Launch Mission Execution Forecast

Mission: Falcon 9 Starlink L-18
Issued: 2 Feb 2021 / 0900L (1400Z)
Valid: 4 Feb 2021 / 0109 – 0130L (0609 – 0630Z)

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 though 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.

On Thursday, the high pressure area slides east, creating southeast winds along the Space Coast. This generates a slight chance for a cumulus cloud violation with Gulf Stream showers early Friday morning.

Launch Day

Probability of Violating Weather Constraints

<10% | **Primary Concerns**: Liftoff Winds

Weather Conditions		Clouds				Additional Risk Criteria	
		Type	Coverage	Base (ft)	Tops (ft)		
Weather/Visibility:	None / 7 mi.					**Upper-Level Wind Shear**:	Low
Temp/Humidity:	40°F / 72%	Cirrostratus	Few	25,000	28,000	**Booster Recovery Weather**:	Mod-Low
Liftoff Winds (200'):	300° 5 - 10 mph					**Solar Activity**:	Low

24-Hour Delay

Probability of Violating Weather Constraints

10% | **Primary Concerns**: Cumulus Cloud Rule

Weather Conditions		Clouds				Additional Risk Criteria	
		Type	Coverage	Base (ft)	Tops (ft)		
Weather/Visibility:	None / 7 mi.					**Upper-Level Wind Shear**:	Low
Temp/Humidity:	52°F / 82%	Cumulus	Few	3,000	6,000	**Booster Recovery Weather**:	Low-Mod
Liftoff Winds (200'):	160° 7 - 12 mph					**Solar Activity**:	Low

***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