The truth about global warming - it's the Sun that's to blame

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Global warming has finally been explained: the Earth is getting hotter because the Sun is burning more brightly than at any time during the past 1,000 years, according to new research.

A study by Swiss and German scientists suggests that increasing radiation from the sun is responsible for recent global climate changes.

Dr Sami Solanki, the director of the renowned Max Planck Institute for Solar System Research in Gottingen, Germany, who led the research, said: "The Sun has been at its strongest over the past 60 years and may now be affecting global temperatures.

"The Sun is in a changed state. It is brighter than it was a few hundred years ago and this brightening started relatively recently - in the last 100 to 150 years."

Dr Solanki said that the brighter Sun and higher levels of "greenhouse gases", such as carbon dioxide, both contributed to the change in the Earth's temperature but it was impossible to say which had the greater impact.

Average global temperatures have increased by about 0.2 deg Celsius over the past 20 years and are widely believed to be responsible for new extremes in weather patterns. After pressure from environmentalists, politicians agreed the Kyoto Protocol in 1997, promising to limit greenhouse gas emissions between 2008 and 2012. Britain ratified the protocol in 2002 and said it would cut emissions by 12.5 per cent from 1990 levels.

Globally, 1997, 1998 and 2002 were the hottest years since worldwide weather records were first collated in 1860.

Most scientists agree that greenhouse gases from fossil fuels have contributed to the warming of the planet in the past few decades but have questioned whether a brighter Sun is also responsible for rising temperatures.

To determine the Sun's role in global warming, Dr Solanki's research team measured magnetic zones on the Sun's surface known as sunspots, which are believed to intensify the Sun's energy output.

The team studied sunspot data going back several hundred years. They found that a dearth of sunspots signalled a cold period - which could last up to 50 years - but that over the past century their numbers had increased as the Earth's climate grew steadily warmer. The scientists also compared data from ice samples collected during an expedition to Greenland in 1991. The most recent samples contained the lowest recorded levels of beryllium 10 for more than 1,000 years. Beryllium 10 is a particle created by cosmic rays that decreases in the Earth's atmosphere as the magnetic energy from the Sun increases. Scientists can currently trace beryllium 10 levels back 1,150 years.

Dr Solanki does not know what is causing the Sun to burn brighter now or how long this cycle would last.

He says that the increased solar brightness over the past 20 years has not been enough to cause the observed climate changes but believes that the impact of more intense sunshine on the ozone layer

and on cloud cover could be affecting the climate more than the sunlight itself.

Dr Bill Burrows, a climatologist and a member of the Royal Meteorological Society, welcomed Dr Solanki's research. "While the established view remains that the sun cannot be responsible for all the climate changes we have seen in the past 50 years or so, this study is certainly significant," he said.

"It shows that there is enough happening on the solar front to merit further research. Perhaps we are devoting too many resources to correcting human effects on the climate without being sure that we are the major contributor."

Dr David Viner, the senior research scientist at the University of East Anglia's climatic research unit, said the research showed that the sun did have an effect on global warming.

He added, however, that the study also showed that over the past 20 years the number of sunspots had remained roughly constant, while the Earth's temperature had continued to increase.

This suggested that over the past 20 years, human activities such as the burning of fossil fuels and deforestation had begun to dominate "the natural factors involved in climate change", he said.

Dr Gareth Jones, a climate researcher at the Met Office, said that Dr Solanki's findings were inconclusive because the study had not incorporated other potential climate change factors.

"The Sun's radiance may well have an impact on climate change but it needs to be looked at in conjunction with other factors such as greenhouse gases, sulphate aerosols and volcano activity," he said. The research adds weight to the views of David Bellamy, the conservationist. "Global warming - at least the modern nightmare version - is a myth," he said. "I am sure of it and so are a growing number of scientists. But what is really worrying is that the world's politicians and policy-makers are not.

"Instead, they have an unshakeable faith in what has, unfortunately, become one of the central credos of the environmental movement: humans burn fossil fuels, which release increased levels of carbon dioxide - the principal so-called greenhouse gas - into the atmosphere, causing the atmosphere to heat up. They say this is global warming: I say this is poppycock."