NASA pilots brave storms

By Bill McBean
Denver Post Staff Writer

The astronauts who vault into space for the National Aeronautics and Space Administration have a longstanding reputation for bravery.

NASA's pilots, however, get considerably less recognition, even though the tasks they undertake are arguably just as dangerous.

For the next two weeks, for instance, NASA crews will aim a vintage Boeing 737 into the thunderstorms that roll and boil along Colorado's Front Range, searching for a powerful windshear to fly through.

Windshear is a generic term for rapidly changing wind currents. One particularly strong form of windshear, called a "microburst," has plagued air travel, causing 500 aviation fatalities and 200 injuries in 26 incidents between 1964 and 1985.

The NASA scientists, flying from Stapleton Airport, will test three systems for early detection of microbursts. One of those systems, known as the Doppler "LIDAR" or (Light Detecting and Ranging) system, will receive special scrutiny.

Windshear systems measure the speed of raindrops or the air temperature to detect microbursts, LIDAR uses laser beams to measure the speed of dust particles.

Denver is the perfect climate for such tests because rain from Colorado microbursts often evaporates before it hits the ground. The violent downward driving wind, however, is still present and that's what LIDAR will be looking for.

"This," said NASA's Mike Lewis, deputy manager of the wind shear study, "is the big test."

In previous tests, NASA has tried out early warning devices that use infrared and microwave radar technology.

Soon, the space agency and the Federal Aviation Administration must decide which detection system is best for commercial aircraft. By 1989, the FAA says commercial flights must carry a detection system that gives pilots who are headed into microbursts 10 to seconds of warning.