



# Falcon 9 Crew Dragon Launch Weather Criteria

**Do not launch** if the sustained wind at the 162-foot level of the launch pad exceeds 30 mph.

**Do not launch** through upper-level conditions containing wind shear that could lead to control problems for the launch vehicle.

**Do not launch** for 30 minutes after lightning is observed within 10 nautical miles of the launch pad or the flight path, unless specified conditions can be met.

**Do not launch** within 10 nautical miles of an attached thunderstorm anvil cloud, unless temperature and time-associated distance criteria can be met.

**Do not launch** within 10 nautical miles of a detached thunderstorm anvil cloud.

**Do not launch** within 3 nautical miles of a thunderstorm debris cloud, unless specific time-associated distance criteria can be met.

**Do not launch** within 5 nautical miles of disturbed weather clouds that extend into freezing temperatures and contain moderate or greater precipitation, unless specific time-associated distance criteria can be met.

**Do not launch** for 15 minutes if field mill instrument readings within five nautical miles of the launch pad exceed +/- 1,500 volts per meter, or +/- 1,000 volts per meter if specified criteria can be met.



**Do not launch** through a cloud layer greater than 4,500 feet thick that extends into freezing temperatures, unless other specific criteria can be met.

**Do not launch** within 10 nautical miles of cumulus clouds with tops that extend into freezing temperatures, unless specific height-associated distance criteria can be met.

**Do not launch** within 10 nautical miles of the edge of a thunderstorm that is producing lightning within 30 minutes after the last lightning is observed.

**Do not launch** through cumulus clouds formed as the result of or directly attached to a smoke plume, unless time-associated criteria can be met.

**Do not launch** if downrange weather indicates violation of limits at splashdown in case of Dragon launch escape.

**Do not launch** if downrange weather shows high probability of violating limits at splashdown in case of Dragon launch escape.

Downrange weather is monitored at more than 50 locations along the ascent track along the North American eastern seaboard and across the North Atlantic.

Probability of violation is calculated for each location including limit conditions for wind, waves, lightning, and precipitation.

# NASAfacts

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