



Launch Mission Execution Forecast

Mission: Falcon 9 Sirius XM-7

Issued: 10 Dec 2020 / 0800L (1300Z)

Valid: 11 Dec 2020 / 1120 – 1320L (1620 – 1820Z)



Forecast Discussion: High pressure centered over the Florida peninsula will reform over the western Atlantic through the end of the week. Winds will gradually veer onshore as this takes place, modifying temperatures and slowly increasing moisture. For the primary launch window Friday morning, favorable conditions are expected for launch with light onshore winds bringing the stratocumulus and cumulus deck over the local Atlantic into the coast. There will be only a small threat for this activity to potentially violate the Cumulus Cloud Rule.

By Saturday, the high will be centered well into the Western Atlantic with the next cold front moving into the Central Gulf of Mexico. This system is not expected to have a direct impact during the launch window, but may lead to an increase in high clouds by midday. Increasing east-southeast winds will bring more robust cumulus clouds towards the Spaceport along with the potential for a few sprinkles. The primary weather concern for a Saturday morning attempt will remain cumulus clouds.

		Probability of Violating Weather Constraints				
Launch Day	10%	Primary Concerns: Cumulus Cloud Rule				
	Weather Conditions				Additional Risk Criteria	
	Weather/Visibility: None / 7 mi.	Clouds			Upper-Level Wind Shear: Low	
	Temp/Humidity: 67°F / 60%	Type	Coverage	Base (ft)	Tops (ft)	Booster Recovery Weather: Low
Liftoff Winds (200'): VRB 5 mph	Cumulus	Scattered	3,000	5,000	Solar Activity: Low	
		Probability of Violating Weather Constraints				
24-Hour Delay	30%	Primary Concerns: Cumulus Cloud Rule				
	Weather Conditions				Additional Risk Criteria	
	Weather/Visibility: None / 7 mi.	Clouds			Upper-Level Wind Shear: Low	
	Temp/Humidity: 72°F / 75%	Type	Coverage	Base (ft)	Tops (ft)	Booster Recovery Weather: Low
Liftoff Winds (200'): 100° 7 - 12 mph	Cirrocumulus	Scattered	30,000	35,000	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		As Needed				