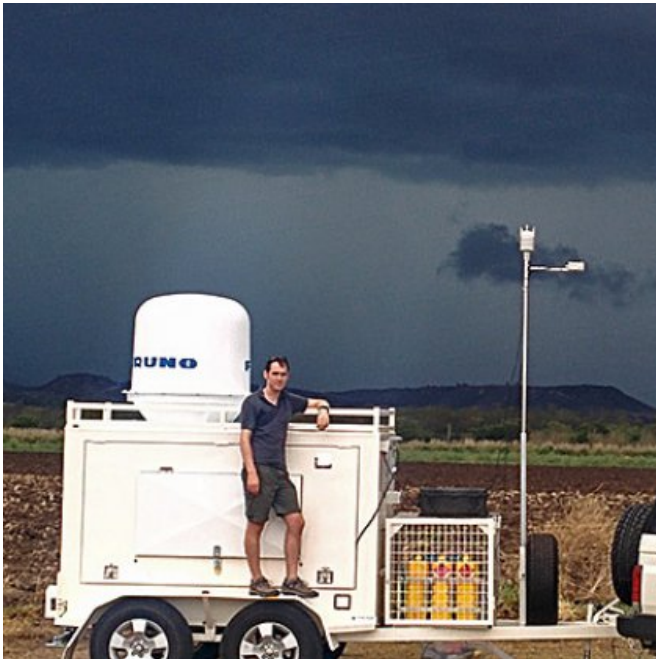


Storm chasers use powerful new radar in bid to understand summer tempests

1 December 2014



UQ's Geographical Sciences PhD student Joshua Soderholm and his team are using Australia's first mobile weather radar station to investigate some of Australia's most powerful summer storms.

Australia's first mobile weather radar has been enlisted by University of Queensland researchers to track some of the country's most dangerous summer storms.

In a bid to improve the accuracy of storm forecasting, UQ's Geographical Sciences PhD student Joshua Soderholm and his team intend to put thunderstorms under intense scrutiny to better understand what drives them.

"We'll be using Australia's first mobile weather radar, the Bureau of Meteorology's highly sensitive research weather radar: CP2, weather balloons and quadcopters to get in close to storms and collect data which will lead to more accurate

methods of forecasting," Mr Soderholm said.

"These radars use a type of technology new to Australia called 'dual-polarisation', which allows us to measure the type of precipitations, such as snow, hail, or rain, and very accurate rain rates.

"The mobile radar allows us to take these new types measurements very close to the storms, providing the highest possible resolution data."

The research is exploring the collisions between thunderstorms and sea breezes which lead to rapid, unpredictable and dangerous storms over the heavily populated south-east Queensland region.

This type of storm was involved in the 1973 Brisbane tornado, a 1985 Brisbane hail storm, a 1989 Redcliffe supercell, and The Gap supercell in November 2008.



Researchers are using Australian Bureau of Meteorology radars that offer 'dual-polarisation', which allows them to measure hail, or rain, and very accurate rain rates.

The new equipment will allow the researchers to study Australian thunderstorms in unprecedented detail with the ultimate goal of understanding why

thunderstorms are more intense in some regions than others.

"Areas of particular thunderstorm intensity are known as '[thunderstorm](#) hotspots', and it is these areas which experience really [severe storms](#) such as those we've seen in the past," Mr Soderholm said.

By developing more accurate methods of forecasting, the team hopes to help people in these regions to prepare for and avoid dangerous storms.

Mr Soderholm and his team will be in the field until January 2015, chasing down storms across south-east Queensland.

Provided by University of Queensland

APA citation: Storm chasers use powerful new radar in bid to understand summer tempests (2014, December 1) retrieved 26 September 2021 from <https://phys.org/news/2014-12-storm-chasers-powerful-radar-summer.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.