



Launch Mission Execution Forecast

Mission: Falcon 9 Starlink 4-7

Issued: 26 Jan 2022 / 0800L (1300Z)

Valid: 29 Jan 2022 / 1450 – 1830L (1950 – 2330Z)



Forecast Discussion: The weather disturbance lingering across the region from yesterday is expected to move out of the region later today. Breezy northeasterly winds will bring periods of onshore moving showers into the Spaceport into the day on Thursday. On Friday, a deep upper level system is expected to dig across the eastern US, with a secondary area of low pressure developing just to the northeast of Florida and moving up the eastern seaboard. This will bring a stronger cold front through Saturday morning, with strong northwesterly winds ushering in another round of chilly conditions across the state. Only a few stratocumulus clouds are expected to linger into the launch window late Saturday afternoon, and the main weather concern for this time will be the Liftoff Winds.

The low pressure system will continue to move quickly up the east coast late Saturday, with high pressure sliding into the eastern US in its wake. The relaxing pressure gradient will allow for lighter winds going into the backup launch window on Sunday afternoon. Only a few low topped stratocumulus clouds are expected to be present, though these may be cold enough for a Cumulus Cloud threat during the backup window.

		Probability of Violating Weather Constraints																
Launch Day	20%	Primary Concerns: Liftoff Winds																
	Weather Conditions				Additional Risk Criteria													
	Weather/Visibility: None / 7 mi.	<table border="1"> <thead> <tr> <th colspan="4">Clouds</th> </tr> <tr> <th>Type</th> <th>Coverage</th> <th>Base (ft)</th> <th>Tops (ft)</th> </tr> </thead> <tbody> <tr> <td>Stratocumulus</td> <td>Few</td> <td>3,500</td> <td>5,000</td> </tr> </tbody> </table>				Clouds				Type	Coverage	Base (ft)	Tops (ft)	Stratocumulus	Few	3,500	5,000	Upper-Level Wind Shear: Low
	Clouds																	
Type	Coverage	Base (ft)	Tops (ft)															
Stratocumulus	Few	3,500	5,000															
Temp/Humidity: 48°F / 50%					Booster Recovery Weather: High													
Liftoff Winds (200'): 320° 20 - 25 mph					Solar Activity: Low													
		Probability of Violating Weather Constraints																
24-Hour Delay	10%	Primary Concerns: Cumulus Cloud Rule																
	Weather Conditions				Additional Risk Criteria													
	Weather/Visibility: None / 7 mi.	<table border="1"> <thead> <tr> <th colspan="4">Clouds</th> </tr> <tr> <th>Type</th> <th>Coverage</th> <th>Base (ft)</th> <th>Tops (ft)</th> </tr> </thead> <tbody> <tr> <td>Stratocumulus</td> <td>Few</td> <td>3,000</td> <td>4,500</td> </tr> </tbody> </table>				Clouds				Type	Coverage	Base (ft)	Tops (ft)	Stratocumulus	Few	3,000	4,500	Upper-Level Wind Shear: Low
	Clouds																	
Type	Coverage	Base (ft)	Tops (ft)															
Stratocumulus	Few	3,000	4,500															
Temp/Humidity: 50°F / 55%					Booster Recovery Weather: Moderate													
Liftoff Winds (200'): 340° 10 - 15 mph					Solar Activity: Low													
<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		27 Jan 2022																