



STS-122 Launch Weather Forecast

Vehicle: Atlantis / Columbus Laboratory
Issued: 6 February 2008 / 7 a.m. EST
Valid: 7 February 2008 / 2:40 – 2:50 p.m. EST

Synoptic Discussion: A cold front will move into the Central Florida area north of Kennedy Space Center (KSC) on launch day. Winds will decrease through the day allowing a sea breeze to develop by launch time. With the convergence along the coast combined with moisture increasing in the atmosphere, there is potential for cumulus clouds, showers, and even an isolated thunderstorm. Thunderstorms are more likely to be inland at launch time and move into the KSC area after launch. Although thunderstorms will be isolated, cool air aloft will provide a possibility of severe weather if a thunderstorm does occur, particularly when a storm interacts with the sea breeze. **Our primary concerns for launch day are cumulus clouds, showers, and an anvil from an inland thunderstorm.** Meteorological models are now stalling the front in the area for a few days rather than moving it to the south; therefore, there is an increased chance of showers and ceilings for the 24- and 48- hour launch attempts.

<u>Clouds</u>	<u>Coverage</u>	<u>Bases (feet)</u>	<u>Tops (feet)</u>
Cumulus	5/8 Broken	3,000	5,000
Altostratus	5/8 Broken	8,000	10,000
Cirrostratus	8/8 Overcast	20,000	24,000

Weather:	Showers / Chance Thunderstorms		
Visibility:	7 miles		
Wind:	090° @ 8 P 12KT (60 foot pad winds)		
Temperature:	76°F	RH: 69%	Dewpoint: 65°F

Probability of KSC weather prohibiting launch:	70%
Probability of KSC weather prohibiting tanking:	0%
Primary concern(s):	Cumulus Clouds, Showers, Anvils
Probability of KSC weather prohibiting launch for 24-hour delay:	40%
Probability of KSC weather prohibiting tanking:	20%
Primary concern(s):	Ceiling, showers
Probability of KSC weather prohibiting launch for 48-hour delay:	30%
Probability of KSC weather prohibiting tanking:	10%
Primary concern(s):	Showers

Sunrise:	7/0707 EST 8/0706 EST 9/0706 EST	Sunset:	7/1807 EST 8/1807 EST 9/1808 EST	
Moonrise:	7/0727 EST 8/0801 EST 9/0833 EST	Moonset:	7/1850 EST 8/1952 EST 9/2053 EST	Illumination: 7 February: 0% 8 February: 3% 9 February: 8%

Next forecast will be issued: As needed