

**TODAY'S WEATHER**  
 M/SUNNY   
 2 °C  
[4 Day Forecast](#) | [Traffic](#)

Wednesday, April 02, 2008 | [Today's Toronto Star](#)

[PHOTOS](#) [VIDEO](#) [COLUMNISTS](#) [BLOGS](#) [PODCASTS](#) [RSS](#) [MOBILE](#) [NEWSLETTERS](#) [ALERTS](#)


   
 Search thestar.com  Search the Web  
[Advanced Search](#) | [Full Text Article Archive](#)

**NOW ONLY \$3.05 PER WEEK!**  
**LIMITED TIME OFFER!**  
**SUBSCRIBE NOW!**

[HOME](#) [NEWS](#) [COMMENT](#) [BUSINESS](#) [SPORTS](#) [ENTERTAINMENT](#) [LIVING](#) [TRAVEL](#) [WHEELS](#) [PARENTCENTRAL](#) [CLASSIFIEDS](#) [CAREERS](#)

[Toronto & GTA](#) | [Ontario](#) | [Canada](#) | [World](#) | [Comics](#) | [Contests](#) | [Crosswords](#) | [Horoscopes](#) | [Lotteries](#) | [Sudoku](#) | [TV Listings](#) | [Auctions](#)

# A week's worth of science news, Jan. 14

> Advertisement <

Jan 14, 2007 04:30 AM

**PETER CALAMAI**

## HURRICANE-HUNTING BALLOONS

Those squiggles crossing the Atlantic Ocean on the map have proved a big surprise to meteorologists and could provide a key to better hurricane forecasting.

The coloured tracks indicate the unexpected paths taken by eight giant weather balloons as they drifted slowly westward, 20 kilometres up in the atmosphere, after being launched from Niger in West Africa last summer.

Atmospheric physicists believe that the tropical storms and hurricanes that reach North America are largely born at that height and between 10 and 20 degrees north of the equator. The seedlings for the storms are weak weather systems known as easterly waves.

The scientists expected to see regular waves producing much straighter tracks. Instead the four-storey-high superpressure balloons zigged, zagged and even doubled back eastwards during journeys that lasted six to 18 days.

This finding underlines how little is known about these crucial hurricane-breeding winds in the mid-Atlantic. The west coast of Africa is beyond the range of U.S., hurricane-hunter airplanes. Launching traditional weather balloons from ships over that wide an area of ocean would cost a mint.

So the National Center for Atmospheric Research in Boulder, Colo., devised an ingenious approach. Each drifting balloon carries an arsenal of miniaturized instrument packages, released automatically twice a day. These "dropsondes" descend by parachute, radioing readings on temperature, pressure and winds to the balloon, which passes the information along via satellite.

A recent center newsletter reported that some of this year's 300 dropsondes "collected measurements from hurricanes-to-be Florence and Gordon just as each system reached tropical-storm strength."






Gathering such information should improve forecasters' skill in predicting which weather systems will grow into hurricanes. Experts are already speculating that heavy surges of hot, dry air from the Sahel region may have helped reduce Atlantic hurricane activity last year from the devastating 2005 season to near-normal levels.

## FINANCIALLY HEALTHY DRINKS

In *Casablanca*, the Claude Rains character professed to be "shocked, shocked" that gambling was taking place at Rick's, the establishment run by Humphrey Bogart.

In a similar vein, Microscope is shocked, shocked to discover that when nutrition studies of soft drinks, juices and milk were sponsored solely by industry, the results were four to eight times more likely to be favourable to the sponsor's financial interests than when there was no industry funding.

So when you hear that a certain juice is rich in anti-oxidants that are allegedly shown to inhibit cancer or some other affliction, you should immediately ask who paid for the research. That may not be easy to find out. Of the 206 medical and scientific articles reviewed by researchers from Children's Hospital Boston, just more than half identified any kind of financial sponsorship, industry or otherwise.

