



Launch Operations Forecast

Vehicle: Falcon 9 CRS-8

Issued: 7 Apr 2016/1300 UTC (0900 EDT)

Valid: 8 Apr 2016/2043 UTC (1643 EDT)

Synoptic Discussion: Currently, a quick moving cold front is draped along the eastern Seaboard and into North Florida. Prefrontal showers are pushing through Central Florida this morning and are expected to clear the Spaceport by early afternoon. Southwesterly low level flow and decreasing cloud cover will allow for warmer than average daytime temperatures. The tail end of the front moves through Central Florida later this evening, causing low level winds to become westerly and gust into the low-twenties. On Friday, skies are expected to clear behind the front with only a few lingering cirrostratus clouds associated with the jet stream digging in across the eastern U.S. Surface winds will remain generally off-shore and gust into the low-twenties throughout most of the day on Friday. A surface trough pushes across the Spaceport just after T-0 causing winds to toggle southwesterly and gust into the mid-twenties Friday evening. Maximum upper-level winds will be from the west at 90 knots at 40,000 feet. The **primary weather concern** for launch is liftoff winds.

In the event of a 24-hr delay, daytime surface winds decrease from the early morning hours to the upper-teens and become northerly by T-0. Maximum upper-level winds will be from the west at 85 knots near 35,000 feet. The development of shallow cumulus clouds make the primary weather concern on Saturday the cumulus cloud rule.

| <u>Clouds</u> | <u>Coverage</u> | <u>Bases (feet)</u> | <u>Tops (feet)</u> |
|---------------|-----------------|---------------------|--------------------|
| Cirrostratus | Few | 35,000 | 38,000 |

| | |
|--|-----------------------------|
| Weather: None | Solar Activity: Low |
| Surface Visibility: 7 miles | Pressure: 29.90 inHg |
| Liftoff Winds (MPH): 260° @ 15 P20 (162') | RH: 57% |
| Temperature: 75°F | |

Launch day probability of violating launch weather constraints: **10%**
Primary concern(s): Liftoff Winds

24-hr delay probability of violating launch weather constraints: **10%**
Primary concern(s): Cumulus Cloud Rule

Sunrise: 8/0704 EDT
9/0703 EDT

Sunset: 8/1945 EDT
9/1945 EDT

Moonrise: 8/0805 EDT
9/0854 EDT

Moonset: 8/2120 EDT
9/2227 EDT

Illumination: 2%
7%

Next forecast will be issued: As Required