CLIMATE CHANGE SCIENCE TRUMPS OPINION

The world must be getting more stupid.

Otherwise, why should a "snowmageddon" hitting Washington, D.C., make global warming a non-problem? But even dumber than that is the conspiracy theory that climate change isn't an actual phenomenon, but an industry created to feather academic beds with funding. Gimme a break.

Rewind to Richard Nixon's war on cancer, John F. Kennedy's commitment to put a man on the moon and President Franklin D. Roosevelt's decision to develop the fission bomb. Were these national goals really make-work projects designed to employ scientists? Were they marketing gimmicks used by chief executives to enhance their popularity?

Ughh. Presidents then - and Barack Obama now - get such ideas from their scientific advisers, weigh the evidence personally and then do what they were elected to do: lead. If you don't like it, then just get out of the way.

Last fall, I heard a talk by distinguished MIT meteorologist Kerry Emanuel titled "A Sober Look at Global Warming." He used "sober" to emphasize that science has no ax to grind on this issue, even when it generates grant revenue. He followed with a main point that was completely apolitical: that we should view climate change less as a problem than a "spectacular intellectual challenge." His audience brightened at the prospect of hearing a talk about something complex enough to be interesting.

This, unfortunately, does not seem to reflect the bulk of the U.S. electorate, who would rather hear what people think about climate change than be intellectually challenged by the issue itself. Indeed, they're far more interested in the sideshow of climate politics - the failure of the Copenhagen conference, the appeals of king coal, big oil or greedy gas, and the opinion of so-and-so. Unfortunately, the substitution of talking-head spin for sober science drowns out rational group action with a gusher of verbosity such as you have read so far in this column.

So, for a change, instead of advising you what to think about climate change, I ask that you think about climate change itself. So, say bye-bye to blowhards. Skirt the skeptics. Find a few facts. I guarantee that what follows contains no opinion.

The setting is a pair of caves - Sanbao and Linzhu - in Hubei province, central China. The focus is a high-fidelity and exceptionally well-dated sedimentary record of stalagmites recording the strength of the Asian monsoon as measured by petrified drips of groundwater.

The publication is a paper in the Oct. 9, 2009, issue of Science by a team of Chinese and American scientists. The answer they provided is to the question: "What causes ice ages to end?"

We now have a good answer. Counter-intuitively, small ice sheets are harder to get rid of than big ones because they can't produce enough meltwater to flip the toggle-switch of Earth's climate system into its interglacial mode. Only when ice sheets are huge, and when tickled by an extra tidbit of astronomically raised sunlight, can they flood the North Atlantic with enough meltwater to stop the persistent flow of north-flowing warm oceanic currents in the Gulf Stream. This permits the North Atlantic to glaze over with sea ice.

In consequence, and moving downwind on the prevailing westerlies, the chill from an ice-covered North Atlantic makes Europe very cold, the Middle East merely cold and mainland Asia cool enough
to stop the Asian monsoon. Ventilation of carbon dioxide dissolved in Pacific waters to the atmosphere increases for unknown reasons, as does the release of methane stored in wet terrestrial soils.

This warms the whole globe through the greenhouse effect, which melts more ice from mid-latitude ice sheets, maintaining the freshness of the North Atlantic and keeping the heat conveyor belt shut off until there's nothing left to melt. Only then can ice sheets begin anew with their oscillatory, grinding growth, a phase that lasts about 90,000 years.

Indeed, for most of the past million years, the Northern Hemisphere has been significantly covered by mid-latitude ice sheets, the globe experienced colder conditions and the world ocean was tens of meters lower than present. All of civilization as we know it emerged within the latest, short-lived and abnormally warm interglacial. To this we've added more heat.