



ACTIVITY: Weather Console (Weather Technician)

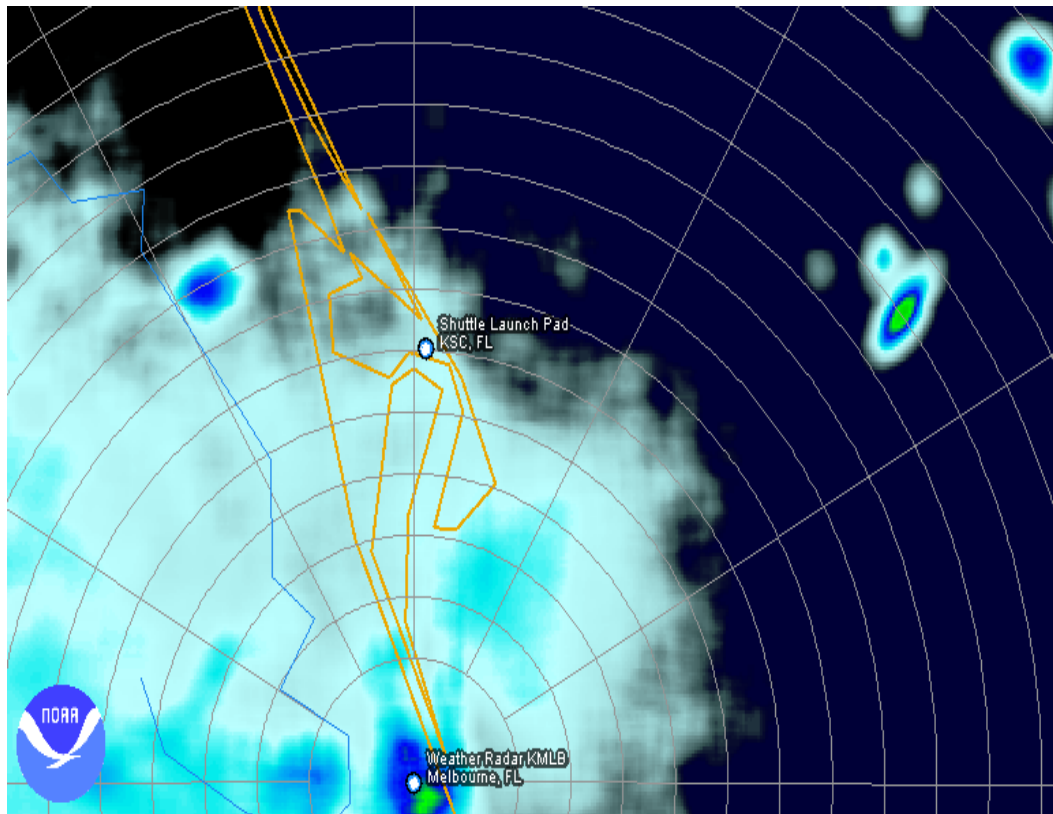
Big Question: Based on the wind speed and direction will the weather clear the launch pad and the flight path in time to launch?

Use the weather data from the wind speed conversion sheet to look at the radar to determine if the weather will clear the launch pad and the flight path in time to launch. Share your information with the meteorologist to determine whether the weather conditions will permit, delay, or scrub the launch.

Time	Convert wind from kts to miles/hr	Multiply mi/hr to mi/(fraction of the hour) of launch to get the number of miles the weather will move before the launch	Record wind direction	Observe radar and weather spokes. Will weather clear in time to launch? Yes/No
Example	15kt x 1.1508 = 17.262 mi/hr	17.262 X 20/60= 17.262 X .33 =	5.23 miles	N to S Yes
	_____ kt x 1.1508 = _____ mi/hr	17.262 X ____/60= 17.262 X ____ =	_____ miles	
	_____ kt x 1.1508 = _____ mi/hr	17.262 X ____/60= 17.262 X ____ =	_____ miles	
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How to read direction and distance using radar data (sent from the Melbourne NWS Station):

Use the legend to understand the radar image. When you are charting speed and direction use the spokes and range rings. The range rings start 10 miles from Melbourne moving out toward the KSC Launch Pad. There are 5 miles between each range ring.



**The Radar Velocity Legend
Wind Velocity Mode**

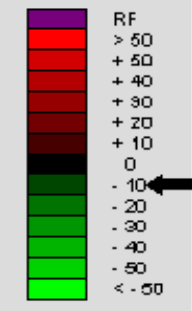
NEXRAD LEVEL-II
KMLB - MELBOURNE, FL
LAT: 28/06/46 N
LON: 80/39/14 W
ELEV: 35.0 FT
VCP: 32

VCP- Volume Coverage Pattern

VELOCITY
ELEV ANGLE: 0.48

Wind Velocity is measured in Knots (KT)

Legend: (Category) KT



Positive Numbers (warm colors) - show that the wind is moving away from the radar.

Negative Numbers (cool colors) - show that the wind is toward the

Velocity - This product is used to estimate wind speed and direction.

Big Question: Will the temperature meet the Launch Commit Criteria for the shuttle launch?

Fill in the weather data on the data-recording sheet from the Digital Weather Display. Share your information with the meteorologist to determine whether the weather conditions will permit, delay, or scrub the launch.

Time	Temperature	Is the temperature < 99 degrees Fahrenheit (F) for more than 30 minutes? > 48 degrees F?	Sky Conditions	Temp and sky conditions within launch commit ranges? Yes/No
Example	70°F	_____ < 48 < 70° < 99 < _____	Clear	Yes
		_____ < 48 < _____ < 99 < _____		
		_____ < 48 < _____ < 99 < _____		
		_____ < 48 < _____ < 99 < _____		
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