



Launch Mission Execution Forecast

Mission: Falcon 9 Axiom-1

Issued: 7 April 2022 / 0800L (1200Z)

Valid: 8 April 2022 / 1112 - 1122L (1512 - 1522Z)



Forecast Discussion: Expect one more day of summer-like weather today, with showers and thunderstorms likely as a cold front makes its way across Central Florida this evening. The regime change will be noticeable Friday, with markedly cooler, drier air filtering in through the day. The primary weather concern Friday is liftoff winds associated with the cold air advection. Maximum upper-level winds will be from the southwest at 120 knots near 40,000 feet.

On Saturday, a strong high pressure area will build in, bringing gusty winds with lows in the mid-50s and highs barely reaching 70 along the Space Coast. The primary launch weather concern Saturday remains liftoff winds. Maximum upper-level winds will be from the southwest at 140 knots near 40,000 feet.

Sunday will be a spectacular day at the Spaceport as high pressure moves overhead, weakening the winds. The primary weather concern Sunday remains liftoff winds in the event the high pressure is slow moving into Florida. Maximum upper-level winds will be from the west at 80 knots near 35,000 feet.

| | | Probability of Violating Weather Constraints ¹ | | | | | |
|------------------------------|---|---|---------------|-----------|--|---|---|
| Launch Day | 10% | Primary Concerns: Liftoff Winds | | | | | |
| | Weather Conditions | | | | Additional Risk Criteria ² | | |
| | Weather: | None | Clouds | | | Upper-Level Wind Shear: | Moderate |
| | | | Type | Coverage | Base (ft) | Tops (ft) | |
| | Visibility: | 7 miles | Altostratus | Few | 15,000 | 18,000 | Ascent Corridor Recovery: Moderate |
| Temp/Humidity: | 70°F / 60% | Cirrostratus | Scattered | 30,000 | 32,000 | Booster Recovery Weather: Moderate | |
| Liftoff Winds (200'): | 320° 15 - 20 mph | | | | | Solar Activity: | Low |
| | | Probability of Violating Weather Constraints | | | | | |
| 24-Hour Delay | 20% | Primary Concerns: Liftoff Winds | | | | | |
| | Weather Conditions | | | | Additional Risk Criteria | | |
| | Weather: | None | Clouds | | | Upper-Level Wind Shear: | Moderate |
| | | | Type | Coverage | Base (ft) | Tops (ft) | |
| | Visibility: | 7 miles | Stratocumulus | Scattered | 4,500 | 6,000 | Ascent Corridor Recovery: High |
| Temp/Humidity: | 65°F / 50% | Cirrostratus | Scattered | 30,000 | 32,000 | Booster Recovery Weather: High | |
| Liftoff Winds (200'): | 340° 17 – 22 mph | | | | | Solar Activity: | Low |
| | | Probability of Violating Weather Constraints | | | | | |
| 48-Hour Delay | <10% | Primary Concerns: Liftoff Winds | | | | | |
| | Weather Conditions | | | | Additional Risk Criteria | | |
| | Weather: | None | Clouds | | | Upper-Level Wind Shear: | Low |
| | | | Type | Coverage | Base (ft) | Tops (ft) | |
| | Visibility: | 7 miles | Cirrus | Few | 28,000 | 30,000 | Ascent Corridor Recovery: Moderate |
| Temp/Humidity: | 60°F / 40% | | | | | Booster Recovery Weather: Low | |
| Liftoff Winds (200'): | 360° 10-15 mph | | | | | Solar Activity: | Low |
| Notes | 1. The Probability of Violation (PoV) is the chance of a local safety or customer constraint violation occurring anytime 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 | As Required