

Launch Mission Execution Forecast

Mission: Falcon 9 TurkSat-5A

Issued: 7 Jan 2021 / 0800L (1300Z)

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



Forecast Discussion: A strong low pressure system is moving across the Deep South this morning with its associated cold front draped along the Central Gulf Coast. This system will progress eastward through the day, with the cold front expected in North Florida this evening. Models continue to show the front breaking up as it crosses the state this evening, with the boundary itself and notable precipitation chances not expected to arrive until after the launch window. However, increasing clouds during the window will remain a watch item. The primary concern this evening remains cumulus clouds and thick clouds, especially in the latter half of the window.

The front will move through the Spaceport before daybreak Friday, though the influence of its parent low will keep a few showers in the forecast through the day. Conditions will be cooler and drier by evening, but scattered low topped cumulus and stratocumulus 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								
30% Primary Concerns: Cumulus Cloud Rule, Thick Cloud Layer Rule								
30% Primary Concerns: Cumulus Cloud Rule, Thick Cloud Layer Rule Weather Conditions Weather/Visibility: None / 7 mi. Clouds Type Coverage Base (ft) Tops (ft)						Additional Risk Criteria		
Weather/Visibility: None / 7 mi.		Туре	Clouds Coverage	Base (ft)	Tops (ft)	Upper-Level Wind Shear:	Moderate	
Temp/Humid	ity:	68°F / 70%	Cumulus	Scattered	3,500	9,000	Booster Recovery Weather:	Low
Liftoff Winds (200') : 190° 17 - 22 mph			Cirrocumulus	Broken	18,000	25,000	Solar Activity:	Low
Probability of Violating Weather Constraints								
20% Primary Concerns: Cumulus Cloud Rule								
20% Primary Concerns: Cumulus Cloud Rule Weather Conditions Additional Risk Criteria							iteria	
Weather/Visibility: None / 7 mi.		Туре	Clouds Coverage	Base (ft)	Tops (ft)	Upper-Level Wind Shear:	Low	
Weather/Visibility: Temp/Humidity:		54°F / 68%	Cumulus	Scattered	2,500	4,500	Booster Recovery Weather:	Moderate
Liftoff Winds (200') : 290° 17 - 22 mph						Solar Activity:	Low	
	Weather/Visil Temp/Humid Liftoff Winds 20% Weather/Visil Temp/Humid	Weather/Visibility: Temp/Humidity: Liftoff Winds (200'): 20% Prima Weather/Visibility: Temp/Humidity:	Weather Weather/Visibility: None / 7 mi. Temp/Humidity: 68°F / 70% Liftoff Winds (200'): 190° 17 - 22 mph Proba 20% Primary Concerns: Cum Weather Weather/Visibility: None / 7 mi. Temp/Humidity: 54°F / 68%	Weather Conditions Weather/Visibility: None / 7 mi. Temp/Humidity: 68°F / 70% Cumulus Liftoff Winds (200'): 190° 17 - 22 mph Cirrocumulus Probability of Vice 20% Primary Concerns: Cumulus Cloud Ru Weather Conditions Weather/Visibility: None / 7 mi. Type Cumulus Cloud Ru Type Cumulus Cloud Ru Cirrocumulus Cloud Ru	Weather Conditions Weather/Visibility: None / 7 mi. Type Coverage Cumulus Scattered Cirrocumulus Broken Probability of Violating W Primary Concerns: Cumulus Cloud Rule Weather Conditions Probability of Violating W Weather Conditions Weather/Visibility: None / 7 mi. Type Coverage Cumulus Scattered Cirrocumulus Broken Probability of Violating W Coverage Type Coverage Cumulus Cloud Rule Scattered Coverage Cumulus Scattered Coverage Cumulus Scattered	Weather Conditions Weather/Visibility: None / 7 mi. Temp/Humidity: 68°F / 70% Probability of Violating Weather Weather/Visibility: None / 7 mi. Temp/Humidity: Coverage Base (ft) Cumulus Scattered 3,500 Cirrocumulus Broken 18,000 Probability of Violating Weather Weather Conditions Weather Conditions Weather/Visibility: None / 7 mi. Type Coverage Base (ft) Coverage Base (ft)	Weather Conditions Weather/Visibility: None / 7 mi. Temp/Humidity: 68°F / 70% Probability of Violating Weather Constrain Type Probability of Violating Weather Constrain Weather/Visibility: None / 7 mi. Type Coverage Base (ft) Tops (ft)	Weather Conditions

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 Needed