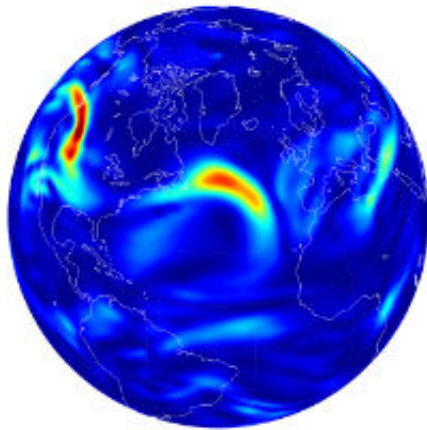


Turbulence expert reveals cost of climate change to aviation insurers

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Credit: University of Reading

Climate change could hit insurers by making plane journeys bumpier, a University of Reading scientist has told an audience of leading insurers.

The Insurance Institute of London lecture at Lloyds of London on Wednesday 18 January, was attended by the City's leading insurance players including CEOs, managing directors, brokers, underwriters, and lawyers.

Atmospheric scientist Dr Paul Williams, a Royal Society University Research Fellow, told the audience in Lloyds' Old Library about the likelihood of increased [turbulence](#) and more extreme weather.

Research by Dr Williams has shown that planes travelling from Europe to North America could face an [increased chance of hitting turbulence](#) by as much as 170% later this century. This is because climate change will strengthen instabilities within the jet stream – a high-altitude wind blowing from west to east across the Atlantic Ocean. The turbulence could also be up to 40% stronger.

Diverting around the additional turbulence has the potential to [lengthen journeys and increase fuel burn](#), which could add to ticket prices and also contribute to climate change, completing a vicious circle.

Dr Williams said: "The aviation industry is facing pressure to reduce its environmental impact, but our work has shown how aviation is itself susceptible to the effects of [climate change](#)."

"Increased turbulence and flight times could have a knock-on effect on passengers and the aviation and insurance industries."

Dr Williams' work is part of a wider body of research by University of Reading experts into the interaction of aviation and [atmospheric physics](#).

For example, research by Professor Keith Shine and Dr Emma Irvine has shown that condensation trails, or contrails, formed behind aircraft flying at high altitude, [can also add to global warming](#) by adding to cloud cover, which prevents heat from escaping Earth's atmosphere.

Researchers at Reading have also been central to efforts to study the spread of volcanic ash in the upper atmosphere. Their work helped to aid the safe resumption of flights after the grounding of all UK air traffic following the eruption of a volcano in Iceland in April 2010.

Provided by University of Reading

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