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For Immediate Release

Stapleton Chosen As Site of Major Wind Shear Study

DENVER--A major research project, designed to investigate the small-scale features of convective summer storms such as wind shears and gust fronts, will take place in the vicinity of Stapleton International Airport this spring between May 15 and August 15.

Termed JAWS for Joint Airport Weather Studies, the program will investigate particular meteorological conditions which often emanate from thunderstorms rolling across the eastern plains of Colorado and which often create hazards for aircraft during takeoffs and landings.

A joint effort by the National Center for Atmospheric Research (NCAR) in Boulder, Colorado, and the University of Chicago, JAWS is aimed at understanding "microbursts"--small regions of intense outflows of air often associated with thunderstorms.

"We consider the JAWS project to be one of the most important meteorological studies being conducted in the area of severe thunderstorm research," says Dr. John McCarthy of NCAR's Atmospheric Technology Division. He, James Wilson, also of NCAR, and Theodore Fujita of the University of Chicago are the experiment's principal investigators.

"As you are well aware, Colorado witnessed a major tornado last June, and it is such events that remind us of the awesome power unleashed during summer storms," McCarthy adds. "Much is yet to be learned about how thunderstorms develop and why they occur where they do, how to predict when and where they will happen and, most importantly, how to warn the public in sufficient time to take shelter."

According to McCarthy, JAWS represents very basic research with important applications to aircraft safety. When a downdraft hits the ground, it causes an outward burst of horizontal wind that can wreak havoc with landing and departing aircraft. In fact, powerful microbursts have probably been responsible for several commercial jet crashes, says McCarthy, including the one that occurred at Stapleton in August 1975.

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"Denver is an ideal location to study this type of phenomenon," he explains. "We believe that this vicinity has one of the highest frequencies of thunderstorms in the United States. This is an important consideration in planning a field program to study a weather event because nature does not always cooperate."

In addition to the basic studies of low-level convective storm winds, JAWS will test eight wind-shear detection and warning systems in a wind-shear-rich environment to evaluate their performance uniformly. JAWS will also study aircraft performance in wind-shear conditions.

While JAWS is basically a collaborative effort between NCAR and the University of Chicago, several other organizations will also be involved, including the National Oceanic and Atmospheric Administration (NOAA), the Federal Aviation Administration (FAA) and the National Aeronautics and Space Administration (NASA).

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