



Launch Mission Execution Forecast

Mission: Falcon 9 Starlink L-17

Issued: 2 Feb 2021/ 1200L (1700Z)

Valid: 4 Feb 2021/ 0526 – 0546L (1026 – 1046Z)



Forecast Discussion: Cold and windy conditions will intensify today as the upper level trough axis digs across Florida. Northwesterly winds near 30 mph will maximize cold air advection, dragging cold continental air across the Deep South down the spine of Florida. Highs today will struggle to reach the 50s despite skies becoming sunny in the afternoon. At the surface, the low pressure system off the Carolina coast will slowly meander northward to the mid-Atlantic and then New England through Wednesday. This slow motion will continue to maintain a tight pressure gradient through Wednesday morning. The forecast is on track for significantly improvement Wednesday evening into Thursday morning as high pressure builds over the Florida Peninsula. Expect nearly clear skies with gradually decreasing winds near or below 10 miles per hour. Conditions will be ideal for launch early Thursday morning with only a very slight concern for liftoff winds if the low pressure area moves out slower than forecast.

Thursday into Thursday night, the high pressure area quickly slides east, creating south to southeast winds along the Space Coast. This generates a slight chance for a cumulus cloud violation with Gulf Stream showers early Friday morning. However, a weak frontal boundary will approach the Deep South Friday morning, causing winds to gradually increase during the backup launch window. As a result, the primary concern for the backup window will be Liftoff Winds.

		Probability of Violating Weather Constraints					
Launch Day	<10%	Primary Concern: Liftoff Winds					
	Weather Conditions				Additional Risk Criteria		
	Weather/Visibility: None / 7 mi.	Clouds				Upper-Level Wind Shear:	Low
	Temp/Humidity: 37°F / 80%	Type	Coverage	Base (ft)	Tops (ft)	Booster Recovery Weather:	Mod-Low
Liftoff Winds (200'): 340° 5 - 10 mph	Cirrostratus	Few	25,000	28,000	Solar Activity:	Low	
		Probability of Violating Weather Constraints					
24-Hour Delay	30%	Primary Concerns: Liftoff Winds, Cumulus Cloud Rule					
	Weather Conditions				Additional Risk Criteria		
	Weather/Visibility: None / 7 mi.	Clouds				Upper-Level Wind Shear:	Low
	Temp/Humidity: 49°F / 90%	Type	Coverage	Base (ft)	Tops (ft)	Booster Recovery Weather:	Moderate
Liftoff Winds (200'): 200° 17 - 22 mph	Cumulus	Few	3,000	6,000	Solar Activity:	Low	
	Cirrostratus	Few	25,000	28,000			
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.							
Next Forecast Will Be Issued		3 Feb 2021					