



Launch Mission Execution Forecast

Mission: Falcon 9 Intelsat-40e

Issued: 5 April 2023 / 0900L (1300Z)

Valid: 7 April 2023 / 0029-0230L (0429-0630Z)



Forecast Discussion: Another warm, sunny day is expected across Central Florida today. Elsewhere, a strong frontal system will be making its way across much of the Eastern U.S. This system's cold front will stall across the Deep South and not make it to the Space Coast. This will leave the Spaceport in an onshore flow pattern with moderated temperatures and isolated coastal showers. The primary launch weather concerns for early Friday and Saturday morning will be liftoff winds and the cumulus cloud rule associated with the gusty, onshore flow.

Probability of Violating Weather Constraints ¹																								
Launch Day	10% Primary Concerns: Liftoff Winds, Cumulus Cloud Rule																							
	Weather Conditions																							
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">Weather/Visibility:</th> <th style="width: 30%;">None / 7 miles</th> <th colspan="3" style="text-align: center;">Clouds</th> </tr> <tr> <th></th> <th></th> <th>Type</th> <th>Coverage</th> <th>Base (ft)</th> <th>Tops (ft)</th> </tr> </thead> <tbody> <tr> <td>Temp/Humidity:</td> <td>72°F / 90%</td> <td>Cumulus</td> <td>Few</td> <td>3,000</td> <td>8,000</td> </tr> <tr> <td>Liftoff Winds (200'):</td> <td>110° 15-20 mph</td> <td>Cirrostratus</td> <td>Scattered</td> <td>30,000</td> <td>33,000</td> </tr> </tbody> </table>	Weather/Visibility:	None / 7 miles	Clouds					Type	Coverage	Base (ft)	Tops (ft)	Temp/Humidity:	72°F / 90%	Cumulus	Few	3,000	8,000	Liftoff Winds (200'):	110° 15-20 mph	Cirrostratus	Scattered	30,000	33,000
	Weather/Visibility:	None / 7 miles	Clouds																					
		Type	Coverage	Base (ft)	Tops (ft)																			
Temp/Humidity:	72°F / 90%	Cumulus	Few	3,000	8,000																			
Liftoff Winds (200'):	110° 15-20 mph	Cirrostratus	Scattered	30,000	33,000																			
Additional Risk Criteria ²																								
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td>Upper-Level Wind Shear:</td> <td style="text-align: right;">Low</td> </tr> <tr> <td>Booster Recovery Weather:</td> <td style="text-align: right;">Low</td> </tr> <tr> <td>Solar Activity:</td> <td style="text-align: right;">Low</td> </tr> </tbody> </table>	Upper-Level Wind Shear:	Low	Booster Recovery Weather:	Low	Solar Activity:	Low																	
Upper-Level Wind Shear:	Low																							
Booster Recovery Weather:	Low																							
Solar Activity:	Low																							
Probability of Violating Weather Constraints																								
24-Hour Delay	15% Primary Concerns: Liftoff Winds, Cumulus Cloud Rule																							
	Weather Conditions																							
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">Weather/Visibility:</th> <th style="width: 30%;">None / 7 miles</th> <th colspan="3" style="text-align: center;">Clouds</th> </tr> <tr> <th></th> <th></th> <th>Type</th> <th>Coverage</th> <th>Base (ft)</th> <th>Tops (ft)</th> </tr> </thead> <tbody> <tr> <td>Temp/Humidity:</td> <td>72°F / 90%</td> <td>Cumulus</td> <td>Few</td> <td>3,000</td> <td>8,000</td> </tr> <tr> <td>Liftoff Winds (200'):</td> <td>100° 15-20 mph</td> <td>Cirrostratus</td> <td>Scattered</td> <td>30,000</td> <td>33,000</td> </tr> </tbody> </table>	Weather/Visibility:	None / 7 miles	Clouds					Type	Coverage	Base (ft)	Tops (ft)	Temp/Humidity:	72°F / 90%	Cumulus	Few	3,000	8,000	Liftoff Winds (200'):	100° 15-20 mph	Cirrostratus	Scattered	30,000	33,000
	Weather/Visibility:	None / 7 miles	Clouds																					
		Type	Coverage	Base (ft)	Tops (ft)																			
Temp/Humidity:	72°F / 90%	Cumulus	Few	3,000	8,000																			
Liftoff Winds (200'):	100° 15-20 mph	Cirrostratus	Scattered	30,000	33,000																			
Additional Risk Criteria																								
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td>Upper-Level Wind Shear:</td> <td style="text-align: right;">Low</td> </tr> <tr> <td>Booster Recovery Weather:</td> <td style="text-align: right;">Low</td> </tr> <tr> <td>Solar Activity:</td> <td style="text-align: right;">Low</td> </tr> </tbody> </table>	Upper-Level Wind Shear:	Low	Booster Recovery Weather:	Low	Solar Activity:	Low																	
Upper-Level Wind Shear:	Low																							
Booster Recovery Weather:	Low																							
Solar Activity:	Low																							
Notes	<ol style="list-style-type: none"> 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. 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. 																							
	See https://www.patrick.spaceforce.mil/Portals/14/Weather/LaunchFAQ.pdf for more information																							
Next Forecast Will Be Issued	6 April 2023																							