



more -- at least two of earth's 30-year weather cycles. Only a few of the cloud-seeding programs, including one in [Saudi Arabia](#) and one in Wyoming, are now collecting rigorous data.

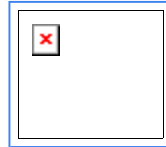


Perhaps the most controversial technology comes from Russia and Mexico ([translated ELAT site](#)).

In 1996, Russian space and weather control scientists hooked up with Gianfranco Bisiacchi, then head of Mexico's space efforts, and founded Electrificación Local de la Atmosfera Terrestre (ELAT)

Nominal results from the three ground stations set up by ELAT in 1998 were so impressive -- rainfall was reported to increase by as much as 30% -- that Mexican state governments were soon clamoring for more facilities. There are now 13, with additional ones being installed in Baja California and the state of Puebla.

ELAT claims credit for ending the severe drought in northern Mexico. Since 2000, says Bisiacchi, the amount of annual rain in the region has been "30% to 35% greater than what it was during the 1990s. In fact, the lakes of the region that were dry are now full."



When operations in the northern states of Sonora and Chihuahua started in 2004, he adds, most lakes were around 8% full. "We've now gone to levels of 85% to 90% -- in just one year."



ELAT says its technology is more efficient than regular cloud-seeding methods. "Milking" clouds is usually done by sprinkling them with particles of silver iodide. The particles provide a site where the clouds' ice crystals accumulate in clumps too heavy to stay aloft.

Bisiacchi and his team take a different tack: They generate charged ions on the ground and point them skyward. That, they claim, fosters clumping on both airborne dust particles and ice crystals touched by a charged ion.

POSTED BY A. DE ROCHE AT 12:24 PM  
LABELS: CHINA, MEXICO, RUSSIA

## The Concept of Ionization

*(note: Below are excerpts from a research paper co-written by the CEO of ELAT Technologies)*

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**ARTIFICIAL ATMOSPHERIC IONIZATION:**

A Potential Window for Weather Modification ([PDF](#))

Phillip Kauffman

Arquimedes Ruiz-Columbié

**Introduction:** Cosmic Rays and Cloud Processes

In 1997 Svensmark and Friis-Christensen reported a correlation between cosmic rays and cloud cover. They found that the observed variation of 3 – 4% of the global cloud cover during the recent solar cycle is strongly correlated with cosmic ray flux.

This was hailed by some as the key to the mystery of how the sun affected climate and produced climactic changes. It was also a confirmation of the long standing suspicion that cosmic rays were linked to global cloudiness.

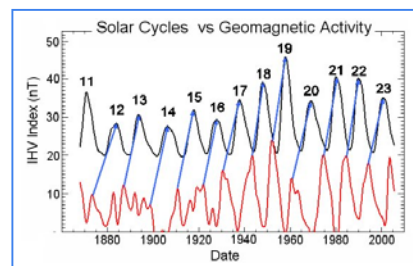
Numerous articles followed studying the catalytic effects of ions from cosmic rays on micro-physical cloud processes and cloud cover.

Of particular interest is the observation from recent satellite data, that cosmic ray-cloud correlation is much more intense in low level clouds than in high level ones.

More cosmic rays correlate to more low level clouds (altitudes of less than 3 km) and lower temperatures.

Low clouds exert a large net cooling effect on the climate. Therefore, greater cosmic ray intensity translates to more cloud cover and cooler temperatures.

The link between global low cloud amounts and cosmic ray intensity has been published in the U.S. by Marsden and Lingenfelter who say: "The observed correlation between global low cloud amount and the



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flux of high energy cosmic rays supports the idea that ionization plays a crucial role in tropospheric cloud formation". *(above image from "Scientists Predict Big Solar Cycle"/NASA)*

Cosmic ray flux variability is not limited to a solar cycle. Although the energy input from cosmic rays is tiny, as the dominant source of ionizing particle radiation, they have a profound effect on many atmospheric processes.

From those observations, it has been established that cosmic ray intensity declined about 15% during the 20th century, roughly about the same variation as the last solar cycle.

### **Hypothesis: General Statement and Conceptual Model**

Ions produced by direct current generators by corona effect will add to and enhance the catalyzing effects that cosmic ray ions are now known to produce in, among other things, lowering nucleation barriers, stimulating charged particle growth and stability and increasing the scavenging rate in clouds.

The injection of a large number of DC corona effect ions will induce changes in cloud microphysics and cloud cover and, consequently modifications in weather conditions.

POSTED BY A. DE ROCHE AT 10:11 AM

LABELS: ELAT, IONOSPHERIC WEATHER MODIFICATION

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