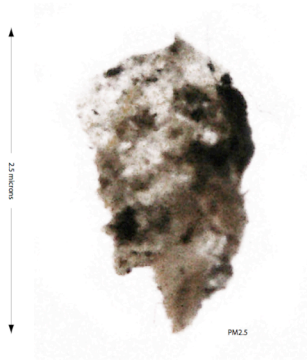


# The Strange Journey of PM2.5

Installation, Digital Prints, Sound  
Andrea Polli 2006

Tiny particles of pollutants often travel great distances, and Dr. Kuoying Wang tracks the movement of these particles in the Asia-Pacific region using a 3-dimensional Lagrangian model he developed. Dr. Wang has determined that in just a few days, particles can travel all the way from China to the United States.

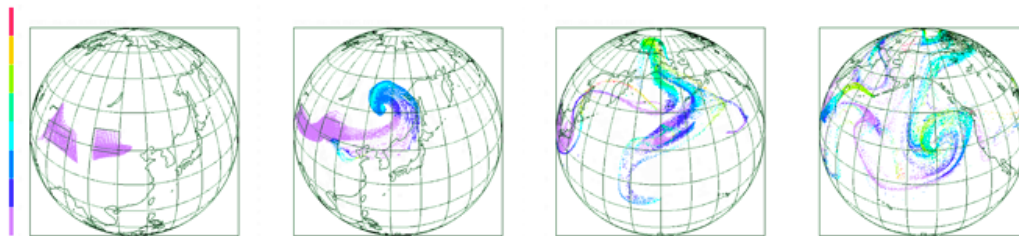
**The Strange Journey of PM2.5** considers the possible path of just one of these tiny particles by the name of PM2.5, a speck smaller than 2.5 microns (one micron equals 1-millionth of a meter, for example a grain of salt is about 70 microns across)\*



PM2.5 was born in a factory in the middle of Southern China and in less than a week he travels through China, over Taiwan and across the Pacific Ocean. He joins with friends as he floats over the Los Angeles freeways and then travels the entire length of the United States, finally landing in New York City.\*\*

The Strange Journey of PM2.5 includes an imaginary portrait of PM2.5, an image of paths he may have traveled modeled by Dr. Wang, and a sonification (data translated to sound) of his journey. This sound is his traveling song.

Imaginary portrait of PM2.5



Long-range transport of the April 2001 Perfect Asian Dust Storm by Dr. Kuoying Wang: Dust sources over the ground (left most), lifting in the air (center left), migrating across the North Pacific (center right), and reaching the Pacific coast of the US (right most).

\*PM2.5 is caused by human activities, desert and biomass burning, and PM2.5's companion, PM10, a polluting particle of less than 10 microns, can be caused by desert dust, biomass burning, and human activity.

\*\*In fact it is documented that the April 2001 Asian dust storm traveled as far as the Atlantic!

## Scientist-Collaborator Biography

Dr. Kuo-Ying Wang graduated with PhD degree from Cambridge University in the United Kingdom in 1998. He did two years of postdoc in Cambridge before returning to Taiwan in 2000. Dr. Wang worked three years in the Taiwan Central Weather Bureau before he went to Cambridge. Dr. Wang has more than 15 years of experience in meteorological analysis and computer simulations for weather, climate, and other atmospheric environment issues. He was awarded a US START Young Scientist Award in 2001, granted a Bristol Leverhulme Visiting Professorship in 2004, and a joint Royal Society-Taiwan National Science Council Fellowship for the 2002-2004. Dr. Wang is currently a member of the UK Royal Meteorological Society, American Meteorological Society, and American Geophysical Union and has published more than 20 SCI papers in international peer-reviewed journals and book chapters. Currently, Dr. Wang has close collaborations with Cambridge University, Bristol University, and the UK Met Office Hadley Centre.