Tornado Forecasting Lab Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

In this lab, you will use Stuve diagrams (from radiosonde soundings) and a surface weather map to forecast the likelihood of severe thunderstorms and tornadoes in the United States.

**L** = Lift 🡪 **Surface weather map:** Fronts

**I** = Instability 🡪 **Stuve diagram:** Parcel (yellow line), CAPE>1000, Lifted Index (LI<-3)

**M** = Moisture 🡪 **Stuve diagram:** Dewpoint temperature (black dashed line), Precipitable Water (PW>1)

**B** = Boundaries 🡪 **Surface weather map:** Fronts or other boundaries

**S** = Shear 🡪 **Stuve diagram:** Helicity (HEL>250)

**Stuve Diagrams**

|  |  |
| --- | --- |
| Station Identifier:  CAPE: Parcel Description:  LI:  PW: Dewpoint Description:  HEL: | Station Identifier:  CAPE: Parcel Description:  LI:  PW: Dewpoint Description:  HEL: |
| Station Identifier:  CAPE: Parcel Description:  LI:  PW: Dewpoint Description:  HEL: | Station Identifier:  CAPE: Parcel Description:  LI:  PW: Dewpoint Description:  HEL: |
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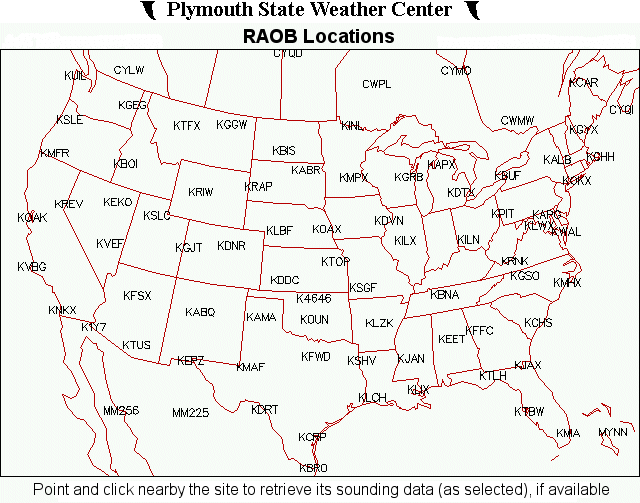
**Surface Weather Map**

Using the surface weather map on Canvas, are there any fronts or other boundaries? If yes, where are they located?

**Final Analysis**

What stations have the highest likelihood for tornadoes and severe thunderstorms? WHY?

Draw concentric circles on the map below indicating where you think there is HIGH, MEDIUM, and LOW chances of severe thunderstorms and tornadoes.



**Verification**

Use the maps listed under “Verification” on Canvas to determine how close your forecasts were to the actual forecasts produced by the Storm Prediction Center

How close was your forecasts to the actual forecasts?