



Launch Mission Execution Forecast

Mission: Atlas V SILENTBARKER (NROL-107)

Issued: 7 Sep 2023 / 0830L (1230Z)

Valid: 9 Sep 2023 / During Window



Forecast Discussion: The abnormally dry pattern across East Central Florida will continue for one more day due to below average moisture levels and very stable conditions. By tomorrow, the mid-level ridge will continue to break down as a short wave digs into the southeastern US, increasing both moisture and instability. This, combined with light offshore flow, will significantly increase afternoon thunderstorm chances. By Saturday morning, the Atlantic ridge axis will settle almost directly over the Spaceport, shifting winds to a light southerly flow before the afternoon sea breeze develops. Launch weather conditions generally look favorable in the morning hours, with most of the diurnal shower/storm activity focused over the Atlantic waters. The primary concern is the small risk of a Cumulus Cloud Rule violation. The weather pattern looks very similar for the backup day Sunday, with the same probability of violation and concerns.

Launch Day	Probability of Violating Weather Constraints ¹						
	15%	Primary Concerns: Cumulus Cloud Rule					
	Weather Conditions				Additional Risk Criteria ²		
	Weather/Visibility:	None / 7 mi.	Clouds		Solar Activity: Low		
		Type	Coverage	Base (ft)			Tops (ft)
Temp/Humidity:	80°F / 80%	Cumulus	Scattered	2,500			10,000
Ground Winds (230'):	180° 5 - 10 knots						

24-Hour Delay	Probability of Violating Weather Constraints						
	15%	Primary Concerns: Cumulus Cloud Rule					
	Weather Conditions				Additional Risk Criteria		
	Weather/Visibility:	None / 7 mi.	Clouds		Solar Activity: Low		
		Type	Coverage	Base (ft)			Tops (ft)
Temp/Humidity:	81°F / 80%	Cumulus	Scattered	2,500			8,000
Ground Winds (230'):	200° 5 – 10 knots						

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 8 Sep 2023