




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
NWP QPF are used within FFGS to compute:

A FMAP, FFFT, PFFT and IFFT C FMAP, Merged MAP, FFFT and FFR


B FMAP, FFFT and FFR
- 


Convective systems are well captured by NWP models, especially in the tropics


A True 


B False 
- 



Large scale synoptic features are well captured by NWP models

A True 

B False 
- The FFGS takes into account and make corrections for QPF biases before performing System Calculations

A True 


B False 

C If appropriate data is provided to System 
- 

Data assimilation refers to:


A Relating model outputs to historical observations

B Making a prediction of future atmospheric state

C Ingest of observations to adjust model states
- 

NWP models produce forecasts, but these models are limited by:

A incorrect parameterization schemes C limited observations

B limited spatial resolution D All of the above
- 

What are the 3 ingredients for deep, moist convection?

تحتاج 3 دمج


A Mesoscale lift

B Steep lapse rates

C Low-level moisture


D Showalter or Lifted Index < 0

E Increasing positive vorticity advection with height

F CAPE
- 


Which of these areas will improve NWP models in the future? Choose the best answer.

A Observing systems C Accessibility and training

B Data assimilation D All of the above
- 

Which of the following is mesoscale in size and time:

A Mid-latitude cyclone C Thunderstorm

B Jet stream D Squall line
- 

What type of thunderstorms typically lasts the longest?


A Single-cell thunderstorms

B Mesoscale convective system (MCS)

C Supercells


D They all last about the same amount of time
- Instability can generally increase due to:

A Surface cold front passage C Boundary layer inversion intensification


B Daytime heating D Dry punch into boundary layer
- 

The forecast models have the most difficult time resolving this feature:

A Mid-latitude cyclones C The jet stream

B Mountains D Mid-latitude anti-cyclones
- 

The side of a mountain range that has upslope wind and is more likely to have clouds and precipitation is the _____ side.


A Windward B Leeward
- 

Strong mesoscale upward forcing will occur where:


A Low level winds diverge

B Two low level convergence boundaries intersect


C Frontolysis occurs

D The temperature and moisture gradient are reduced
- 


The tendency for a forecast model to make the same mistake each time similar weather conditions set-up for a particular region is termed a model:


A Deviation B Error C Bias D Mistake
- 

The _____ pressure systems tend to cover a larger spatial area.


A High B Low
- 

Rain can not occur if instability is not present.


A True 

B False 
- A ridge is a region of _____ and _____.


A Higher heights and warmer temperatures C Lower heights and warmer temperatures

B Higher heights and colder temperatures D Lower heights and colder temperatures
- 

Air will _____ along frontal boundaries.

A Diverge B Converge
- 

As more precision in time and space for a forecast is required below the synoptic scale, forecast models tend to become:


A More accurate B Less accurate
- 

(Statement 1) Two different forecasters can draw very different conclusions from the same forecast data.
(Statement 2) It is important to communicate the forecast completely, coherently and correctly.

A Statement 1 and Statement 2 are both false

B Statement 1 and Statement 2 are both true

C Statement 1 is true and Statement 2 is false


D Statement 1 is false and Statement 2 is true
- 

A bow echo is produced by:

A Storms developing along a cold front


B A line of storms encountering abundant moisture

C Strong winds aloft entering the backing side of a squall line

D The merging of two supercells
- 


This on radar indicates a flooding potential:

A Consistently heavy rain C Very intense slow moving thunderstorms

B Training of storms D d. All of the above
- 

All of the following will exacerbate the flash flood potential except:

A Snow melt C Saturated soil


B Dense vegetation D Training of thunderstorms
- 

What is a trigger mechanism?


A It is a process that prevents precipitation or storms from occurring

B It is a sounding that has a region of positive CAPE

C It is any process that initiates precipitation or storm development


D It is in reference to Omega forcing from either low level divergence or upper level convergence
- 

Higher CIN values, ___ the likelihood of convective storms.

A lower B higher
- 


CAPE is used to assess (Choose the best answer):

A Hail potential C Updraft strength

B Thunderstorm potential D All of the above
- 

Instability release in a thundersnow situation usually occurs from:

A Surface based convection C Fronts

B Dynamic lifting D Elevated convection
- 

The difference between stratiform and convective precipitation is:

A Instability release C Warm moist air in the lower troposphere

B Forced lifting D Wind shear