



guardian.co.uk

## Branson space ships to measure greenhouse gas levels

---

**Ian Sample**, science correspondent  
guardian.co.uk, Tuesday September 30 2008 17:10 BST

---

Richard Branson's space tourism company, Virgin Galactic, is to use its space planes to gather scientific data on climate change from the highest reaches of the atmosphere under a new collaboration with an American government laboratory.

Instruments and sensors will be added to the company's high altitude plane, White Knight Two, and the smaller rocket-propelled SpaceShipTwo, as part of a climate change research project planned by the US National Oceanic and Atmospheric Administration (NOAA) in Colorado.

The researchers will use Virgin Galactic test flights, and subsequent commercial launches, to collect air samples from high up in the atmosphere, which will be analysed for greenhouse gases such as carbon dioxide, methane and other constituents.

Virgin Galactic chief, Will Whitehorn, said the first experimental flights of White Knight Two are planned for five weeks' time, though the new instrumentation will not be fitted until next February.

Researchers will use White Knight Two to take measurements of the atmosphere at up to 50,000 feet. Further instruments added to SpaceShipTwo will be able to collect samples from up to around 100km.

Until now, scientists have struggled to get regular measurements of the atmosphere at such high altitudes. Tests using balloons provide some data, but these can follow erratic flight paths.

Sir Richard announced the initiative during a video message to thousands of space industry delegates at the 59th International Astronautical Congress in Glasgow today.

"To my mind there is no greater or more immediate challenge than that posed by climate change. It's therefore more than fitting that the very first science to be conducted on board our new vehicles may be specifically directed at increasing our understanding and knowledge of the atmosphere and from there, to better inform our decisions as to the most effective ways of dealing with climate change," he said.

The US Federal Aviation Authority prohibits Virgin Galactic from making money from its planes while they are still undergoing experimental flight tests, so the first scientific measurements will be conducted for free, with the American lab paying for the instruments to be fitted.

According to Virgin Galactic, more than 100 passengers have paid the \$200,000 fee for a suborbital flight with the company, the first of which are scheduled for 2010. Before then, the company will conduct around 200 test flights.

Brent Smith, a director with NOAA, told the congress: "We need data and observations to understand how our climate changes and this affords us a new and unique opportunity to gather samples and measurements at much higher altitudes than we could usually achieve."

guardian.co.uk © Guardian News and Media Limited 2008