Launch Mission Execution Forecast

Mission: Falcon 9 COSMO-SkyMed
Issued: 26 Jan 2022 / 0800L (1300Z)
Valid: 27 Jan 2022 / 1806 – 1817L (2306 – 2317Z)

Forecast Discussion: The weather disturbance currently bringing rain to Florida this morning will slowly move off the Atlantic coast later today, leading to showers becoming more intermittent as the day wears on. While deep moisture through the atmosphere gradually gets stripped away tonight into tomorrow, the proximity of this system coupled with robust onshore flow will still support scattered low-topped showers moving towards the coast on Thursday. Thus, the main weather concerns for launch day are lingering cumulus clouds and showers embedded in this low-level onshore flow as well as breezy conditions during liftoff.

For delay day, a deep upper level trough and associated cold front will dive into the southeastern U.S., switching the low-level winds from out of the northwest. Layered moisture associated with this system suggests the potential for thick clouds as well as scattered showers embedded within lower cumulus clouds.

Launch Day

Probability of Violating Weather Constraints

40%

Primary Concerns: Cumulus Cloud Rule, Liftoff Winds

Weather Conditions		Clouds				Additional Risk Criteria	
		Type	Coverage	Base (ft)	Tops (ft)		
Weather/Visibility:	Sct Showers / 7 mi.					**Upper-Level Wind Shear**:	Low
Temp/Humidity:	63°F / 90%	Cumulus	Broken	2,000	8,000	**Booster Recovery Weather**:	Moderate
Liftoff Winds (200'):	030° 20 - 25 mph					**Solar Activity**:	Low

24-Hour Delay

Probability of Violating Weather Constraints

40%

Primary Concerns: Thick Cloud Layers Rule, Cumulus Cloud Rule

Weather Conditions		Clouds				Additional Risk Criteria	
		Type	Coverage	Base (ft)	Tops (ft)		
Weather/Visibility:	Sct Showers / 7 mi.					**Upper-Level Wind Shear**:	Moderate
Temp/Humidity:	57°F / 82%	Cumulus	Scattered	3,000	10,000	**Booster Recovery Weather**:	Low
Liftoff Winds (200'):	310° 15 - 20 mph	Altostratus	Broken	16,000	24,000	**Solar Activity**:	Low

***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 Required