



Launch Mission Execution Forecast

Mission: Falcon 9 AMOS-17

Issued: 31 July 2019/1400L

Valid: 3 Aug 2019/1852-2020L (03/2252Z-04/0020Z)

Synoptic Discussion: A weakening tropical wave is expected to move across the western Bahamas and approach the Space Coast by Saturday afternoon. Meanwhile, an upper level trough will move across the eastern Gulf of Mexico toward the west coast of Florida. This trough is likely to absorb the tropical wave and surface development is not expected. However, there will be abundant moisture moving from the Bahamas into eastern Florida. This increasing moisture and the Gulf trough combined with afternoon heating will help initiate showers and thunderstorms over a large area of Central Florida. The primary weather concerns for launch will be lightning and thick cloud layers associated with the trough.

In the event of a delay, conditions only improve slightly as the Gulf trough remains just to our west and plenty of moisture is still in place. Boundaries from convection as well as the sea breeze will be the focus for thunderstorm development Sunday. The primary concerns for Sunday are lightning and cumulus clouds

<u>Clouds</u>	<u>Coverage</u>	<u>Bases (feet)</u>	<u>Tops (feet)</u>
Cumulus	Scattered	2,500	15,000
Alto cumulus	Broken	12,000	20,000
Cirrostratus	Overcast	25,000	30,000

Weather:	Scattered Showers/Thunderstorms		
Surface Visibility:	7 Miles	Solar Activity:	Low
Liftoff Winds (MPH):	120° @ 10-15 (200')	Pressure:	29.90 inHg
Temperature:	82°F	RH:	85%

Launch day probability of violating launch weather constraints: **70%**
Primary concern(s): Lightning Rule and Thick Cloud Layer Rule

Delay day probability of violating launch weather constraints: **60%**
Primary concern(s): Lightning Rule and Cumulus Cloud Rule

The probability of violation does not include mission & launch vehicle specific upper-level wind criteria.

Sunrise: 03/0645 EDT
04/0646 EDT

Sunset: 03/2012 EDT
04/2011 EDT

Moonrise: 03/0926 EDT
04/1033 EDT

Moonset: 03/2230 EDT
04/2310 EDT

Illumination: 10%
18%

Next forecast will be issued: 1 August 2019