-  Email story
-  Print
-  Choose text size
-  Report typo or correction
-  Email the author

 BOOKMARK 

### MORE IN THE NEWS

[Zimbabwe opposition declares victory](#)

[Wynne adds her support to homework review](#)

[Young commuters greenest](#)

[Canada foils UN water plan](#)

[Chef Susur Lee takes on New York](#)

### RECENT SPECIAL SECTIONS

- [Sick Kids](#)
- [Desi Life, issue 7](#)
- [Best Employers for New Canadians](#)
- [Earth Hour](#)
- [RRSPs & Investing](#)
- [Living Yoga](#)
- [Diabetes](#)
- [Guide to Colleges and Universities](#)
- [Florida Travel](#)
- [Caribbean Travel](#)

[More Specials](#)

> Advertisement <



**50% OFF**  
**7-DAY HOME DELIVERY**

**NOW ONLY \$3.05 PER WEEK!**  
**LIMITED TIME OFFER!**  
**SUBSCRIBE NOW!**



In the current issue of the journal *Public Library of Science Medicine*, the authors argue that financial conflict of interest is more pernicious than other potential research biases because it "acts consistently in one direction over time." Check out the rigorous details of this study for free at [www.plos.org](http://www.plos.org).

### SIMPLE STELLAR SERENDIPITY

Astronomer Harvey Richer confesses that he's been "singularly unsuccessful" in buying winning lottery tickets.

Yet stellar serendipity has paid off with long odds for the University of British Columbia professor and Jason Kalirai, Richer's former Ph.D. student.

At the American Astronomical Society meeting in Seattle last week, Kalirai reported that the two researchers have found the most distant globular cluster ever detected, more than a billion light-years distant.

The discovery promises to shed light on the evolution of galaxies, because these star balls are most probably the offspring of the Big Bang's earliest stars.

The prosaic term globular cluster really doesn't do justice to this cosmic phenomenon. These balls can contain hundreds of thousands, even millions, of stars, so closely packed that a thousand stars can reside in a space smaller than the stretch between our own Sun and the nearest neighbouring star.

Kalirai and Richer were studying NGC 6397, one of the hundreds of globular clusters in our own Milky Way galaxy. They'd photographed it during 126 orbits of the Hubble space telescope, an exposure providing unprecedented detail of a tiny patch of sky about one-tenth the size of the full moon.

Examining the results, the astronomers spotted what looked like a bunch of white dwarf stars. Since that made no sense, they took a closer look and found they'd captured a globular cluster in a distant galaxy that just happened to be in line with NGC 6397.

"The cluster was so far away that it appears as a point, just like a star," said Richer in an interview.

Since the light from that cluster takes a billion years to reach Earth, we're seeing it that much earlier in stellar evolution, providing clues to the life cycle of clusters in the Milky Way galaxy.

### CLICK HERE

[www.sefora.org](http://www.sefora.org)

This website pledges to challenge political leaders who "systematically ignore scientific evidence and analysis, put ideological interests ahead of scientific truth, suppress valid scientific evidence, and harass and threaten scientists for speaking honestly about their research."

This cyberspace scold is Scientists and Engineers for America, which boasts 15 Nobel laureates on its board of advisors plus two former U.S. presidential science advisors. With issues such as the teaching of intelligent design, a federal ban on embryonic stem cell research, and visa restrictions on foreign researchers, the group is certainly operating in a target-rich environment.



### MOST POPULAR ON THESTAR.COM

Most Read

Most Emailed

- Gr. 3 kids plotted to stab teacher, police say
- Horoscopes for Wednesday, April 2
- Police praise residents for prompting drug sweep
- Chef Susur Lee takes on New York
- Canada foils UN water plan

### SPECIAL



#### The high, high north

The Star's Peter Calamai takes us aboard the Amundsen, an icebreaker on a scientific expedition in the western Arctic ocean.



#### Falling down

This reader's father took a spill crossing a street in Oakville.



#### Bread on the table

Ask Alain Coumont if his sourdough country bread is as good as Poilâne's and he gives you a Gallic shrug, which means both "of ..."

[More Specials](#)

[TheStar.com](#) [Corrections](#) | [Contact Webmaster](#) | [FAQ](#) | [RSS](#) | [Desi Life](#)

[Toronto Star](#) [About Us](#) | [Subscribe](#) | [Subscriber Self Services](#) | [Contact Us](#) | [News Releases](#) | [Star Internships](#) | [Careers at the Star](#)

[Advertise With Us](#) [Media Kit](#) | [Online Advertising](#) | [Print Advertising](#) | [Special Sections](#)

[Initiatives](#) [Santa Claus Fund](#) | [Fresh Air Fund](#) | [Classroom Connection](#)

[Torstar Sites](#) [toronto.com](#) | [ourfaves.com](#) | [Pages of the Past](#) | [Star Store & Photo Sales](#) | [New In Homes](#) | [More...](#)



[TORONTO STAR](#) [thestar.com](#) © Copyright Toronto Star 1996-2008 [Privacy Code](#) | [Site Map](#)