



Launch Mission Execution Forecast



Mission: Space Launch System - Artemis I

Issued: 23 Sep 2022 / 1030L (1430Z)

Valid: 27 Sep 2022 / 1137 – 1247L (1537 – 1647Z)

Forecast Discussion: As Hurricane Fiona races northward, a trailing band of convergence between Fiona and an upper-level trough settles southward into Florida today. This 'back-door front' will push through the Space Coast late this afternoon, producing some isolated showers and bringing gusty northeasterly winds. The boundary should continue south of the Spaceport Saturday as high pressure builds in, allowing winds to diminish. On Sunday, the boundary will push back northward ahead of a likely strengthening tropical system in the western Caribbean, gradually shifting shower activity closer to the Spaceport. The weather begins to further deteriorate Monday into Tuesday, as a possible hurricane shifts into the northwest Caribbean Sea. The official forecast from the National Hurricane Center tracks the possible hurricane over western Cuba early Tuesday, with the storm entering the eastern gulf near the Florida Keys mid-day Tuesday. Deep tropical moisture will spill across the Spaceport Tuesday, with widespread cloud cover and scattered showers likely during the launch window. As a result, our primary concerns will be the Cumulus Cloud Rule, Surface Electric Fields Rule, and the Flight Through Precipitation constraint.

Probability of Violating Weather Constraints ¹						
Launch Day	80%	Primary Concerns: Cumulus Cloud, Surface Electric Fields, Flight Through Precipitation				
	Weather Conditions				Additional Risk Criteria ²	
	Weather/Visibility:	Sct Showers / 7 mi.	Clouds			
			Type	Coverage	Base (ft)	Tops (ft)
Temp/Humidity:	82°F / 80%	Cumulus	Broken	2,500	20,000	Upper-Level Winds: Low Solar Activity: Low
Ground Winds (132'):	100° 12 - 18 knots	Alto cumulus	Broken	15,000	30,000	
Notes	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 https://www.patrick.spaceforce.mil/Portals/14/Weather/LaunchFAQ.pdf for more information.					
Next Forecast Will Be Issued		24 Sep 2022				