FLOODS HURRICANES DROUGHT TORNADOS
SHRINKING ICE CAPS VANISHING GLACIERS

A HOLLYWOOD DISASTER MOVIE?

TRANSPORT WORKERS UNION LOCAL 100 AFL-CIO

NOT IN SERVICE

NO. THESE ARE THE EFFECTS OF GLOBAL WARMING.
THESE AREN'T COMING SOON, THEY'RE HERE NOW!

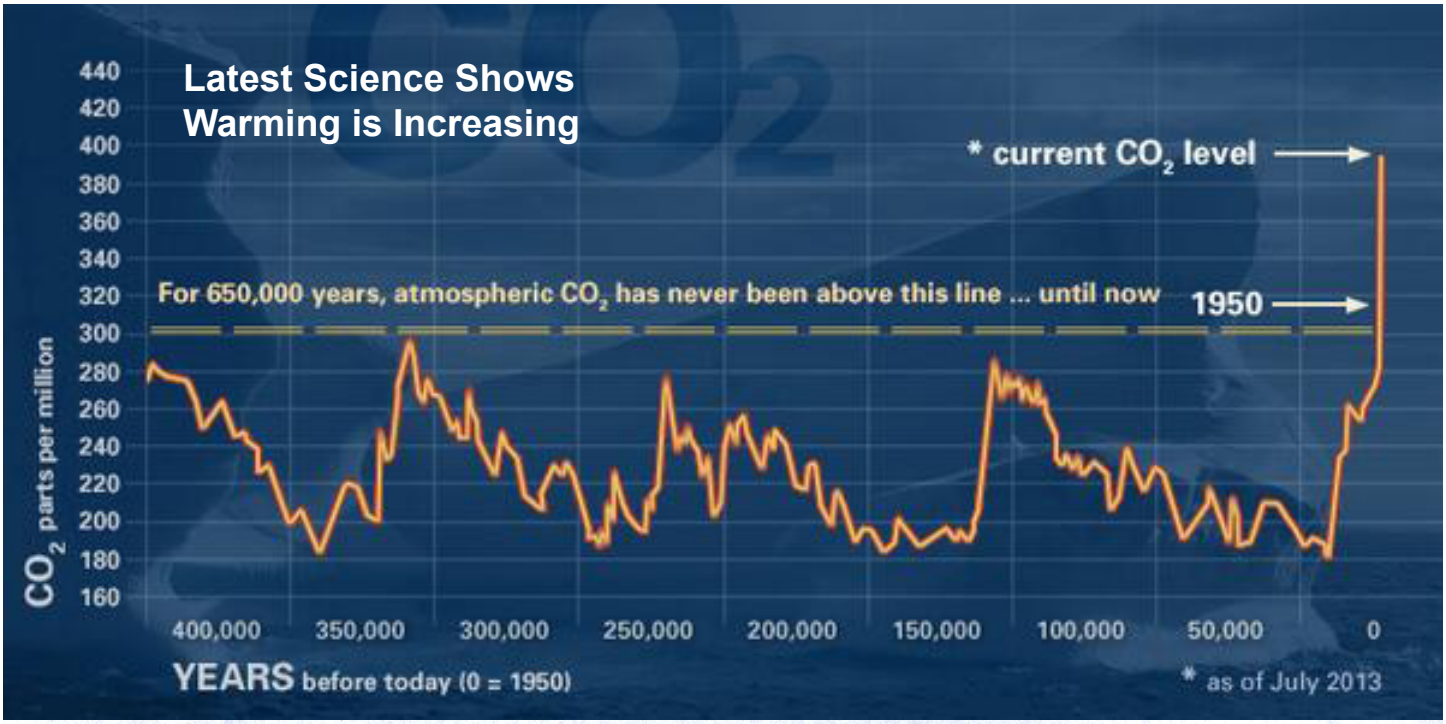
PEOPLE'S CLIMATE MARCH SUNDAY, SEPT. 21, 2014

With a Subway Campaign Underway, Climate Change Action is Coming to New York On September 21
Labor Rally Before the Peoples Climate March
at 10am — 58th Street & Broadway near Columbus Circle
Look for the TWU Van and Air Sock

