



Launch Mission Execution Forecast

Mission: Atlas V SILENTBARKER (NROL-107)

Issued: 28 Aug 2023 / 0800L (1200Z)

Valid: 29 Aug 2023 / During Window



Forecast Discussion: After generally quiet weather over the weekend, the pattern will become active this week as Tropical Storm Idalia moves into the Gulf of Mexico. Moisture will continue to increase today with southeasterly flow, bringing scattered coastal showers. Tropical Storm Idalia is currently intensifying in the northwest Caribbean Sea and will slowly push northwards into the Gulf of Mexico later today and tomorrow. However, on Tuesday morning during the window, Idalia is expected to be well to our southwest in the southeastern Gulf and far enough away where we likely will not have any significant impacts yet. The main concerns will be any showers that develop from outer bands, and anvil clouds blowing off from the main area of convection in the Gulf.

The storm will push north/northeastwards in the Gulf, with the National Hurricane Center forecasting a landfall in the Big Bend region of Florida Wednesday morning as a Category 3 hurricane. There is still some uncertainty for Wednesday, but the storm's center will be closer to the Spaceport, likely near the Big Bend region of Florida. Wednesday morning is when the Space Coast will experience the impacts from Idalia. Thus, the POV is much higher for the backup day, with the main concerns being the Cumulus Cloud Rule, Anvil Cloud Rules, Thick Cloud Layers Rule, and Ground Winds all associated with the storm.

Launch Day	Probability of Violating Weather Constraints ¹					
	20%	Primary Concerns: Cumulus Cloud Rule, Anvil Cloud Rules				
	Weather Conditions				Additional Risk Criteria ²	
	Weather/Visibility:	None / 7 mi.	Clouds			
Temp/Humidity:	83°F / 85%	Type	Coverage	Base (ft)	Tops (ft)	
Ground Winds (230'):	160° 8 - 12 knots	Cumulus	Scattered	2,500	10,000	
		Cirrostratus	Scattered	30,000	35,000	

24-Hour Delay	Probability of Violating Weather Constraints					
	80%	Primary Concerns: Cumulus Cloud Rule, Anvil Cloud Rules, Thick Cloud Layers Rule, Ground Winds				
	Weather Conditions				Additional Risk Criteria	
	Weather/Visibility:	Sct Showers / 7 mi.	Clouds			
Temp/Humidity:	82°F / 90%	Type	Coverage	Base (ft)	Tops (ft)	
Ground Winds (230'):	180° 30 – 38 knots	Cumulus	Scattered	2,500	18,000	
		Cirrostratus	Broken	25,000	34,000	

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 | As Required