



Launch Mission Execution Forecast



Mission: Space Launch System - Artemis I

Issued: 27 Aug 2022 / 0700L (1100Z)

Valid: 29 Aug 2022 / 0833 – 1033L (1233 – 1433Z)

Forecast Discussion: *No significant changes have been made to the forecast.*

An unsettled weather pattern will continue across Central Florida today as a weak trough to the north keeps very light steering flow out of the south to south-southwest. This will favor another stormy afternoon across the Spaceport with convective activity decreasing after sunset. On Sunday, a pattern shift back to south-southeast flow is expected, which should decrease the areal and temporal coverage of storms along the Space Coast. This flow regime will remain in place for the opening of the initial launch window Monday morning. While the overall lightning threat seems low, this onshore flow regime will promote scattered showers across the Atlantic waters through the launch window. As a result, the primary weather concerns for a Monday morning attempt will be the Cumulus Cloud Rule, Surface Electric Fields Rule, and the Flight Through Precipitation constraint.

Probability of Violating Weather Constraints ¹																					
Launch Day	30% Primary Concerns: Cumulus Cloud Rule, Surface Electric Fields Rule, Flight Through Precipitation																				
	<table border="1"> <thead> <tr> <th colspan="2">Weather Conditions</th> <th colspan="2">Additional Risk Criteria²</th> </tr> </thead> <tbody> <tr> <td> Weather/Visibility: Sct Showers / 7 mi. Temp/Humidity: 82°F / 90% Liftoff Winds (132'): 140° 5-10 mph </td> <td> <table border="1"> <thead> <tr> <th colspan="4">Clouds</th> </tr> <tr> <th>Type</th> <th>Coverage</th> <th>Base (ft)</th> <th>Tops (ft)</th> </tr> </thead> <tbody> <tr> <td>Cumulus</td> <td>Scattered</td> <td>2,500</td> <td>20,000</td> </tr> </tbody> </table> </td> <td colspan="2"> Upper-Level Winds: Low Solar Activity: Low </td> </tr> </tbody> </table>	Weather Conditions		Additional Risk Criteria ²		Weather/Visibility: Sct Showers / 7 mi. Temp/Humidity: 82°F / 90% Liftoff Winds (132'): 140° 5-10 mph	<table border="1"> <thead> <tr> <th colspan="4">Clouds</th> </tr> <tr> <th>Type</th> <th>Coverage</th> <th>Base (ft)</th> <th>Tops (ft)</th> </tr> </thead> <tbody> <tr> <td>Cumulus</td> <td>Scattered</td> <td>2,500</td> <td>20,000</td> </tr> </tbody> </table>	Clouds				Type	Coverage	Base (ft)	Tops (ft)	Cumulus	Scattered	2,500	20,000	Upper-Level Winds: Low Solar Activity: Low	
	Weather Conditions		Additional Risk Criteria ²																		
	Weather/Visibility: Sct Showers / 7 mi. Temp/Humidity: 82°F / 90% Liftoff Winds (132'): 140° 5-10 mph	<table border="1"> <thead> <tr> <th colspan="4">Clouds</th> </tr> <tr> <th>Type</th> <th>Coverage</th> <th>Base (ft)</th> <th>Tops (ft)</th> </tr> </thead> <tbody> <tr> <td>Cumulus</td> <td>Scattered</td> <td>2,500</td> <td>20,000</td> </tr> </tbody> </table>	Clouds				Type	Coverage	Base (ft)	Tops (ft)	Cumulus	Scattered	2,500	20,000	Upper-Level Winds: Low Solar Activity: Low						
Clouds																					
Type	Coverage	Base (ft)	Tops (ft)																		
Cumulus	Scattered	2,500	20,000																		

Notes

- The Probability of Violation (PoV) is the chance of a local safety or customer constraint violation occurring anytime during the launch window.
- 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 <https://www.patrick.spaceforce.mil/Portals/14/Weather/LaunchFAQ.pdf> for more information

Next Forecast Will Be Issued 28 Aug 2022