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Cover: Beaten egg whites support a hunk of aerogel, the lightest solid on Earth. When light scatters through the aerogel's diaphanous molecular network, a ghostly, bluish tinge emerges. Scientists can now make aerogels with densities only about three or four times that of air. The near-transparency, ultralight weight and poor heat conduction of these new materials make them candidates for home applications such as insulation in windows and refrigerators. (Photo: Lawrence Livermore National Laboratory)



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## Letters

### Ozone hysteria?

In "Antarctic ozone hole returns with a bang" (SN: 9/29/90, p.198), Richard Monastersky states, "Every September since the late 1970s, the Antarctic has experienced a temporary but dramatic loss of ozone." This clearly implies that the loss only started in the late 1970s, and such statements may be one reason why there is so much hysteria concerning "ozone depletion."

The fact is that ozone measurements only began in the late 1970s. For all we know, this temporary ozone loss has been occurring since the dawn of time.

You should at least temper the bad news about ozone with what may be some good news — namely, that the data may not support the ozone depletion theory. (Many scientists still view it as a theory, not a fact.)

N. Vorchheimer  
Buckingham, Pa.

Measurements of stratospheric ozone above Antarctica actually started well before the 1970s.

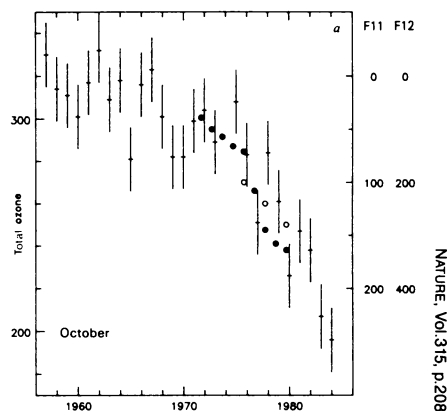
In 1956, British researchers began recording ozone levels over Antarctica's Halley Bay. Their decades-long record shows clear evidence of a change in the late 1970s, concurrent with a rapid rise in stratospheric levels of ozone-destroying chlorine due to human-made chemicals, most notably chlorofluorocarbons (CFCs).

When J.C. Farman of the British Antarctic Survey first described the ozone depletion in the May 16, 1985 NATURE, he presented a now-famous graph of mean October ozone values (in Dobson units) over Halley Bay for 1957 through 1984. The graph, shown at right, also depicts the levels (in parts per thousand) of CFC-11 (solid circles) and CFC-12 (open circles). The CFC scale on the right side of the graph is inverted to show the match between increasing CFCs and decreasing ozone.

Atmospheric scientists have since gathered considerable data backing the theory that pollutants cause the Antarctic ozone hole. It's true that they regard the explanation as a theory, but the theory has grown quite strong.

It's impossible to prove a scientific theory; one can only disprove a theory. Modern science therefore rests on a long list of "unproved"

theories, including evolution, the atomic model of matter and the cellular model of living organisms. Such theories gained their current stature by withstanding countless attempts to disprove them. The pollutant theory for ozone loss is relatively young, but already it has survived a variety of such tests. — R. Monastersky



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