Massive dust storm in China circled the world in 13 days: study

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A wind storm that ripped across western China's Taklimakan desert kicked up hundreds of thousands of tonnes of dust that high-altitude winds then carried around the world in less than two weeks, a study says.

On May 8-9, 2007 winds reaching up to 36 kilometers (22.5 miles) per hour blew an estimated 800,000 tonnes of dust into the air, according to satellite imaging and computer models.

Trapped against the high walls of the Tibetan plateau, the dust was forced higher and higher, reaching an altitude of around 5,000 metres (16,250 feet).

A warm convection flow then lofted most of the dust higher still, where it caught a jetstream that took it on a "journey around the world" at between 8,000 and 10,000 metres (26,000 and 32,500 feet).

After 13 days, the plume passed over the Taklimakan desert where it had begun its strange trek.

On its second trip around the globe, part of the dust fell on the northwest Pacific thanks to an abrupt change in a high-pressure weather system. More may have fallen in the Mid-Atlantic and Balkans.

The cloud was detected by an imager called Caliop, launched in 2006 aboard a NASA Earth-observation satellite, Calipso.

The study, published on Monday in the journal *Nature Geoscience*, shows the importance of airborne dust particles in reflecting sunlight, thus easing global warming, say its Japanese authors.

Asian dust could play an important role in high-altitude cloud formation, with dust particles providing the seed around which water molecules condense and then freeze, they add.

The mineral-rich dust from Taklimakan may also nourish the waters of the North Pacific, depositing iron that feeds phytoplankton, the microscopic marine plants that are the first link in the oceanic food chain.

"The Taklimakan Desert is a major source of dust transported and deposited around the globe," says the paper, lead-authored by Itsushi Uno of Kyushu University.

"Asian dust may have a more important role in many processes than thought by the atmospheric sciences community at present."

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