



# Launch Mission Execution Forecast

**Mission:** Atlas V CST-100 OFT-2

**Issued:** 16 May 2022 / 0800L (1200Z)

**Valid:** 19 May 2022 / 1845 – 1905L (2245 – 2305Z)



**Forecast Discussion:** *No significant change to the forecast reasoning.* Central Florida is expected to continue to gradually ease into the summer convective season this week as our local weather becomes predicated on the placement of the Atlantic high pressure area, amount of available moisture, as well as the interaction of the Gulf and Atlantic sea breezes. Limited moisture and south to southwest steering flow will lead to isolated showers and thunderstorms each afternoon through Thursday – with the greatest concentration predominantly west of Interstate 95 where the sea breezes are more likely to collide. For MLP Roll activities on Wednesday, mainly dry conditions are forecast with only a small chance, less than 20%, of a shower or thunderstorm in the afternoon as the Atlantic sea breeze develops and moves inland. Similar conditions are expected on Thursday, with isolated afternoon activity expected to develop near or just west of the launch complex, bringing a chance of a Cumulus Cloud Rule and/or Anvil Cloud Rule violation during the count. Precipitation chances increase substantially on Friday as winds increase out of the south and draw a plume of deeper moisture upward from the Caribbean. As a result, the forecast remains more pessimistic for the backup opportunity with higher probabilities of violations of the Cumulus Cloud Rule, Thick Cloud Layer Rule, and Anvil Cloud Rules.

		Probability of Violating Weather Constraints <sup>1</sup>				
<b>Launch Day</b>	<b>30%</b>	<b>Primary Concerns:</b> Cumulus Cloud Rule, Anvil Cloud Rules				
	Weather Conditions				Additional Risk Criteria <sup>2</sup>	
	<b>Weather/Visibility:</b>	Isolated Storms / 7 mi.	Clouds			<b>Solar Activity:</b> Low
			Type	Coverage	Base (ft)	
<b>Temp/Humidity:</b>	79°F / 80%	Cumulus	Few	3,500	6,000	
<b>Ground Winds (230'):</b>	150° 13 - 18 knots	Cirrostratus	Scattered	28,000	35,000	
		Probability of Violating Weather Constraints				
<b>24-Hour Delay</b>	<b>60%</b>	<b>Primary Concerns:</b> Cumulus Cloud Rule, Thick Cloud Layer Rule, Anvil Cloud Rules				
	Weather Conditions				Additional Risk Criteria	
	<b>Weather/Visibility:</b>	Sct Storms / 7 mi.	Clouds			<b>Solar Activity:</b> Low
			Type	Coverage	Base (ft)	
<b>Temp/Humidity:</b>	78°F / 84%	Cumulus	Scattered	2,500	12,000	
<b>Ground Winds (230'):</b>	160° 15 - 20 knots	Alto cumulus	Broken	15,000	20,000	
<b>Notes</b>	1. The Probability of Violation (PoV) is the chance of a local safety or customer constraint violation occurring anytime during the launch window. 2. Additional Risk Criteria, which are not included in the PoV, are mission-specific constraints that may not include all phenomena within each risk factor.					
	See <a href="https://www.patrick.spaceforce.mil/Portals/14/Weather/LaunchFAQ.pdf">https://www.patrick.spaceforce.mil/Portals/14/Weather/LaunchFAQ.pdf</a> for more information.					
<b>Next Forecast Will Be Issued</b>		17 May 2022				