



Launch Mission Execution Forecast

Vehicle: Atlas V

Issued: 07 September 09/1200Z (0800 EDT)

Launch Weather Team: (321) 853-8484

Synoptic Discussion: A developing low pressure system off the Carolina coast results in dryer air over the peninsula today. A remnant trough of low pressure East of the Florida peninsula with an upper level trough in the Gulf of Mexico persists through launch week. Moisture gradually increases on launch day with ample moisture in place on Wednesday. Increasing moisture coupled with the upper level trough will result in afternoon and evening thunderstorms over the peninsula. Weak Westerly steering level winds through mid week will result in slow migration of interior thunderstorms toward the East coast. Upper level winds will transport anvil clouds from interior thunderstorms toward the East coast. For MLP roll, Northerly winds becoming Northeasterly by late morning gusting in the low to mid teens (230 feet) are expected along with coastal showers. There is a low threat of an isolated thunderstorm during roll. Isolated afternoon and evening thunderstorms are expected to remain inland. On launch day, increasing moisture, afternoon heating, and the influence of the upper level trough results in afternoon and evening thunderstorms. The seabreeze is expected to develop near noon and serve as the focus for developing thunderstorms as it pushes slowly to the West. Upper level steering winds will cause thunderstorms to slowly drift back toward the East coast. Westerly anvil level winds are a threat to transport anvil clouds back toward the East coast. The primary concerns for launch day are anvil clouds, cumulus clouds, and lightning. In the event of a 24 hour delay, increasing moisture and gradual strengthening of upper level winds will transport interior thunderstorms and anvil clouds back to the East coast. The primary concerns for a 24 hour delay are anvil clouds, cumulus clouds, and lightning.

<u>Clouds</u>	<u>Coverage</u>	<u>Bases (feet)</u>	<u>Tops (feet)</u>
Cumulus	Scattered	2,000	15,000
Alto cumulus	Scattered	14,000	17,000
Cirrus	Broken	25,000	28,000
Weather:	Isolated Thunderstorms/Showers		
Visibility:	7 miles	Solar Activity:	Low
Wind:	060° @ 12-16 KT (230')	Pressure:	29.89 INS
Temperature:	81° - 83° F	RH:	70%

Launch day overall probability of violating weather constraints: **60%**

Primary concern(s): Cumulus Clouds, Anvil Clouds, Lightning

24-hour delay overall probability of violating weather constraints: **70%**

Primary concern(s): Cumulus Clouds, Anvil Clouds, Lightning

48-hour delay overall probability of violating weather constraints: **N/A**

Primary concern(s): N/A

Sunrise:	08/0704 EDT	Sunset:	08/1935 EDT		
	09/0704 EDT		09/1934 EDT		
	10/0705 EDT		10/1933 EDT		
Moonrise:	07/2107 EDT	Moonset:	08/1043 EDT	Illumination:	08 Jun 84%
	08/2144 EDT		09/1145 EDT		09 Jun 75%
	09/2227 EDT		10/1248 EDT		19 Jun 66%

Next forecast will be issued: As Required