

Light rain: Lasers could trigger downpours on demand

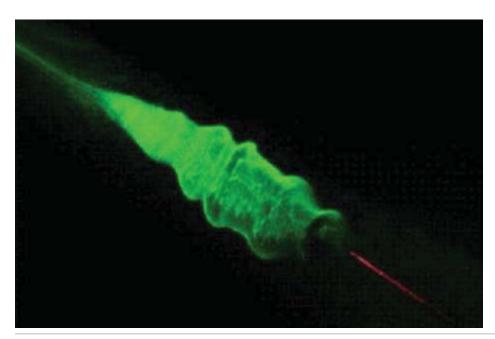
By Claire Bates

Last updated at 7:55 AM on 4th May 2010

People in drought-stricken countries could one day create rain clouds on demand thanks to laser technology.

Physicists have discovered that firing short laser bursts into the air can trigger the formation of water droplets. The breakthrough technique could help stimulate rainfall in the future.

Scientist Jerome Kasparian and his team from the University of Geneva wanted to find a more environmentally friendly alternative to cloud seeding. This 50-year-old process attempts to artificially induce showers.



A red laser pulse ionises the air and triggers the condensation of water droplets to create a cloud, which is illuminated by a green laser

Rockets carrying silver iodide particles are scattered in the sky. The particles act as 'condensation nuclei' around which water drops can form.

Dr Kasparian said cloud seeding is not an efficient method despite decades of development.

He added: 'There are also worries about how safe adding silver iodide particles into the air is for the environment.'

The researchers realised laser technology could be used to create an alternative technique.

They found firing an energy beam through an atmospheric cloud chamber created a channel of ionised nitrogen and oxygen molecules. These acted as condensation anchors in much the same way as silver iodide molecules.

The water drops along the damp channel nearly doubled in size from 50micrometres to 80 micrometres as they fused to the ions.



While rain on demand could be several years away, Dr Kasparian said the technique could be adapted to help weathermen predict when a downpour is due

Next, Dr Kasparian's team tested the same technique in real-world conditions. They fired a high-powered 'Teramobile laser' into the skies above Berlin over a number of nights.

They found condensation droplets again formed along the path of the laser when humidity was high.

Laser physics expert Roland Sauerbrey, from the FZD Dresden-Rossendorf Research Centre in Germany, was impressed with the results.

'This is the first time that a laser has been used to cause condensation outdoors,' he told Nature.com.

The researchers next plan to investigate whether they can create condensation in a wider area by sweeping their laser across the sky.

While rain on demand could be several years away, Dr Kasparian said the technique could be adapted to help weathermen predict when a downpour is on its way.

The research appears in the latest edition of Nature Photonics.

Comments (27)

Newest
Oldest
Best rated
Worst rated

View all

Cloud seeding and chem trails are two different topics. This rain maker uses how much power? How about just making a large humidity condenser at ground level and power it up with solar panels, then flood your crops with 100 times more water than the plants can use.

- Meatwad-SSuppet, San Diego California, 04/5/2010 23:55

Click to rate _ Rating (0)

Report abuse

So "cloud seeding" has officially been admitted? All those nasty letters I got when even a simple mention of CHEMTRAILS and now here it is verified for real. All this rain is caused by the dangerous spraying of this cloud seeding (chemtrails) which is done on a massive scale throughout the world. Our climate here in Mallorca is ruined. We had 4 days of sun the whole winter and yesterday my house was flooded again, thanks to this "cloud seeding" which was done on a massive scale a few days ago.

- Jane Rossello, Palma de Mallorca,

Cloud seeding was 'officially admitted' a long time ago. The fact that you didn't know about it proves nothing. It's a huge leap from cloud seeding, which has been widely used for a long time, to the ridiculous 'chemtrails' theory.

- David, Cheltenham, England, 04/5/2010 17:52

Click to rate _ Rating 8

Report abuse

In my experience, any of the following activities will generate rain: -

- 1. Wash the car
- 2. Paint the fence
- 3. Cut the grass
- 4. Walk the dog
- 5. Put washing out to dry
- 6. Have a BBQ
- Peter, Chelmsford, UK, 04/5/2010 17:22

Click to rate _ Rating 10

Report abuse

Far simpler and cheaper.....just wash your car.....just wash your car.....

