

LED efficiencies: Apples and oranges **FREE**

Bill Moran



*Physics Today* **61** (8), 15 (2008);  
<https://doi.org/10.1063/1.2970953>



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## Of hurricanes and fooling Mother Nature

The letter by Michael Binkley and the reply from Kerry Emanuel under the heading "Cool Shades for Hurricanes?" (PHYSICS TODAY, March 2008, page 9) attracted my attention. As a forester, hydrologist, ecologist, and student of atmospheric phenomena, I understand our atmosphere fairly well.

The function of hurricanes is to move excess heat energy from the equatorial regions toward the poles, particularly the North Pole. It is in humankind's best interest not to monkey around any more than we already have with Earth's powerful and yet delicately balanced energy sources, sinks, and pathways. An experiment in seeding hurricanes 40–50 years ago resulted in a near international incident when an errant seeded storm abruptly turned north and grazed Havana, Cuba, rather than taking its more normal path into the Gulf of Mexico. Fidel Castro complained bitterly that the event was a deliberate act of aggression by the US, but, of course, he received denials. A report later showed that the storm made a completely unnatural and sudden 90-degree turn northward. The proposed seeding program was later abandoned when potential perpetrators were required to write an environmental impact statement.

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## LED efficiencies: Apples and oranges

The item "White LEDs Poised for Global Impact" (PHYSICS TODAY, December 2007, page 25) provides an interesting account of the use of LEDs in rural villages. Although the article correctly mentions that the energy efficiency of

LED technology continues to improve, I found the efficiency comparison with fluorescent lights misleading, for two reasons. First, some manufacturers show their specs as lumens per watt of light output, while others show lumens per watt used by the LED. The former does not include power wasted as heat. Second, some comparisons are made using LED light that is concentrated in a narrow beam while the fluorescent lights are tested without fixtures.

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## Importance of double-blind reviews

I am amazed to learn from the letter by Lance Williams (PHYSICS TODAY, November 2007, page 12) that any academic journal would have only a single-blind referee process.

After finishing a postdoc in physics long ago, I went to trade school and learned how to practice medicine, which I have been doing ever since. I can assure you that the majority of physicians understand the scientific value of double-blind over single-blind evaluations of drugs. And those who don't use double-blind procedures often have a financial interest in the product they are evaluating. Is the accuracy of physics publications somehow not as important? Shouldn't physics and physicists have the highest standards, or perhaps even set the standards? Even old general practitioners who think "physics" is a quaint plural term for laxatives can tell you that single-blind evaluations are not worth much.

Are any of you physicists embarrassed by this practice?

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**I couldn't help** but applaud Lance Williams for writing his letter. On more than one occasion, I have seen the same piece of writing referred to as "poor English" and "well presented," depending on the names and affiliations of the coauthors. Why can't we adopt the double-blind system? It may not be perfect, but it is definitely better than the single-blind one.

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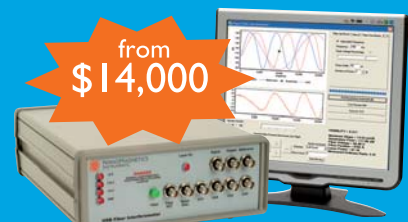
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