



Launch Mission Execution Forecast

Mission: SpaceX Falcon 9 Dragon Crew Demo-2

Issued: 27 May 2020 / 1000L (1400Z)

Valid: 27 May 2020 / 1633L (2033Z)



Forecast Discussion: Residual moisture with the passing low pressure system and increased low-level convergence will threaten the Space Coast with showers and thunderstorms this afternoon. Tropical Storm Bertha has just formed off the coast of South Carolina and is advecting inland over the next 6 hours. The primary concerns for launch are flight through precipitation, as well as the anvil and cumulus cloud rules associated with the afternoon convection.

On Friday, the subtropical ridge builds into the region and begins to re-assert its influence. Although convection will still be likely, the ridge axis near the Space Coast will allow the east coast sea breeze to move further inland, keeping the storms farther from the Spaceport. A similar set up is expected this weekend, with the ridge axis being over or just north of the Spaceport. Convection will initiate inland, allowing for a potential clearing around the Spaceport. The primary weather threats for launch will be flight through precipitation, the anvil cloud rule, the cumulus cloud rule associated with afternoon convection for Saturday, and including thick cloud rule for Sunday.

27-May		Probability of Violating Weather Constraints					
50%		Primary Concerns: Flight Through Precipitation, Anvil Cloud Rule, Cumulus Cloud Rule					
Weather Conditions				Additional Risk Criteria			
Weather/Visibility:	Isold Showers / 7 mi.	Clouds			Upper-Level Wind Shear:	Low	
		Type	Coverage	Base (ft)	Tops (ft)		
Temp/Humidity:	82°F / 72%	Cumulus	Scattered	3,000	12,000	Booster Recovery Weather:	Moderate
Liftoff Winds (200'):	120° 12 - 17 mph	Cirrostratus	Broken	25,000	28,000	Solar Activity:	Low

30-May		Probability of Violating Weather Constraints					
40%		Primary Concerns: Flight Through Precipitation, Anvil Cloud Rule, Cumulus Cloud Rule					
Weather Conditions				Additional Risk Criteria			
Weather/Visibility:	Isold Showers / 7 mi.	Clouds			Upper-Level Wind Shear:	Low	
		Type	Coverage	Base (ft)	Tops (ft)		
Temp/Humidity:	87°F / 76%	Cumulus	Scattered	3,000	7,000	Booster Recovery Weather:	Low
Liftoff Winds (200'):	170° 10 - 15 mph	Cirrostratus	Broken	25,000	28,000	Solar Activity:	Low

31-May		Probability of Violating Weather Constraints					
40%		Primary Concerns: Flight Through Precipitation, Anvil Cloud Rule, Cumulus Cloud Rule, Thick Cloud Rule					
Weather Conditions				Additional Risk Criteria			
Weather/Visibility:	Isold Showers / 7 mi.	Clouds			Upper-Level Wind Shear:	Low	
		Type	Coverage	Base (ft)	Tops (ft)		
Temp/Humidity:	86°F / 84%	Cumulus	Scattered	3,000	10,000	Booster Recovery Weather:	Low
Liftoff Winds (200'):	170° 10 - 15 mph					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
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