



Launch Mission Execution Forecast

Mission: SpaceX Falcon 9 Dragon Crew Demo-2

Issued: 26 May 2020 / 0800L (1200Z)

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



Forecast Discussion: The tropical wave that has been delivering copious rains to the eastern half of Florida will finally move offshore this morning and may develop into a low-pressure area as it drifts north along the Gulf Stream. It should take much of the cloudiness and rains away to the northeast, but ample remnant moisture will allow afternoon convection to develop over Central Florida. On launch day, residual moisture will still be present and mid-level steering flow will be westerly, meaning afternoon convection will travel eastward towards the Space Coast. The primary concerns are flight through precipitation, as well as the anvil and cumulus cloud rules associated with the afternoon convection.

On Thursday, expect a typical early summer pattern with sea breezes creating afternoon convection that will mostly favor the eastern portions of Central Florida due to the westerly steering flow. 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 on Saturday, with the ridge axis being over or just north of the Spaceport. Convection will initiate inland, giving the 3:21pm liftoff time a fighting chance. The primary weather threats for launch remain flight through precipitation, the anvil cloud rule, and the cumulus cloud rule associated with afternoon convection.

Probability of Violating Weather Constraints						
27 May	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	
	Temp/Humidity: 82°F / 72%	Type	Coverage	Base (ft)	Tops (ft)	Booster Recovery Weather: Moderate
Liftoff Winds (200'): 120° 12 - 17 mph	Cumulus	Scattered	3,000	12,000	Solar Activity: Low	
	Cirrostratus	Broken	25,000	28,000		
Probability of Violating Weather Constraints						
30 May	30%	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	
	Temp/Humidity: 84°F / 64%	Type	Coverage	Base (ft)	Tops (ft)	Booster Recovery Weather: Low
Liftoff Winds (200'): 170° 10 - 15 mph	Cumulus	Scattered	3,000	10,000	Solar Activity: Low	
	Cirrostratus	Broken	25,000	28,000		
<p>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. Back-up day launch forecasts will be provided when the back-up date is within four days of this forecast.</p>						
Next Forecast Will Be Issued		As Required				