



# Launch Mission Execution Forecast

**Mission:** Falcon 9 Sirius XM-7

**Issued:** 7 Dec 2020 / 0800L (1300Z)

**Valid:** 10 Dec 2020 / 1119 – 1319L (1619 – 1819Z)



**Forecast Discussion:** The area of low pressure that crossed the state overnight has now moved out into the open Atlantic, with its trailing frontal boundary now moving through the southern Florida peninsula. Lingering rainfall will diminish through the early afternoon hours as breezy northwest winds bring in another shot of cold and dry air. High pressure will build across the state from the Gulf of Mexico behind the system for the rest of the week, bringing several days of cool and dry weather into both the primary and backup launch windows.

For the primary launch window on Thursday, the continuing dry airmass will limit most clouds. However, there will be a very small threat for cumulus clouds moving onshore from the Atlantic. By the backup launch window on Friday, low level onshore flow will bring a gradual increase in moisture allowing for a few more clouds. The primary threat for a launch attempt on Friday will remain cumulus clouds.

		Probability of Violating Weather Constraints					
<b>Launch Day</b>	<b>10%</b>	Primary Concerns: Cumulus Cloud Rule					
	Weather Conditions				Additional Risk Criteria		
	<b>Weather/Visibility:</b> None / 7 mi.	<b>Clouds</b>			<b>Upper-Level Wind Shear:</b> Moderate		
	<b>Temp/Humidity:</b> 58°F / 63%	Type	Coverage	Base (ft)	Tops (ft)	<b>Booster Recovery Weather:</b> Low	
<b>Liftoff Winds (200'):</b> VRB 5 mph	Cumulus	Few	2,500	4,000	<b>Solar Activity:</b> Low		
		Probability of Violating Weather Constraints					
<b>24-Hour Delay</b>	<b>20%</b>	Primary Concerns: Cumulus Cloud Rule					
	Weather Conditions				Additional Risk Criteria		
	<b>Weather/Visibility:</b> None / 7 mi.	<b>Clouds</b>			<b>Upper-Level Wind Shear:</b> Low		
	<b>Temp/Humidity:</b> 67°F / 65%	Type	Coverage	Base (ft)	Tops (ft)	<b>Booster Recovery Weather:</b> Low	
<b>Liftoff Winds (200'):</b> 100° 5 - 10 mph	Cumulus	Scattered	3,000	5,000	<b>Solar Activity:</b> Low		
<p><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></p>							
<b>Next Forecast Will Be Issued</b>		8 Dec 2020					