



# Launch Mission Execution Forecast



**Mission:** Falcon 9 Optus-X

**Issued:** 16 Nov 2024 / 1015L (1515Z)

**Valid:** 17 Nov 2024 / 1629 – 1827L (2129 – 2327Z)

**Forecast Discussion:** A seasonably cool and dry airmass will remain in place across the Spaceport over the next few days as a large area of high pressure slides out of the Great Lakes and off the coast of the Carolinas. With light onshore flow in place, a low-topped stratocumulus deck is likely, though this is expected to be far too warm for any launch weather concerns. The high center moves just to the east of Florida for the backup window on Monday, with winds remaining light as they veer out of the southeast. Otherwise, very little change is expected in the environment with the continuing low-topped stratocumulus deck of minimal concern.

Probability of Violating Weather Constraints <sup>1</sup>													
<b>Launch Day</b>	<b>&lt;5%</b> Primary Concerns: Cumulus Cloud Rule												
	Weather Conditions												
	<table border="0" style="width: 100%;"> <tr> <td style="width: 30%;"><b>Weather/Visibility:</b> None / 7 mi.</td> <td style="width: 30%; text-align: center;"><b>Clouds</b></td> <td style="width: 40%;"></td> </tr> <tr> <td></td> <td style="text-align: center;">Type          Coverage      Base (ft)      Tops (ft)</td> <td></td> </tr> <tr> <td><b>Temp/Humidity:</b> 74°F / 65%</td> <td style="text-align: center;">Stratocumulus   Scattered</td> <td style="text-align: center;">2,500      5,000</td> </tr> <tr> <td><b>Liftoff Winds (200'):</b> 050° 7 - 12 mph</td> <td></td> <td></td> </tr> </table>	<b>Weather/Visibility:</b> None / 7 mi.	<b>Clouds</b>			Type          Coverage      Base (ft)      Tops (ft)		<b>Temp/Humidity:</b> 74°F / 65%	Stratocumulus   Scattered	2,500      5,000	<b>Liftoff Winds (200'):</b> 050° 7 - 12 mph		
	<b>Weather/Visibility:</b> None / 7 mi.	<b>Clouds</b>											
	Type          Coverage      Base (ft)      Tops (ft)												
<b>Temp/Humidity:</b> 74°F / 65%	Stratocumulus   Scattered	2,500      5,000											
<b>Liftoff Winds (200'):</b> 050° 7 - 12 mph													
Additional Risk Criteria <sup>2</sup>													
	<table border="0" style="width: 100%;"> <tr> <td style="width: 60%;"><b>Upper-Level Wind Shear:</b></td> <td style="width: 40%;">Low</td> </tr> <tr> <td><b>Booster Recovery Weather:</b></td> <td>Low-Mod</td> </tr> <tr> <td><b>Solar Activity:</b></td> <td>Low</td> </tr> </table>	<b>Upper-Level Wind Shear:</b>	Low	<b>Booster Recovery Weather:</b>	Low-Mod	<b>Solar Activity:</b>	Low						
<b>Upper-Level Wind Shear:</b>	Low												
<b>Booster Recovery Weather:</b>	Low-Mod												
<b>Solar Activity:</b>	Low												
Probability of Violating Weather Constraints													
<b>24-Hour Delay</b>	<b>&lt;5%</b> Primary Concerns: Cumulus Cloud Rule												
	Weather Conditions												
	<table border="0" style="width: 100%;"> <tr> <td style="width: 30%;"><b>Weather/Visibility:</b> None / 7 mi.</td> <td style="width: 30%; text-align: center;"><b>Clouds</b></td> <td style="width: 40%;"></td> </tr> <tr> <td></td> <td style="text-align: center;">Type          Coverage      Base (ft)      Tops (ft)</td> <td></td> </tr> <tr> <td><b>Temp/Humidity:</b> 75°F / 65%</td> <td style="text-align: center;">Stratocumulus   Scattered</td> <td style="text-align: center;">2,500      5,000</td> </tr> <tr> <td><b>Liftoff Winds (200'):</b> 120° 7 - 12 mph</td> <td></td> <td></td> </tr> </table>	<b>Weather/Visibility:</b> None / 7 mi.	<b>Clouds</b>			Type          Coverage      Base (ft)      Tops (ft)		<b>Temp/Humidity:</b> 75°F / 65%	Stratocumulus   Scattered	2,500      5,000	<b>Liftoff Winds (200'):</b> 120° 7 - 12 mph		
	<b>Weather/Visibility:</b> None / 7 mi.	<b>Clouds</b>											
	Type          Coverage      Base (ft)      Tops (ft)												
<b>Temp/Humidity:</b> 75°F / 65%	Stratocumulus   Scattered	2,500      5,000											
<b>Liftoff Winds (200'):</b> 120° 7 - 12 mph													
Additional Risk Criteria													
	<table border="0" style="width: 100%;"> <tr> <td style="width: 60%;"><b>Upper-Level Wind Shear:</b></td> <td style="width: 40%;">Low</td> </tr> <tr> <td><b>Booster Recovery Weather:</b></td> <td>Low</td> </tr> <tr> <td><b>Solar Activity:</b></td> <td>Low</td> </tr> </table>	<b>Upper-Level Wind Shear:</b>	Low	<b>Booster Recovery Weather:</b>	Low	<b>Solar Activity:</b>	Low						
<b>Upper-Level Wind Shear:</b>	Low												
<b>Booster Recovery Weather:</b>	Low												
<b>Solar Activity:</b>	Low												
<b>Notes</b>	<ol style="list-style-type: none"> <li>1. 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>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.</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 Needed												