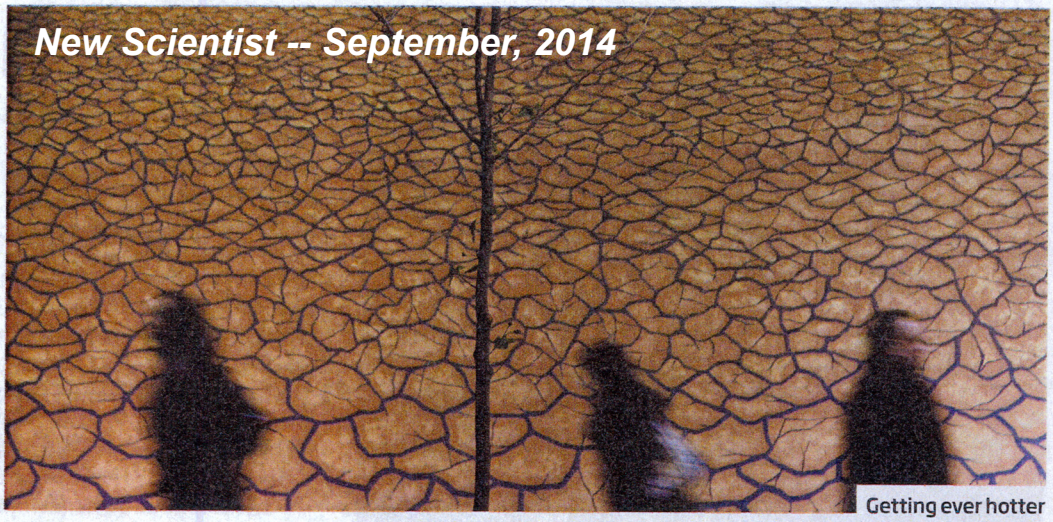
Organizers Expect 40,000 people at this Historic March

PEOPLE'S CLIMATE MARCH

TWU Has One Solution:
Clean Mass Transit Means Less Cars on the Road. **More Mass Transit Means Less Global Warming!**
Wear Your Union Colors! T-Shirts Available at the TWU Van



New Scientist -- September, 2014



REUTERS/MICK TSIKAS

Getting ever hotter

No more pauses in global warming

Michael Slezak

ENJOY the pause in global warming while it lasts, because it's probably the last one we will get this century. Once temperatures start rising again, it looks like they will keep going up without a break for the rest of the century, unless we cut greenhouse gas emissions.

The slowdown in global warming since 1997 seems to be driven by unusually powerful winds over the Pacific Ocean, which are burying heat in the water. But even if that happens again, or a volcanic eruption spews cooling particles into the atmosphere, we are unlikely to see a similar hiatus, according to two independent studies.

Masahiro Watanabe of the University of Tokyo in Japan and his colleagues have found that, over the past three decades, the natural ups and downs in temperature have had less influence on the planet's overall warmth. In the 1980s, natural variability accounted for almost half of the temperature changes seen. That fell to 38 per cent in the 1990s and just 27 per cent in the 2000s (*Nature Climate Change*, doi.org/vf6).

Instead, human-induced warming is accounting for more and more of the changes from year to year, says Watanabe. With ever-faster warming, small natural variations have less impact and are unlikely to override the warming trend.

"The implication is that we will get fewer hiatus periods, or hiatus periods that last for a shorter period," says Wenju Cai at CSIRO in Melbourne, Australia, who wasn't involved in the work.

According to another recent study, the current hiatus may be our last for a while. Matthew England and his colleagues at the University of New South Wales in Sydney, Australia, estimated the odds of another pause.

Using 31 climate models, they concluded that if emissions keep rising, the chance of a hiatus – a 10-year period with no significant warming – drops to virtually zero after 2030 (*Geophysical Research Letters*, doi.org/vfw).

The current hiatus will probably be followed by rapid warming as heat escapes the ocean, so we are unlikely to get another decade of no warming before 2030. Today's pause "is probably going to be the last one that we'll see in the foreseeable future", says England. It could be another century or more before the next hiatus.

But that could change if we slow greenhouse gas emissions now. If our emissions peak by 2040, the temperature rise will slow by 2100, and hiatus periods will become more likely.

Hiatuses can also be triggered by volcanic eruptions that eject particles into the air, reflecting sunlight away from Earth, as happened after the eruption of Mount Pinatubo in 1991. But even if a volcano erupts it will make little difference. "After 2030, the rate of global warming is likely to be so fast that even large volcanic eruptions on the scale of Krakatoa are unlikely to drive a hiatus decade," says England's colleague, Nicola Maher. ■