

CLOUDS OF CLIMATE CHANGE

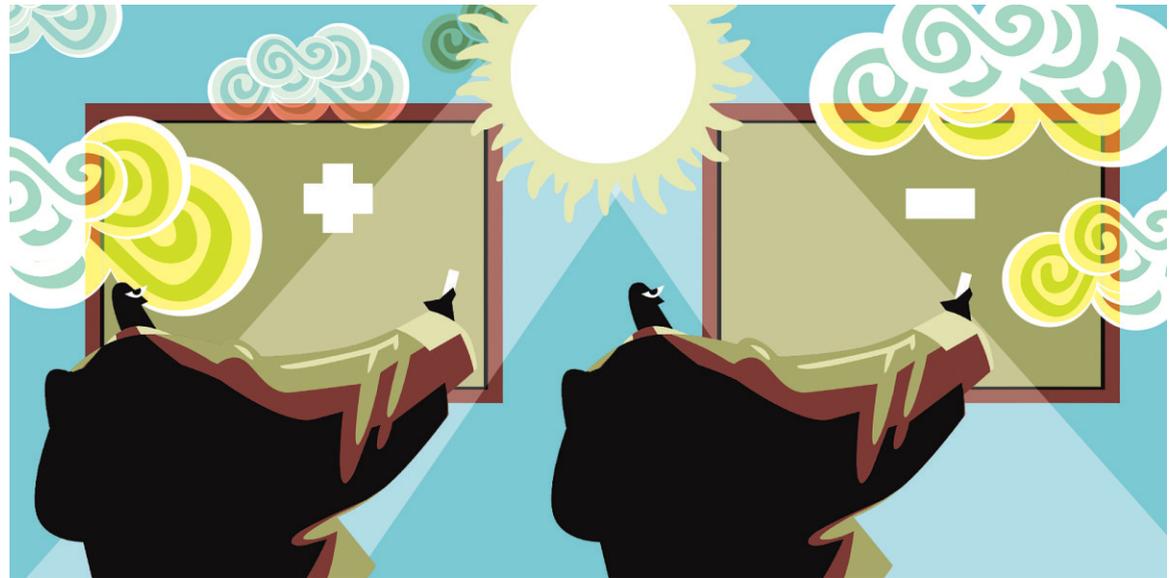
The CO₂ theory of global warming could soon be superseded by an alternative concept based on clouds to explain climate change, says DEEPAK LAL

ILLUSTRATION BY BINAY SINHA

IN an earlier column I had outlined two alternative theories about global warming: the CO₂ theory propagated by the Intergovernmental Panel on Climate Change (IPCC) and Danish physicist Henrik Svensmark's "cosmoclimatology" theory which linked "sunspots" and cosmic rays to the Earth's climate ("Climate change: sun and the stars vs CO₂", June 2007). I had also noted that an experiment at the CERN particle physics laboratory called CLOUD was to begin in 2010 to test the cosmoclimatology theory. The first results from this experiment were published recently ("Role of sulphuric acid, ammonia and galactic cosmic rays in atmospheric aerosol nucleation", by Kirby *et al*, *Nature* (2011), 476, 429-433). It finds a "significant" cosmic ray cloud effect (see www.thegwpf.org for details and commentaries including from Professor Svensmark).

To recapitulate: the cosmoclimatology theory argues that climate is controlled by low cloud cover, which when widespread has a cooling effect by reflecting solar energy back into space and vice versa. These low clouds, in turn, are formed when the sub-atomic particles called cosmic rays, emitted by exploding stars, combine with water vapours rising from the ocean. The constant bombardment of the planet by cosmic rays is modulated by solar wind, which when it is blowing prevents cosmic rays from reaching the earth and creating low clouds. The solar wind in turn is caused by the varying sunspot activity of the sun. When the sun is hyperactive with lots of sunspots, the solar wind is blowing intensely, fewer cosmic rays get through to form the low clouds, and the planet experiences global warming. When, as in recent years, sunspot activity decreases we get the global cooling observed over the last 12 years.

