

Once-derided climate-change satellite may launch with new goal

July 11 2012, By Mark K. Matthews

An Earth observation satellite conceived by former Vice President Al Gore - but banished to a Maryland warehouse by foes of climate change after George W. Bush beat Gore for the presidency - could get a ride into space as early as 2014.

The [National Oceanic and Atmospheric Administration](#) wants about \$23 million next year to continue a quiet reboot of the [satellite](#), and spending bills circulating in Congress show that lawmakers - so far - are willing go along with it.

But given the satellite's history, supporters won't breathe easy until the Deep Space Climate Observatory rises from a launchpad.

"It's been a long road," said Francisco Valero, the project's principal investigator.

The probe's tale begins in 1998 at the Massachusetts Institute of Technology, where Gore outlined the concept for a [NASA satellite](#) that could continuously monitor Earth - and beam back pictures 24-7 - from an orbit 1 million miles away. He named it "Triana," after Rodrigo de Triana, the sailor in [Christopher Columbus'](#) crew who first spied the New World.

The reason for the million-mile orbit was twofold.

The satellite's instruments could make large-scale observations about

[global climate change](#) - a vast improvement over the narrow segments of the planet provided by closer-in satellites.

"It's like looking at the forest and looking at every tree simultaneously," Valero said.

But as important to Gore - who after he lost the presidency made the Oscar-winning documentary "An Inconvenient Truth" about [climate change](#) - the satellite would offer environmentalists a live view of the planet similar to the iconic "Blue Marble" photo of Earth taken during the Apollo era.

"This new satellite ... will allow people around the globe to gaze at our planet as it travels in its orbit around the sun for the first time in history," said Gore at the time. He added that the probe could "awaken a new generation to the environment."

On those orders, NASA spent about \$100 million on the satellite - only to see its launch delayed and ultimately canceled after Republican leaders in Congress raised questions about its cost and scientific worth.

Among them was former U.S. Rep. Dave Weldon, R-Fla., who said the so-called "GoreSat" was nothing more than an expensive "screensaver" and dismissed its possible contributions to climate-change science.

Now running for U.S. Senate, Weldon reiterated his concerns.

"It was a pet project of [Al Gore's](#)," he said. "I think it's still questionable."

After Bush's election in 2000, the satellite was consigned to storage at a Maryland warehouse. But in 2008, NOAA and the Air Force moved to rescue it for a mission that had nothing to do with climate change or

inspiring pictures.

One of the instruments aboard the satellite was a sensor that can monitor disturbances in solar weather, including flare-ups that have the potential to wreak havoc on global communications.

The U.S. currently has only one satellite that can provide an early warning of these disturbances. That probe, the Advanced Composition Explorer, was launched in 1997 and already is more than a decade beyond its design life.

Losing that probe without a replacement, said NOAA scientists, would devastate their ability to predict space-weather events that have the capability of disabling everything from power grids to airplane communications.

"From an operations point of view, it is if you are doing hurricane forecasting in Florida and all of a sudden you don't have any (sensor) buoys offshore," said Joseph Kunches of NOAA's Space Weather Prediction Center in Colorado.

Testing of the Deep Space Climate Observatory showed the probe could handle its new assignment - while still performing the mission assigned by Gore - and this year NOAA began a multiyear, \$85 million effort to revive and operate the spacecraft.

That price tag, however, does not include launch costs, which NOAA said were still under evaluation by the Air Force and could run in the tens of millions of dollars.

NASA documents indicate that the satellite could launch in 2014, possibly from Kennedy Space Center.

In the meantime, lead scientist Valero said he is once again preparing for a mission he first joined 14 years ago.

Slated for inclusion on the spacecraft are instruments that can measure aerosols in the atmosphere and changes in atmospheric temperature and radiation. These are key, Valero said, to settling the question of global warming and humanity's contribution to it.

"We want to obtain data that allows the scientific world to come up with a definitive answer to (the question of) global warming," said Valero, of the Scripps Institution of Oceanography. "We want to prove it with data so there is more discussion about it."

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