

LHC: Not quite free

The LHC cost billions,
And it's very, very large,
Just so it can find the Higgs,
Ironically "free of charge."

Kay R. Shultz

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stressed and irritable, less thoughtful, less reflective, and less humane now than in the days of less technology.

During more than 30 years of teaching physics at various universities, I have seen the change in students' minds and intellectual levels. Many students go through their days with blank expressions on their faces; they lack the ability to reason logically or think abstractly; and they no longer possess the drive to learn. Many become isolated; they are losing their natural curiosity, their ability to think deeply, and even their capacity and desire to interact with the world—or the people—around them. It's sad.

I recommend that my students—and the rest of us!—stop looking for answers on the internet and instead go out and play in the real world. We can learn a lot more physics from Nature than from being stuck to the computer screen. Why not emulate Copernicus, Galileo, or Isaac Newton, who saw the world with their own eyes. Spend time walking in the woods, listening to the ocean, experiencing the beauty of the spring flowers, and being amazed by the vast expanse of the night sky; it's bigger than your computer screen, you know. Nature—not the internet—is still the greatest teacher.

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Opinions with a side of science

Is the Letters column of *PHYSICS TODAY* abandoning the scientific method in favor of the method more generally used in political advertising? I refer to two letters on page 12 of the September 2008 issue.

Charles Gallo laments TV's version of science by stating, "Most of the programs turn people away from physics rather than draw them in." An interesting theory, but he mentions not a scrap

of observational data to back it up. The statement should have been posed more properly as a question, with the usual exhortation of theorists urging some experimentalist to test it.

Worse still is the reply from Robert Griffiths to Eric Lerner's argument concerning science and religion. Lerner poses specific questions to which Griffiths' only reply is to call Lerner's letter a "dogmatic caricature" and to urge readers to look into the book he reviewed—a book that also does not address any of the questions. Lerner's point, that science and religion do not share any of the same methods and that consequently science provides continuing insights into the universe while religion fails to do so, is certainly valid. After teaching a course in "religion and science" for several years at the University of Miami, I can only conclude that religion, most particularly Christianity, is based on unreproducible phenomena stipulating the existence of an unobservable entity. Can anything be further removed from science than that?

It is sad that, as a nation, we routinely accept politicians stating wild and unverified hypotheses as fact and evading direct questions by offering nonanswers. Should we not expect to find relief in a science magazine?

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Clarifications on exoplanets

On page 47 of the article in the May 2009 issue of *PHYSICS TODAY*, figure 2b is mistakenly credited to Geoff Marcy rather than the National Solar Observatory. The high-resolution solar spectrum was produced with the Fourier-transform spectrometer at the McMath-Pierce Solar Facility in 1984 and serves as a proxy for a high-resolution spectrum of a Sun-like star. Credit for the image should go to NSO/ AURA/NSF.

Also, on page 51, the first complete sentence in the second column should read as follows: "The plot assumes a 2.5-m telescope operating at a wavelength of 800 nm with an advanced coronagraph capable of imaging a planet separated from its glaring star by as little as 160 milliarcseconds."

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