

## **Launch Mission Execution Forecast**

Mission: Falcon 9 Starlink-L21

**Issued**: 13 March 2021 / 0800L (1300Z)

Valid: 14 March 2021 / 0444 - 0645L (0844 - 1045Z)



Forecast Discussion: High pressure at the surface continues to dominate the weather across the Space Coast. It has maintained easterly low level flow across the area and has kept skies mostly clear during the day and partly cloudy during the night time hours. Expect this trend to continue Sunday morning as the high pressure remains in firm control. During the early morning hours on Sunday, expect scattered low level clouds with isolated, brief showers possible over the water. If any precipitation makes its way inland, they should quickly dissipate after moving inland. The primary concern for Sunday morning will be the Cumulus Cloud Rule. In the event of a 24-hour delay, the high will remain in place over the region. A storm system is expected to move from the southern Plains into the lower Mississippi Valley through early Monday morning. The only effect this system is expected to have on our area is to veer the winds to a southeasterly direction and strengthening them slightly. Otherwise, weather conditions are expected to remain similar to Sunday morning. The primary concerns will be from the Cumulus Cloud Rule and Liftoff Winds.

Probability of Violating Weather Constraints							
10% Primary Concerns: Cumulus Cloud Rule							
Weather Conditions  Weather/Visibility: None / 7 mi.  Clouds Type Coverage Base (ft) Tops (ft)						Additional Risk Criteria	
Weather/Visibility: None / 7 mi.		Clouds Type Coverage Base (ft) Tops (ft)			Upper-Level Wind Shear:	Low	
Temp/Humidity: 60°F / 96%		Stratocumulus	Scattered	4,500	5,500	Booster Recovery Weather:	Low
Liftoff Winds	( <b>200</b> '): 100° 10 – 15 mph					Solar Activity:	Low
Probability of Violating Weather Constraints  10% Primary Concerns: Cumulus Cloud Rule, Liftoff Winds							
10% Primary Concerns: Cumulus Cloud Rule, Liftoff Winds							
Weather/Visibility: None / 7 mi. Temp/Humidity: 56°F / 90%  Weather Conditions  Clouds Type Coverage Base (ft) Coverage Fig. 200 Scattered 4,000 5,500  Cumulus  Coverage Fig. 200 Booster Recovery Weather: Low							iteria
Weather/Visi	bility: None / 7 mi.	Туре	Clouds Coverage	Base (ft)	Tops (ft)	Upper-Level Wind Shear:	Low
Temp/Humid	ity: 56°F / 90%	Cumulus	Scattered	4,000	5,500	Booster Recovery Weather:	Low
<b>Liftoff Winds (200')</b> : 130° 12 - 17 mph						Solar Activity:	Low
	Weather/Visil Temp/Humidi Liftoff Winds  10%  Weather/Visil Temp/Humidi Liftoff Winds	Weather Weather/Visibility: None / 7 mi. Temp/Humidity: 60°F / 96% Liftoff Winds (200'): 100° 10 – 15 mph  Prob Primary Concerns: Cum  Weather Weather/Visibility: None / 7 mi. Temp/Humidity: 56°F / 90% Liftoff Winds (200'): 130° 12 - 17 mph	Weather Conditions Weather/Visibility: None / 7 mi. Temp/Humidity: 60°F / 96% Liftoff Winds (200'): 100° 10 – 15 mph  Probability of Vice  Weather Conditions  Weather Conditions  Weather Conditions  Weather Conditions  Weather/Visibility: None / 7 mi. Type Temp/Humidity: 56°F / 90%  Liftoff Winds (200'): 130° 12 - 17 mph	Weather Conditions  Weather/Visibility: None / 7 mi. Type Coverage Stratocumulus Scattered  Clouds Coverage Stratocumulus Scattered  Probability of Violating W  Primary Concerns: Cumulus Cloud Rule, Liftoff W  Weather Conditions  Weather/Visibility: None / 7 mi. Weather/Visibility: None / 7 mi. Type Coverage Coverage Coverage Cumulus Scattered  Clouds Coverage Cumulus Scattered  Clouds Coverage Cumulus Scattered	Weather/Visibility: None / 7 mi. Temp/Humidity: 60°F / 96% Liftoff Winds (200'): 100° 10 – 15 mph  Probability of Violating Weather  Probability of Violating Weather  Weather/Visibility: None / 7 mi.  Weather Conditions  Weather Conditions  Weather/Visibility: None / 7 mi. Type Coverage Base (ft) Stratocumulus Scattered 4,500  Coverage Base (ft)  Type Clouds Coverage Base (ft)  Type Coverage Base (ft)  Coverage Base (ft)  Type Coverage Base (ft)  Coverage Base (ft)  Type Coverage Base (ft)  Temp/Humidity: 56°F / 90%  Liftoff Winds (200'): 130° 12 - 17 mph	Weather Conditions  Weather/Visibility: None / 7 mi. Temp/Humidity: 60°F / 96%  Primary Concerns: Cumulus Cloud Rule  Type Coverage Base (ft) Tops (ft) Stratocumulus Scattered 4,500 5,500  Coverage Base (ft) Tops (ft) Stratocumulus Scattered 4,500 5,500  Probability of Violating Weather Constrain  Probability of Violating Weather Constrain  Weather Conditions  Weather/Visibility: None / 7 mi. Type Coverage Base (ft) Tops (ft) Type Coverage Base (ft) Tops (ft) Tops (ft) Temp/Humidity: 56°F / 90% Cumulus Scattered 4,000 5,500  Liftoff Winds (200'): 130° 12 - 17 mph	Weather Conditions  Weather/Visibility: None / 7 mi. Temp/Humidity: 60°F / 96%  Primary Concerns: Cumulus Cloud Rule  Stratocumulus Scattered 4,500 5,500  Probability of Violating Weather Constraints  Weather/Visibility: None / 7 mi.  Probability of Violating Weather Constraints  Weather Conditions  Weather Conditions  Additional Risk Criefly Winds  Booster Recovery Weather: Solar Activity:  Additional Risk Criefly Winds  Primary Concerns: Cumulus Cloud Rule, Liftoff Winds  Weather/Visibility: None / 7 mi. Type Clouds Coverage Base (ft) Type (Clouds Coverage Base (ft) Type (Type Coverage Base (ft) Type (Clouds Coverage Base (ft) Type (Type Coverage Base (ft) Type (T

**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 As required