

# Terra satellite to track volcanic unrest

A global warning system for volcanic eruptions will soon be in place, following the launch late last year of a NASA Terra satellite from California.

Dr Fred Prata of CSIRO Atmospheric Research is a co-investigator on the NASA team that will use a sensor on the satellite to monitor the surface of the planet, looking for 'hot spots' that may signal an active volcano.

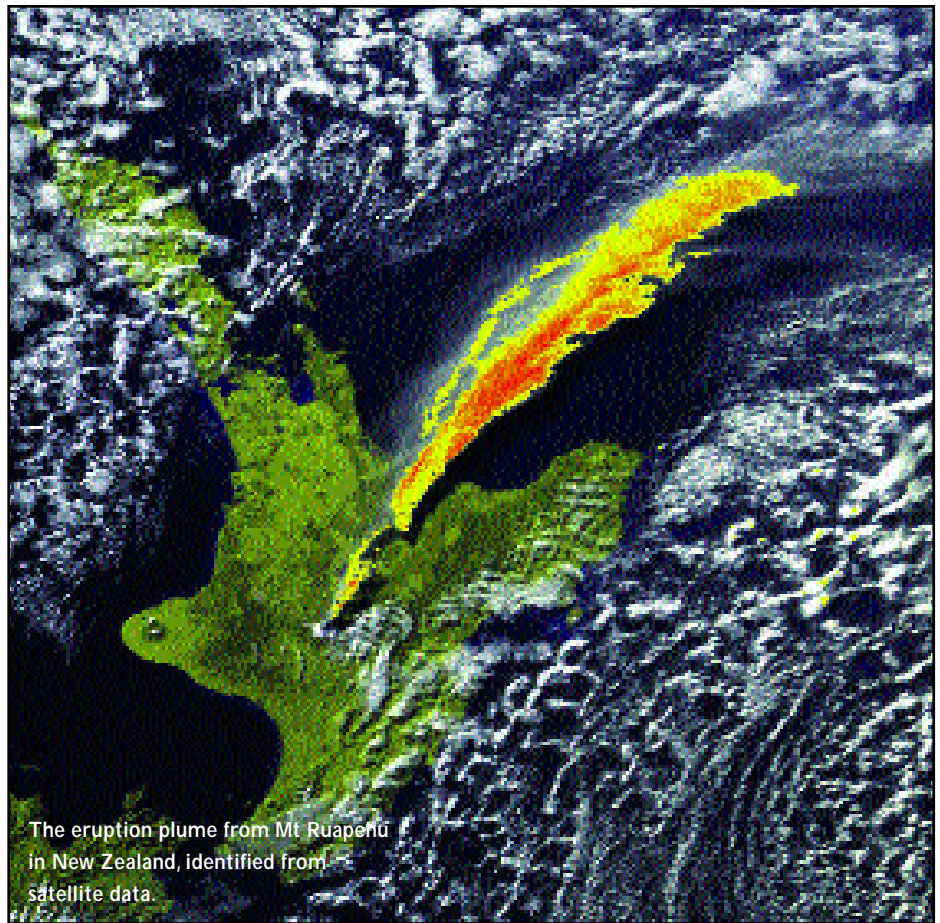
'We will be collecting information at dozens of different wavelengths,' Prata says. 'Until now, we haven't had sufficient information to be able to spot a volcano that is about to erupt.'

'Our objective is to provide timely alerts to local authorities when we spot high temperatures, known as "thermal anomalies", produced by lava near the surface. We will also be able to warn pilots to keep clear of the area.'

Researchers will also be using the sensor, known as a Moderate Resolution Imaging Spectroradiometer, to study the effects of eruptions on the atmosphere and on climate. They will be able to investigate the composition of particles and gases ejected into the air.

'The sensor will provide temperature readings throughout the atmosphere, assessments of cloud patterns and will enable us to track smoke plumes from biomass burning,' Prata says.

Australian scientists will have daily access to NASA satellite data, which will be received at ground stations in Hobart, Alice Springs and Perth.



The eruption plume from Mt Ruapehu in New Zealand, identified from satellite data.

Working with NASA, CSIRO is using measurements from a site near Alice Springs to calibrate another sensor on board the NASA Terra satellite: an advanced radiometer.

The radiometer will provide high-resolution data on land use and land cover, track natural disasters, and probe climate

variability and hydrology. The radiometer, a result of collaboration between the United States and Japan, will also aid in exploration for metal deposits, petroleum and ground water.

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## Meet our associate editor

AN associate editor, Dr Wendy Pyper, has been appointed to the staff of *Ecos*.

Wendy began her path into science journalism with a degree at the University of Queensland, majoring in microbiology and biochemistry. During the next four years, while contemplating future career options, she completed a PhD on the genetic mapping of the Haemochromatosis gene, and spent the rest of her time pursuing outdoor interests.

A brief trip to Europe and Canada convinced her that travel was an important part of any future job description, and on her return she left sunny Queensland to take up a position as a

forensic molecular biologist in Adelaide. Drawn back to her hometown a year later, Wendy joined the Malaria Unit of the Queensland Institute of Medical Research as a research officer. However, a long suppressed urge to write about science, rather than practice it, soon saw her pacing the corridors of journalism school.

One graduate diploma and a fist full of science and health publications later, Wendy's new career path looked promising. But it was a chance inquiry to *Ecos* in 1999 that really kickstarted her career as a science journalist. After contributing stories to the past two editions of *Ecos*, Wendy is delighted to take on the editing role.



*Ecos* writer and associate editor, Dr Wendy Pyper.