, reaching northeast Florida Friday evening. The front will weaken and stall somewhere along the Florida Peninsula Saturday, with its position near or northwest of the Spaceport during the backup launch window. The local atmosphere will gradually moisten in the low and mid-levels of the atmosphere due to the presence of the eroding front. Isolated showers will be possible, but will be low topped, with no thunderstorm concerns during the backup attempt. The primary concerns during the backup launch window will be the Cumulus Cloud Rule and Thick Cloud Layer Rule, with a slight concern for Liftoff Winds should the front not weaken as much as expected. Temperatures will be in the upper 50s during the backup launch window.

		Probability of Violating Weather Constraints					
Launch Day	30%	Primary Concern: Liftoff Winds					
	Weather Conditions				Additional Risk Criteria		
	Weather/Visibility: None / 7 mi.	Clouds			Upper-Level Wind Shear: Low		
	Temp/Humidity: 48°F / 90%	Type	Coverage	Base (ft)	Tops (ft)	Booster Recovery Weather: Moderate	
Liftoff Winds (200'): 210° 20 - 25 mph	Cirrostratus	Scattered	23,000	26,000	Solar Activity: Low		
		Probability of Violating Weather Constraints					
24-Hour Delay	30%	Primary Concerns: Cumulus Cloud Rule, Thick Cloud Layer Rule, Liftoff Winds					
	Weather Conditions				Additional Risk Criteria		
	Weather/Visibility: Iso Showers / 7 mi.	Clouds			Upper-Level Wind Shear: Low		
	Temp/Humidity: 57°F / 90%	Type	Coverage	Base (ft)	Tops (ft)	Booster Recovery Weather: High-Mod	
Liftoff Winds (200'): 230° 12 - 17 mph	Cumulus	Scattered	1,500	4,000	Solar Activity: Low		
		Altostratus	Scattered	20,000	23,000		
<i>Note: The Probability of Violation (POV) is the chance that a Lightning Launch Commit Criteria (LLCC) or certain user constraints (surface winds, precipitation, and temperatures, etc.) will be violated during the launch window. It does not take into account upper-level wind shear, booster recovery weather, and solar activity.</i>							
Next Forecast Will Be Issued		As Required					