For a REAL downpour.....POLISH it.....PO

- (Old) Robert, Worcester UK, 04/5/2010 13:24

Click to rate _ Rating 7

Report abuse

Great, and the worlds Military will do what with a weapon like this? Scientists never learn.

- Les, Pattaya, Thailand, 04/5/2010 12:51

Click to rate _ Rating 8

Report abuse

"Light rain: Lasers could trigger downpours on demand"

Next time the volcano on Island blows it's top, make it rain, bring down the dust and the holiday makers back home.

- Richard, Hamburg, 04/5/2010 08:11

Click to rate _ Rating 5

Report abuse

The views expressed in the contents above are those of our users and do not necessarily reflect the views of MailOnline.

Headlines

Most Read

- Revealing the British eco-car that can drive from London to Brighton on a coke can of fuel
- Eager beavers build a giant dam that would have made Hoover proud
- Hacker 'selling 1.5m stolen Facebook users' login details on black market'
- Silent electric cars to get 'Star Wars' sound effects to warn pedestrians they are coming
- <u>'Undersea volcano of oil': Satellite image shows growing slick hitting U.S. coast</u>
- <u>Exotic Victorian flower lost 50 years ago is unearthed in English country garden</u>
- Spain's spectacular solar power plant
- World leaders fail to slow biodiversity extinction rates
- Apple iPad sales reach one million as it flies off the shelves TWICE as fast as the iPhone
- Light rain: Lasers could trigger downpours on demand
- Magic 'Pixie Dust' made from pig bladders helps 'regrow' limbs of wounded soldiers
- Scientists use 'Jurassic Park' experiment to try to bring woolly mammoth back from the dead
- DVD player sales plummeting as film lovers switch to downloads
- The rise of the robo-fighters: Britain's new pilotless air force
- How a beautiful stranger will send a man's stress hormones soaring...especially if he's not in the same league
- The extraordinary row between Apple and Flash that's stopping people watching BBC iPlayer on their iPhones
- Lost? Ask a woman... How men are better at map reading, but women are superior at remembering routes
- STEPHEN HAWKING: How to build a time machine
- Space yacht will be first craft to travel on 'solar waves' as it sets sail for Venus
- · Are you listening to me? Scientists prove blinking eyes mean the mind is wandering
- Icy asteroid could finally reveal where Earth's water came from
- MORE SCIENCE
- Hacker 'selling 1.5m stolen Facebook users' login details on black market'
- Silent electric cars to get 'Star Wars' sound effects to warn pedestrians they are coming
- Drama in the air: Two peregrine falcons in extraordinary battle 250ft above ground
- Revealing the British eco-car that can drive from London to Brighton on a cola can of fuel
- Eager beavers build a giant dam that would have made Hoover proud
- Magic 'Pixie Dust' made from pig bladders helps 'regrow' limbs of wounded soldiers
- · How a beautiful stranger will send a man's stress hormones soaring...especially if he's not in the same league
- Stephen Hawking backs possibility for humans to travel millions of years into the future
- Exotic Victorian flower lost 50 years ago is unearthed in English country garden
- The extraordinary row between Apple and Flash that's stopping people watching BBC iPlayer on their iPhones
- DVD player sales plummeting as film lovers switch to downloads
- Light rain: Lasers could trigger downpours on demand
- Apple iPad sales reach one million as it flies off the shelves TWICE as fast as the iPhone
- Are you listening to me? Scientists prove blinking eyes mean the mind is wandering
- Stephen Hawking: Earth could be at risk of an invasion by aliens living in 'massive ships'
- Dramatic satellite pictures show Iceland volcano still erupting... but ash on the wane at last
- Iceland volcano from space: The dramatic ash plume engulfing Britain and 'nightmarish face' seen from above
- iPhone users can watch live TV for free... and the service is soon coming to all smart phones
- Britons believe mixed-race people are the 'most attractive and successful'
- Icy asteroid could finally reveal where Earth's water came from
- MOST READ IN DETAIL

Ads by Google

The Doctor's Choice Experienced, Proven QualityVisit our Gallery, See Real Results www.HairTransplantSeattle.com/Popular Rain Boots Styles 100s of Womens Rain Boot Designs! Enough to Make You Wish for Rain Like.com/Rain_Boots Resurrection of Jesus Did Jesus Rise From the Dead? Discover the Facts From Scholars www.y-Jesus.com/Resurrection