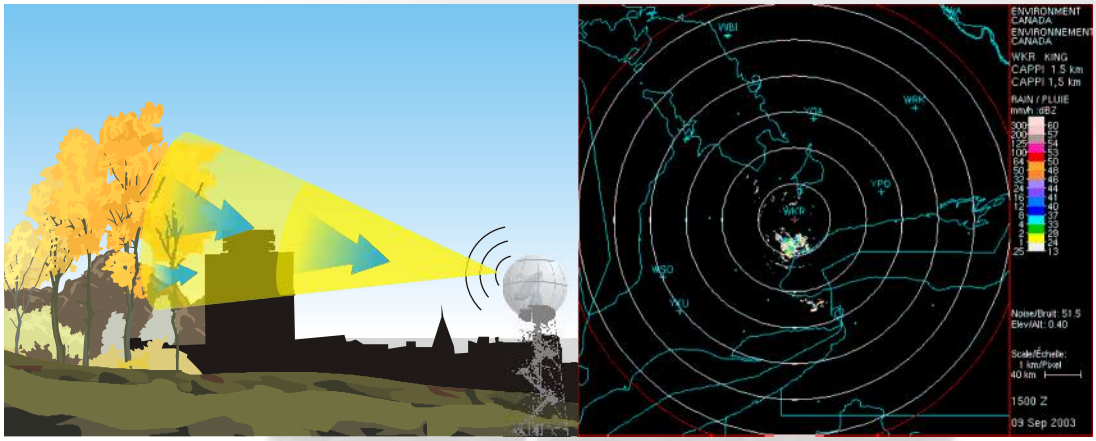
WEATHER RADAR

Common Interpretation Errors

A picture is worth a thousand words…but sometimes what you see isn't necessarily what you get. Canadian weather radar is now easily accessible at Environment Canada's Weatheroffice website **weatheroffice.ec.gc.ca**. But just because something looks colourful on the radar screen doesn't mean it is raining or snowing. By the same token, just because the echoes appear weak or can't be seen at all, doesn't mean that someplace isn't getting significant rain or snow. What follows are some of the more common radar interpretation mistakes you can make…

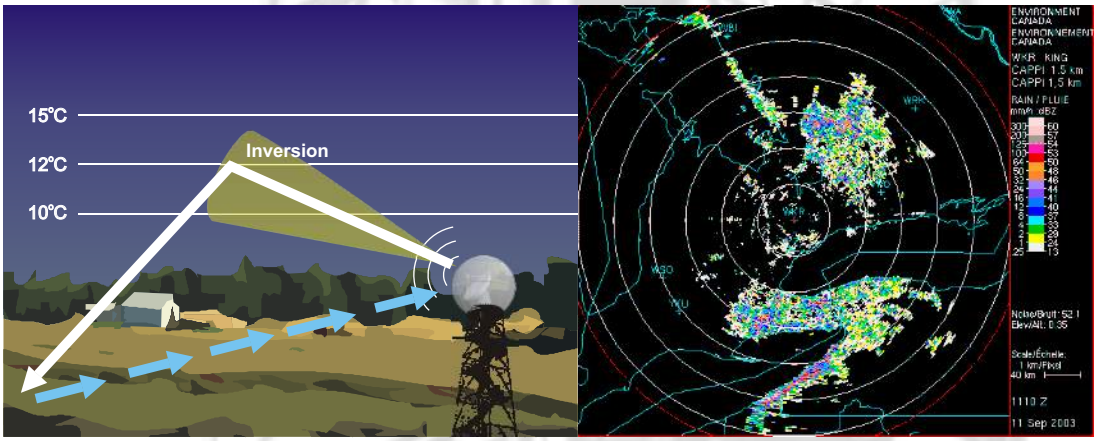
Ground Clutter

- These echoes are called "Ground Clutter" and they occur when a portion of the radar beam comes into contact with tall buildings, trees or hills.
- Learn the common ground clutter "signature" in your area, so you can distinguish it from real precipitation.



