



# Launch Mission Execution Forecast

**Mission:** Falcon 9 TurkSat-5A

**Issued:** 6 Jan 2021 / 0900L (1400Z)

**Valid:** 7 Jan 2021 / 2028 – 8/0028L (8/0128 – 0528Z)



**Forecast Discussion:** A large area of high pressure stretching from near the Great Lakes into the southeast will shift eastward today, veering local winds out of the northeast and modifying temperatures. The next low pressure system, currently developing across Texas, is forecast to move along the Gulf coast through the day on Thursday, with the main surface low moving offshore the Carolinas Thursday night. The associated cold front moves into the Florida peninsula late Thursday night, though it is not expected to arrive until after the launch window. However, the front itself will be preceded by increasing clouds during the launch window. The primary weather concern for a Thursday evening launch attempt will be cumulus clouds and thick clouds.

The front will cross the Spaceport early on Friday, with another round of cool and drier air arriving behind it through the day. Left behind the front will be scattered low topped cumulus and stratocumulus that will linger into the launch window. While clouds are not expected to be tall, the cool airmass in place will make it easier for any more robust cumulus development to reach to colder temperatures. The primary weather concern for a launch attempt Friday evening will be cumulus clouds.

		Probability of Violating Weather Constraints					
<b>Launch Day</b>	<b>30%</b>	<b>Primary Concerns:</b> Cumulus Cloud Rule, Thick Cloud Layer Rule					
	Weather Conditions				Additional Risk Criteria		
	<b>Weather/Visibility:</b> None / 7 mi.	<b>Clouds</b>				<b>Upper-Level Wind Shear:</b>	Moderate
		Type	Coverage	Base (ft)	Tops (ft)	<b>Booster Recovery Weather:</b>	Low
<b>Temp/Humidity:</b> 68°F / 70%	Cumulus	Scattered	3,500	9,000	<b>Solar Activity:</b>	Low	
<b>Liftoff Winds (200'):</b> 190° 17 - 22 mph	Cirrocumulus	Broken	18,000	25,000			
		Probability of Violating Weather Constraints					
<b>24-Hour Delay</b>	<b>20%</b>	<b>Primary Concerns:</b> 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
		Type	Coverage	Base (ft)	Tops (ft)	<b>Booster Recovery Weather:</b>	Moderate
<b>Temp/Humidity:</b> 54°F / 68%	Cumulus	Scattered	2,500	4,500	<b>Solar Activity:</b>	Low	
<b>Liftoff Winds (200'):</b> 290° 12 - 17 mph							
<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>							
<b>Next Forecast Will Be Issued</b>		7 Jan 2021					