The "ice core" millennial evidence on the correlation between CO₂ and temperature, cited by "warmists" like Al Gore, is owing to the lagged effects of climate on the ocean. As Princeton University physicist William Harper notes: "These records show that changes in temperature preceded changes in CO₂ levels, so that CO₂ levels were an effect of temperature changes. Much of this was probably due to outgassing of CO₂ from the warming oceans or the reverse



on cooling" ("The Truth about Greenhouse Gases", Briefing paper No.3, www.thegwpf.org). For the oceans are the primary sinks as well as emitters of CO₂. Given their vastness relative to the earth's surface, it takes a long time for the ocean to warm from rises in temperatures (and vice versa), hence the lag between temperature and CO₂ levels.

The missing piece in the cosmoclimatology theory was the physical link between cosmic rays and cloud formation. As Professor Harper notes, one of the weaknesses of the climate models favoured by IPCC is an assumed large and positive feedback effect from CO₂-induced changes in water vapours and clouds. "But there is observational evidence that the feedback factor is small and maybe even negative." The mystery of low cloud formation is what CLOUD is meant to uncover. In a series of lab and natural experiments, Professor Svensmark and his colleagues had already set out some of the chemistry behind this theory. As he says, the CLOUD results "basically confirm our own experimental results since 2006, and does so within a larger variation of parameters. It seems to say that ions [cosmic rays] are fundamental for the nucleation of new aerosols [tiny liquid or solid particles that provide a nucleus around which droplets can form from water vapour in the air]" ("The cosmic ray/Cloud seeding hypothesis is con-

verging with reality", www.thegwpf.org).

And how has the army of media personnel, "warmist" scientists and IPCC reacted to this experimental evidence supporting the Svensmark hypothesis? By denying or ignoring it ("CLOUD experiment media links", Andrew Montford, www.thegwpf.org). But, once, as I hope, Professor Svensmark wins the Nobel prize, the myth of anthropogenic global warming will be finally nailed. But, how has this immense scientific scam been perpetrated?

The story begins with Maurice Strong, and will hopefully end with Professor Svensmark (*The Real Global Warming Disaster* by Christopher Booker). Born into poverty during the Great Depression, he became a socialist and a firm believer in the United Nations (UN) as an embryo world government. He ran the Canadian government's overseas aid agency in the 1960s, and saw environmentalism as a cause to further world government. He organised and chaired the first UN conference on the human environment in 1972 which launched the UN Environment Programme (UNEP), of which he became the first director. He retired in 1976 from UNEP. In 1983 he became the key member of the Brundtland Commission, which coined the meaningless term "sustainable development" and endorsed Mr Strong's growing conviction of the threat of man-made global

warming after he attended a conference organised by UNEP and the World Meteorological Organisation (WMO). He then got UNEP and WMO to agree on an inter-governmental mechanism to provide scientific assessments of climate change. This was to lead to the creation of IPCC.

Mr Strong reached the high point of his career when he was to lobby through networking at the UN for the 1992 Rio "Earth Summit", which he chaired and organised. Using the environment NGOs to propagate his cause, funded by UN agencies, he succeeded in creating the impression of popular concern about global warming. This led politicians from 172 countries to fly to Rio de Janeiro and sign a UN Framework Convention on Climate Change, the precursor to the 1997 Kyoto treaty. But this was to be his swansong. In 2005, the Volcker Commission, formed to look into the corruption in the UN's "food-for oil" programme in Saddam's Iraq, disclosed that in 1997 Iraq's former foreign minister Tariq Aziz had handed a Korean contact of Mr Strong's nearly \$1 million to persuade the UN for more favourable terms. The money was paid into a Strong family company. Forced to resign as UN Under-Secretary General, he retired to Beijing!

The moral is: despite ideologues and rent seekers, real science will ultimately win against its politicised bastard.