

Launch Mission Execution Forecast

Mission: Falcon 9 Transporter-4

Issued: 31 Mar 2022 / 0815L (1215Z)

Valid: 01 Apr 2022 / 1214 – 1234L (1614 – 1634Z)



Forecast Discussion: After a stretch of beautiful weather in East Central Florida the first half of the week, conditions will deteriorate later today as a cold front approaches from the northwest. By tomorrow, this front will slow down and stall out over the area. This boundary, along with plentiful moisture in place, will bring unsettled weather tomorrow, increasing cloud coverage along with shower and lightning chances. Thus, the primary concerns are the Cumulus Cloud Rule, Surface Electric Fields Rule, and the Thick Cloud Layers Rule.

For the backup day on Saturday, the unsettled pattern remains in place as the front lingers over Central Florida. While the bulk of the thunderstorm activity will likely be later in the afternoon, there will still be enhanced cloud coverage and shower chances. The POV is slightly lower, with the same primary concerns as on Friday's attempt.

Models are in better agreement today regarding the location of the front on Monday. The general consensus is that it will be south of the Spaceport, allowing for drier air to move in, onshore flow, and favorable launch conditions. The primary concern is the Cumulus Cloud Rule.

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Probability of Violating Weather Constraints								
70% Primary Concerns: Cumulus Cloud Rule, Surface Electric Fields Rule, Thick Cloud Layers Rule								
Weather Conditions							Additional Risk Criteria	
Weather/Visil	bility:	Sct Showers /7 mi.	Туре	Cloud: Coverage	Base (ft)	Tops (ft)	Upper-Level Wind Shear:	Low
Weather/Visibility: Temp/Humidity:		76°F / 80%	Cumulus	Scattered	2,500	15,000	Booster Recovery Weather:	Low
Liftoff Winds	(200'):	290° 10 - 15 mph	Altostratus	Broken	14,000	18,000	Solar Activity:	Low-Mod
Probability of Violating Weather Constraints 50% Primary Concerns: Cumulus Cloud Rule, Surface Electric Fields Rule, Thick Cloud Layers Rule								
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Weather Weather/Visibility: Sct Showers / 7 mi. Temp/Humidity: 75°F / 73%			Туре	Cloud: Coverage	Base (ft)	Tops (ft)	Upper-Level Wind Shear:	Low-Mod
Temp/Humidity: 75		75°F / 73%	Cumulus	Scattered	2,500	15,000	Booster Recovery Weather:	Low
Liftoff Winds	(200'):	090° 7 - 12 mph	Cirrostratus	Broken	20,000	24,000	Solar Activity:	Low-Mod
Probability of Violating Weather Constraints								
20% Primary Concerns: Cumulus Cloud Rule								
20% Primary Concerns: Cumulus Cloud Rule Weather Conditions							Additional Risk Criteria	
Weather/Visibility: None / 7 mi. Temp/Humidity: 76°F / 63%			Туре	Clouds Coverage	Base (ft)	Tops (ft)	Upper-Level Wind Shear:	Low
Temp/Humidity:		76°F / 63%	Cumulus	Scattered	3,000	8,000	Booster Recovery Weather:	Low
Liftoff Winds (200'): 090° 10 - 15 mph							Solar Activity:	Low
	70% Weather/Visil Temp/Humid Liftoff Winds 50% Weather/Visil Temp/Humid Liftoff Winds 20% Weather/Visil Temp/Humid	70% Prima Weather/Visibility: Temp/Humidity: Liftoff Winds (200'): 50% Prima Weather/Visibility: Temp/Humidity: Liftoff Winds (200'): 20% Prima Weather/Visibility: Temp/Humidity:	Probable 70% Primary Concerns: Cum Weather Weather/Visibility: Sct Showers /7 mi. Temp/Humidity: 76°F / 80% Liftoff Winds (200'): 290° 10 - 15 mph Probable Probable Weather Weather/Visibility: Sct Showers / 7 mi. Temp/Humidity: 75°F / 73% Liftoff Winds (200'): 090° 7 - 12 mph Probable Probable Weather/Visibility: None / 7 mi. Weather Weather/Visibility: None / 7 mi. Temp/Humidity: 76°F / 63%	Probability of View Towns: Cumulus Cloud Research Weather Conditions Weather/Visibility: Sct Showers /7 mi. Type Cumulus Liftoff Winds (200'): 290° 10 - 15 mph Altostratus Probability of View Towns: Cumulus Cloud Research Probability: Sct Showers /7 mi. Weather Conditions Weather/Visibility: Sct Showers /7 mi. Temp/Humidity: 75°F / 73% Cumulus Liftoff Winds (200'): 090° 7 - 12 mph Cirrostratus Probability of View Towns: Cumulus Cloud Research Probability of View Weather Conditions Weather/Visibility: None / 7 mi. Type Cumulus Cloud Research Type Cumulus Cloud Research Conditions Weather/Visibility: None / 7 mi. Type Cumulus Cloud Research Conditions	Probability of Violating Weather Conditions Weather/Visibility: Sct Showers / 7 mi. Type Coverage Liftoff Winds (200'): 290° 10 - 15 mph Altostratus Broken Probability of Violating Weather/Visibility: Sct Showers / 7 mi. Type Coverage Probability of Violating Weather Conditions Weather Conditions Weather Conditions Weather/Visibility: Sct Showers / 7 mi. Type Coverage Temp/Humidity: 75°F / 73% Cumulus Scattered Liftoff Winds (200'): 090° 7 - 12 mph Cirrostratus Broken Probability of Violating Weather/Visibility: Sct Showers / 7 mi. Type Coverage Cumulus Scattered Cirrostratus Broken Probability of Violating Weather/Violating Weather/Violating Weather Conditions Weather Conditions Weather Conditions Weather/Visibility: None / 7 mi. Type Clouds Coverage Cumulus Cloud Rule Coverage Cumulus Cloud Rule	Probability of Violating Weather 70% Primary Concerns: Cumulus Cloud Rule, Surface Electric Weather Conditions Weather/Visibility: Sct Showers / 7 mi. Temp/Humidity: 76°F / 80% Cumulus Scattered 2,500 Probability of Violating Weather Probability of Violating Weather Probability of Violating Weather Sometimes of the probability of Violating Weather Fromp/Humidity: 75°F / 73% Cumulus Cloud Rule, Surface Electric Cumulus Cloud Rule Weather/Visibility: Sct Showers / 7 mi. Temp/Humidity: 75°F / 73% Cumulus Scattered 2,500 Probability of Violating Weather 20% Primary Concerns: Cumulus Cloud Rule Weather/Visibility: None / 7 mi. Type Coverage Base (ft) Type Coverage Base (ft) Coverage Base (ft) Clouds Type Coverage Base (ft)	Probability of Violating Weather Constraing Propagation Primary Concerns: Cumulus Cloud Rule, Surface Electric Fields Rule Surface Electric Fields Rule Propagation Pr	Probability of Violating Weather Constraints Primary Concerns: Cumulus Cloud Rule, Surface Electric Fields Rule, Thick Cloud Layers Rule Additional Risk Cr

Note: The Probability of Violation (POV) is the chance that a Lightning Launch Commit Criteria (LLCC) or certain user constraints (surface winds, precipitation, and temperatures, etc.) will be violated during the launch window. It does not take into account upper-level wind shear, booster recovery weather, and solar activity.

Next Forecast Will Be Issued

As Required