

New aircraft to study severe turbulence

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The nation's newest and most advanced research aircraft is taking part in its first major mission: studying severe atmospheric turbulence.

The \$81.5 million HIAPER aircraft -- owned by the National Science Foundation and operated by the Boulder, Colo.-based, National Center for Atmospheric Research -- will fly over treacherous whirlwinds, known as rotors, as they form above California's Sierra Nevada mountain range.

HIAPER -- High-performance Instrumented Airborne Platform for Environmental Research -- will perform 10-hour flights from its base at Jefferson County Airport in Colorado to California's Owens Valley, exploring mountain waves that form over the Sierra Nevada and are associated with the rotors, as well as studying the impacts of the waves on atmospheric regions as high as the stratosphere.

The research is expected to lead to better prediction of such aviation hazards.

HIAPER, a highly instrumented Gulfstream V, is capable of reaching an altitude of 51,000 feet and cruising for 7,000 miles.

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