



# Launch Mission Execution Forecast

**Mission:** Falcon 9 SES 18 & 19

**Issued:** 16 Mar 2023 / 0900L (1300Z)

**Valid:** 17 Mar 2023 / 1928 – 2026L (2328 – 18/0026Z)



**Forecast Discussion:** Cool, dry air is in place as high pressure remains control for the next several days. Tomorrow, the next cold front will begin to approach Florida from the west, and the high will retreat into the Atlantic. The front will be draped over the Florida Panhandle by the evening. This set up will bring southerly winds, shifting southeasterly and becoming gusty in the late afternoon and evening behind the sea breeze. While there is little risk of a Lightning Launch Commit Criteria violation, the near surface Liftoff Winds will be the primary concern during the launch window.

For the backup day on Saturday, launch weather conditions will deteriorate as the front approaches East Central Florida. While there is still some discrepancy among the models regarding the front's exact position, it is likely that showers, storms, and increased cloud cover will be in the area. The POV is higher for the backup day, with the primary concerns being the Cumulus Cloud Rule, Surface Electric Fields Rule, and Thick Cloud Layers Rule.

Launch Day		Probability of Violating Weather Constraints <sup>1</sup>					
		<b>20%</b>	Primary Concerns: Liftoff Winds				
		Weather Conditions				Additional Risk Criteria <sup>2</sup>	
		<b>Weather/Visibility:</b> None / 7 mi.	<b>Clouds</b>				<b>Upper-Level Wind Shear:</b> Low-Mod
			Type	Coverage	Base (ft)	Tops (ft)	
		<b>Temp/Humidity:</b> 73°F / 65%	Cumulus	Scattered	3,500	7,000	<b>Booster Recovery Weather:</b> Low
		<b>Liftoff Winds (200'):</b> 150° 25 - 30 mph	Cirrus	Scattered	32,000	35,000	<b>Solar Activity:</b> Low
24-Hour Delay		Probability of Violating Weather Constraints					
		<b>65%</b>	Primary Concerns: Cumulus Cloud Rule, Surface Electric Fields Rule, Thick Cloud Layers Rule				
		Weather Conditions				Additional Risk Criteria	
		<b>Weather/Visibility:</b> Sct Showers / 5 mi.	<b>Clouds</b>				<b>Upper-Level Wind Shear:</b> Low-Mod
			Type	Coverage	Base (ft)	Tops (ft)	
		<b>Temp/Humidity:</b> 71°F / 85%	Cumulus	Broken	3,000	15,000	<b>Booster Recovery Weather:</b> Low
		<b>Liftoff Winds (200'):</b> 300° 12 - 17 mph	Cirrostratus	Broken	25,000	30,000	<b>Solar Activity:</b> Low
Notes	<ol style="list-style-type: none"> <li>The Probability of Violation (PoV) is the chance of a local safety or customer constraint violation occurring any random time 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>						
	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						
<b>Next Forecast Will Be Issued</b>		As Required					