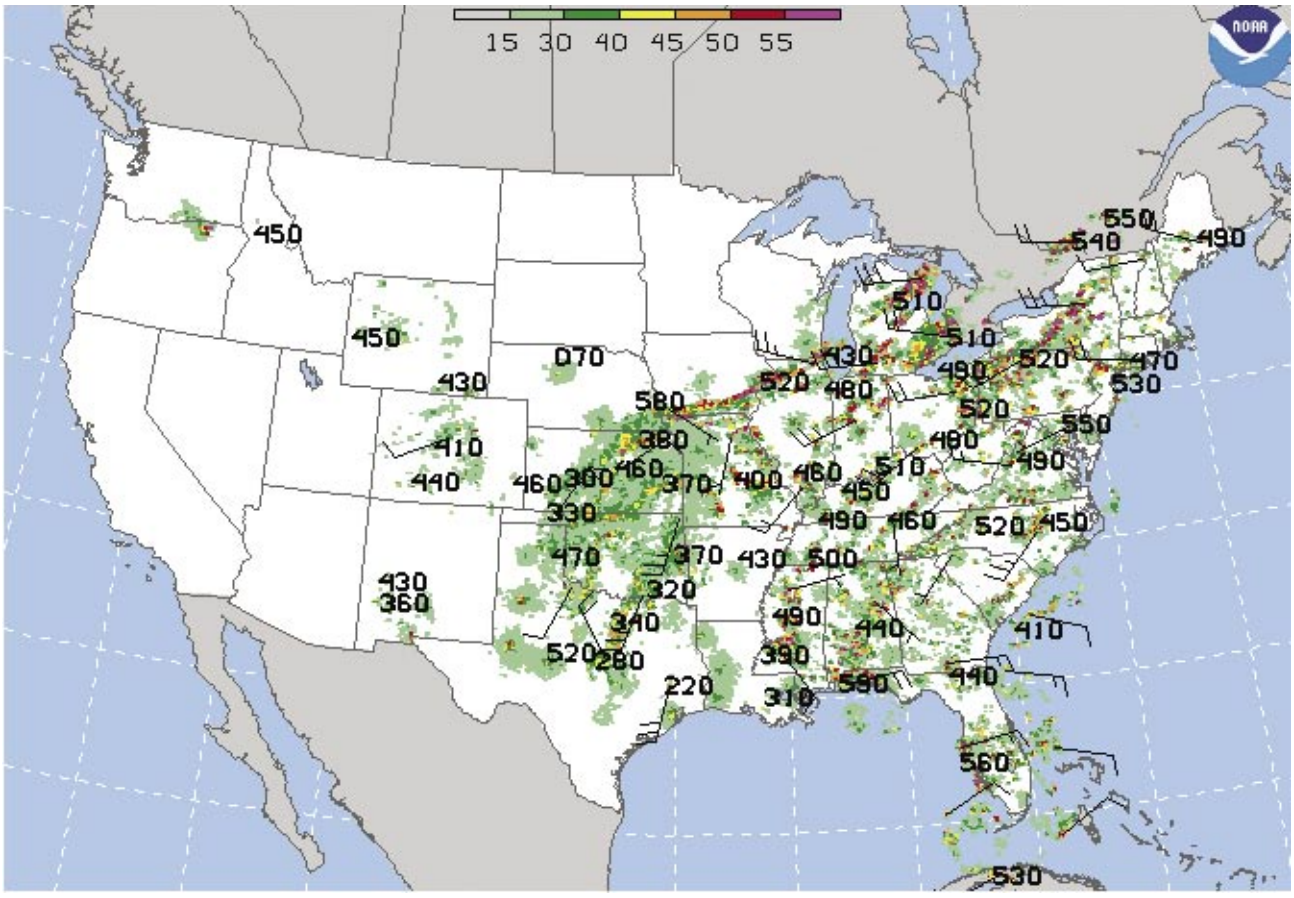

Figure 4-31. *Radar summary chart.*

- Type of precipitation—the type of precipitation is marked on the chart using specific symbols.
- Echo configuration—echoes are shown as areas, cells, or lines.
- Weather watches—severe weather watch areas for tornadoes and severe thunderstorms are depicted by boxes outlined with heavy dashed lines.

A valuable tool for preflight planning, the SD chart has several limitations. Since it depicts only areas of current precipitation, it will not show areas of clouds and fog with no appreciable precipitation, or the height of the tops and bases of the clouds. SD charts should be used in conjunction with current METAR and weather forecasts.

Composite Moisture Stability Chart

The composite moisture stability chart is a chart composed of four panels depicting stability, precipitable water, freezing level, and average relative humidity conditions. This computer-generated chart contains data obtained from upper-air observations, is updated twice a day, and shows the relative stability of the air mass and the potential for thunderstorms or thermal activity.

Stability/Lifted Index Chart

A subdisplay of the composition moisture stability chart is the stability or lifted index (LI) chart, a valuable tool for determining the stability of the atmosphere. The stability or LI chart is the upper left hand panel of the composite moisture stability chart. Two indexes represent the moisture and stability of the air: the K index (KI) and the LI, with these numbers composing a fraction. KI (denominator of the fraction) provides moisture and stability information. Values range from high positive values to low negative values. A high positive KI indicates moist, unstable air. KI values are considered high when at or above +20, and low when less than +20. *[Figure 4-32]*

The LI (numerator of the fraction) is a common measure of atmospheric stability. It is calculated by hypothetically lifting a parcel of air to the 500 mb level, approximately 18,000 feet MSL, and analyzing its stability at that level. A positive LI indicates that a particular parcel of air is stable and resists further upward motion. Large positive values (+8 or greater) would indicate very stable air. Conversely, a negative LI means that a lifted surface parcel of air is unstable, and more likely to rise. Large negative values (–6 or more) indicate very unstable air.