

Integrated Terminal Weather System (ITWS) Microburst Detection Algorithm

Technology #12290

Applications

A main application for this technology is as a software tool for air traffic control.

Problem Addressed

Microbursts present a strong danger to aircraft at low altitudes, primarily on final approach or shortly after departure and have been the cause of several fatal air carrier accidents.

Technology

The Integrated Terminal Weather System (ITWS) Microburst Detection Algorithm uses Terminal Doppler Weather Radar (TDWR) data to detect microbursts in the airport terminal area. The Microburst Detection algorithm identifies regions of strongly spreading winds near the ground, which are used for subsequent processing algorithms to determine specific impact of these events to runway approach and departure corridors. This algorithm enables air traffic controllers to determine the safest paths for incoming and departing aircraft.

Advantages

- Detects microbursts to improve aircraft safety in landing

Categories For This Invention:

Lincoln Laboratory
Software (Copyright)
Other (Software)
Transportation
Other (Transportation)

Intellectual Property:

Copyright Other

Inventors:

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Publications:

A Shear-based Microburst Detection Algorithm for the Integrated Terminal Weather System (ITWS)
American Meteorological Society
1993

External Links:

Lincoln Laboratory
<https://www.ll.mit.edu/>