



Launch Mission Execution Forecast

Mission: Falcon Heavy ViaSat-3.1

Issued: 27 Apr 2023 / 2030L (28/0030Z)

Valid: 28 Apr 2023 / 1924 – 2031L (2324 – 27/0031Z)



Forecast Discussion: Significant severe threat is waning across the Spaceport with the strongest storms expected to be offshore by late evening. Squall line moving towards the west Florida coast is expected to arrive just after midnight, lingering through much of the overnight hours. Severe threat looks minimal with this line as it falls part on its trek east, but gusty winds will not be out of the question. Friday will be another active day as an area of low pressure tracking across the Mid-South pulls a frontal boundary into Florida. The boundary will bring activity moving from west to east towards the Spaceport by midday and continuing through the afternoon. Most activity may be just south or offshore of the Spaceport by the start of the backup window but given current uncertainty would expect at least lingering debris clouds and anvils through the window.

The active pattern continues into Saturday as a very well-defined upper-level shortwave crosses into the Gulf with yet another weaker disturbance rolling into the state ahead of it. Not too dissimilar from other days this week, showers and storms will get going by midday as both sea breezes get going enhanced by the upper-level support. The east coast seabreeze will remain closer to the coast due to increased westerly flow, so coverage will favor areas near the Spaceport. Similar to Friday, convection may be winding down leading into the backup launch window Saturday evening, however lingering debris clouds and anvils will remain a concern.

		Probability of Violating Weather Constraints ¹					
Launch Day	70%	Primary Concerns: Anvil Cloud Rules, Debris Cloud Rule, Cumulus Cloud Rule					
	Weather Conditions				Additional Risk Criteria ²		
	Weather/Visibility: Isold Storms / 7 mi.	Clouds				Upper-Level Wind Shear:	Low
		Type	Coverage	Base (ft)	Tops (ft)	Booster Recovery Weather:	N/A
Temp/Humidity: 72°F / 85%	Cumulus	Scattered	3,000	10,000	Solar Activity:	Low	
Liftoff Winds (200'): 200° 10 - 15 mph	Cirrostratus	Overcast	18,000	26,000			
		Probability of Violating Weather Constraints					
24-Hour Delay	70%	Primary Concerns: Anvil Cloud Rules, Cumulus Cloud Rule, Surface Electric Fields Rule					
	Weather Conditions				Additional Risk Criteria		
	Weather/Visibility: Isold Storms / 7 mi.	Clouds				Upper-Level Wind Shear:	Low
		Type	Coverage	Base (ft)	Tops (ft)	Booster Recovery Weather:	N/A
Temp/Humidity: 74°F / 86%	Cumulus	Scattered	3,500	11,000	Solar Activity:	Low	
Liftoff Winds (200'): 160° 7 - 12 mph	Cirrostratus	Overcast	22,000	28,000			
Notes	<ol style="list-style-type: none"> The Probability of Violation (PoV) is the chance of a local safety or customer constraint violation occurring any random time 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 Needed					