

# Australian CubeSat prepared for launch by NASA

April 18 2017, by Robyn Mills

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A University of Adelaide-built satellite will be launched early tomorrow morning by NASA from Cape Canaveral in Florida, on the Atlas V rocket bound for the International Space Station.

It's the culmination of four years' hard work by about 50 University of Adelaide students and a dozen staff led by Research Fellow Dr Matthew Tetlow, and it will play a key role in a project to explore the upper reaches of the atmosphere.

The 'CubeSat' is one of three miniaturised or 'nanosatellites' developed in Australia under the European-funded project QB50, an international network of 50 CubeSats – the first Australian-built satellites to be launched for 15 years.

"This is incredibly exciting to see our spacecraft launched to the International Space Station and know that it will play an important part in this research," says Dr Tetlow.

"It's a fantastic milestone and a testament to the team. The whole project has been an invaluable and unique experience for the many students who have worked on it. It's not everyday student engineers get to help build a satellite to be launched by NASA."

In about a month, the CubeSats will be deployed from the International Space Station into the thermosphere, a layer of atmosphere from about 95km to 500km, where they will take different measurements to

understand its relationship to other layers of the atmosphere and how that affects our climate.

Science and Information Economy Minister Kyam Maher says: "This is a remarkable achievement that will provide important climate change data for all global partners of this project and demonstrates how strongly our state performs in scientific research and advanced technology.

"The State Government awarded \$300,000 through our Premier's Research and Industry Fund towards the development of the satellite, which is one of 50 that will be launched into the lower thermosphere."

The University of Adelaide CubeSat will be measuring the densities of particles in the thermosphere and the amount of water vapour in particular regions of the atmosphere.

Dr Tetlow says nanosatellites are the way of the future for space research. "With the miniaturisation of electronics, it's now possible to put the same amount of research equipment of a full-sized satellite into something that's about the size of a loaf of bread," he says. "The CubeSat can do the same work that a large [satellite](#) does at a much reduced cost."

Provided by University of Adelaide

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