



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL WEATHER SERVICE

104 Airport Road
Dodge City, Kansas

May 13, 2005

Mr. Harry Bartel
Airport Manager
City of Hugoton
Hugoton, Kansas 67951

Dear Harry:

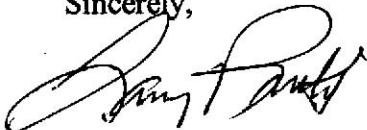
Thank you very much for your proactive approach to distributing data collected by the Hugoton Airport AWOS. Western Kansas suffers from a paucity of high quality observation sites, and the Hugoton site fills a significant hole between Elkhart and Liberal. Data collected from Hugoton will enhance our ability to accurately determine the state of the atmosphere over western Kansas with a consequent improvement in our ability to provide high quality forecasts and warnings. The following are a few examples of how data collected from Hugoton will contribute to improvements in forecasts and warnings:

- ◆ Provision of improved initial conditions for mesoscale modeling efforts. WFO Dodge City will be running mesoscale models in the near future to assist with high resolution weather forecasts. A denser network of observation sites will improve the performance of these models.
- ◆ Accurate diagnosis of the position and strength of features such as outflow boundaries and fronts. This capability is vital to evaluating the potential for tornado development with thunderstorms. The observation from Hugoton will be very helpful to the decision making process for severe thunderstorm and tornado warnings.
- ◆ Accurate location of boundaries contributing to thunderstorm initiation.
- ◆ Determination of areal extent of stratus and fog. Knowing conditions at Hugoton will assist with aviation forecasts by helping WFO forecasters to more accurately determine the location and evolution of stratus and fog. This information also is very helpful to determining where public advisories for fog, and/or freezing fog are needed.
- ◆ Determination of precipitation type. Knowing the surface temperature pattern in greater detail will help to establish where transition from liquid to freezing precipitation will occur.
- ◆ Verification of severe thunderstorm and high wind warnings. Real time measurements from observation sites are vital to determining whether or not severe thunderstorm and high wind warning criteria are met.



Many other examples of the value of these data to forecasts and warnings could be provided. I applaud Hugoton for pursuing wide distribution of data collected at the Hugoton Airport and sincerely hope that other AWOS sites will follow suit.

Sincerely,

A handwritten signature in black ink, appearing to read "Larry Ruthi", written in a cursive style.

Larry Ruthi
Meteorologist in Charge
Weather Forecast Office
Dodge City, Kansas