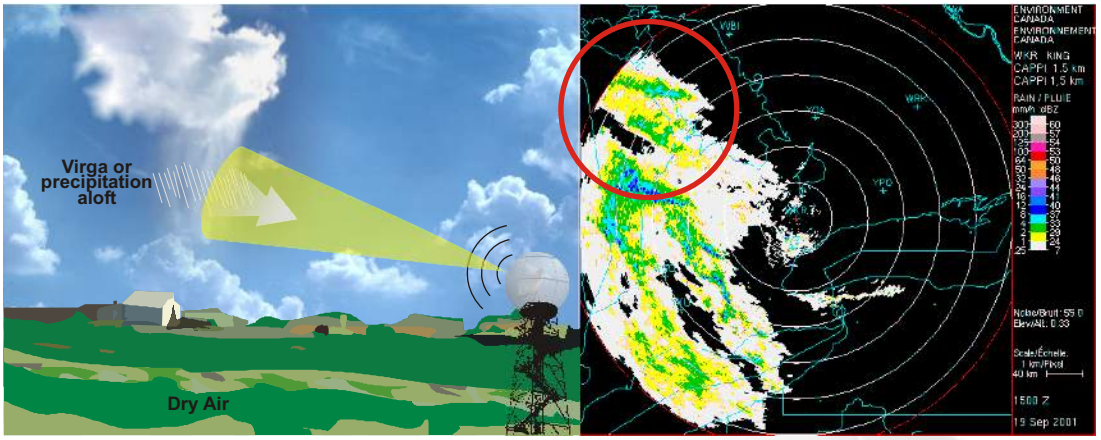
Anomalous Propagation - AP

- Occurs when strong temperature inversions are present in the low levels (i.e. Temperature rises with height).
- Most common on clear nights during the early morning hours. Largely dissipates by midday.
- Radar beam is bent into the ground and returns a strong signal to radar.
- Radar echoes are NOT real, there was no precipitation occurring in the image at the right.



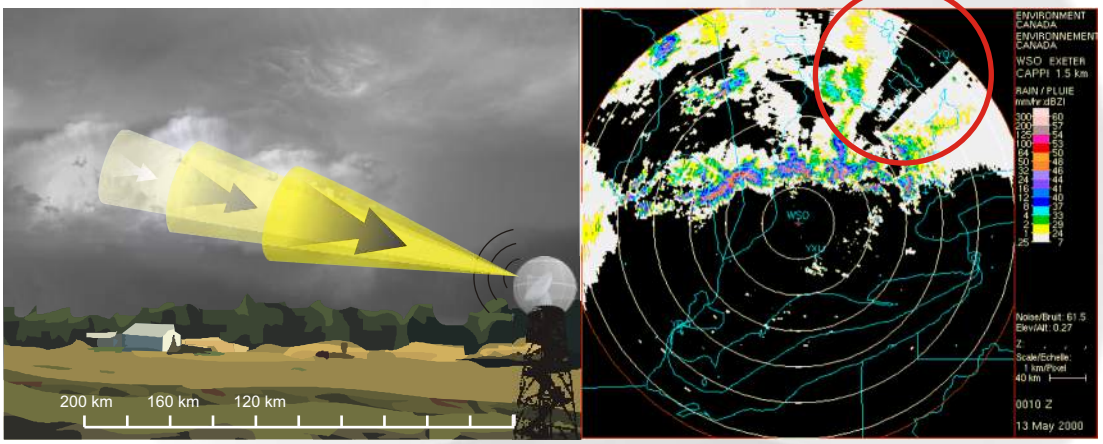
Virga

- Radar detecting precipitation that is occurring aloft but not reaching the ground.
- Dry conditions at low levels.
- No precipitation was hitting the ground in the Bruce Peninsula in the picture to the right.



Storm Interference

- Storms closest to radar reflect or absorb most of the available radar energy leaving reduced amount of energy to detect more distant storms.
- Storms in the circled area were quite intense but were not being detected appropriately by the radar due to the strong storms occurring closer to the radar.



Overshooting Beam

- Intense precipitation such as lake effect snowsqualls can be associated with clouds of minimal vertical extent.
- In such cases, the radar beam may overshoot most of the area of precipitation and therefore indicate only weak echoes when in fact significant precipitation is occurring.
- Intense snow flurry activity was occurring in the cities of Toronto and Kitchener at the time of the image on the right but only light echoes were showing up on the radar (most of the echoes evident outside the area highlighted in red were due to ground clutter).