



# Launch Mission Execution Forecast



**Mission:** Space Launch System - Artemis I

**Issued:** 25 Aug 2022 / 0845L (1245Z)

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

**Forecast Discussion:** An unsettled weather pattern will continue across Central Florida today as a weak trough sinks into North Florida, causing the ridge axis to shift southward. Showers and storms will begin to form along the east coast sea breeze around noon and move slowly westward. However, shifting mid-level flow, in conjunction with disturbances aloft, may send thunderstorms back toward the Spaceport late this afternoon and evening. In any case, convective activity will wane overnight. For Friday and Saturday, the predominant steering flow shifts to the south-southwest. This will favor stormy afternoons and evenings as the sea breeze collision favors the east coast. As usual, showers and storms will decrease overnight. On Sunday, a pattern shift back to southeast flow is expected, which should decrease the coverage of the showers and thunderstorms 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 <sup>1</sup>																													
<b>Launch Day</b>	<b>30%</b> <b>Primary Concerns:</b> Cumulus Cloud Rule, Surface Electric Fields Rule, Flight Through Precipitation																												
	<table border="1"> <thead> <tr> <th colspan="4">Weather Conditions</th> <th colspan="2">Additional Risk Criteria<sup>2</sup></th> </tr> </thead> <tbody> <tr> <td><b>Weather/Visibility:</b> Sct Showers / 7 mi.</td> <td colspan="2"><b>Clouds</b></td> <td></td> <td></td> <td rowspan="3"><b>Upper-Level Winds:</b> Low <b>Solar Activity:</b> Low</td> </tr> <tr> <td></td> <td>Type</td> <td>Coverage</td> <td>Base (ft)</td> <td>Tops (ft)</td> </tr> <tr> <td><b>Temp/Humidity:</b> 82°F / 90%</td> <td>Cumulus</td> <td>Scattered</td> <td>2,500</td> <td>20,000</td> </tr> <tr> <td><b>Liftoff Winds (132'):</b> 150° 5-10 mph</td> <td colspan="4"></td> <td></td> </tr> </tbody> </table>	Weather Conditions				Additional Risk Criteria <sup>2</sup>		<b>Weather/Visibility:</b> Sct Showers / 7 mi.	<b>Clouds</b>				<b>Upper-Level Winds:</b> Low <b>Solar Activity:</b> Low		Type	Coverage	Base (ft)	Tops (ft)	<b>Temp/Humidity:</b> 82°F / 90%	Cumulus	Scattered	2,500	20,000	<b>Liftoff Winds (132'):</b> 150° 5-10 mph					
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<b>Notes</b>	<ol style="list-style-type: none"> <li>The Probability of Violation (PoV) is the chance of a local safety or customer constraint violation occurring anytime during the launch window.</li> <li>Additional Risk Criteria, which are not included in the PoV, are mission-specific constraints that may not include all phenomena within each risk factor.</li> </ol> <p>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</p>																												
<b>Next Forecast Will Be Issued</b>	26 Aug 2022																												