



Launch Mission Execution Forecast



Mission: ASTRA VCLS DEMO 2

Issued: 1 Feb 2022 / 0800L (1300Z)

Valid: 5 Feb 2022 / 1300 – 1600L (1800 – 2100Z)

Forecast Discussion: Drier weather with a warming trend is expected this week as mid-level ridging builds into central FL through Friday. At the surface, the ridge builds to our north, increasing the pressure gradient gradually by mid-week, bringing gusty winds as high as 20-22kt from southeast on Wednesday and Thursday afternoons. This stronger onshore flow could bring a few light rain showers moving onshore. By Friday, winds weaken and become from the south ahead of a cold front moving into the southeast. For launch day Saturday, long range models are still divergent. The GFS and GALWEM models keep the cold over north FL Sat, bringing continued favorable weather to the Spaceport and low chances for any weather violations. The European model brings a shallow cold front through the Spaceport at some point during the count or launch window, bringing scattered showers with higher chances of Cumulus Cloud Rule violations, and winds from the north potentially reaching 15-20kt. This forecast leans more towards the favorable GFS and GALWEM solution, but keeps isolated showers and a slightly elevated POV as a blend. The backup day 48-hr forecast will be included tomorrow.

Probability of Violating Weather Constraints							
Launch Day	30%	Primary Concerns: Cumulus Cloud Rule					
	Weather Conditions				Additional Risk Criteria		
	Weather/Visibility:	Isol. Showers / 7 mi.	Clouds			Upper-Level Wind Shear:	Low
			Type	Coverage	Base (ft)	Tops (ft)	
Temp/Humidity:	72°F / 75%	Cumulus	Scattered	3,000	10,000	Solar Activity:	N/A
Liftoff Winds (30'):	160° 6 - 10 kts	Cirrus	Scattered	28,000	30,000		
<i>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.</i>							
Next Forecast Will Be Issued		2 Feb 2022					