

**WHAT MAKES NEWS...
“NEWSWORTHY”?**

HOW DO WE DECIDE?

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THE BASICS

- Is it new?
- Is it a first of its kind discovery?
- Is it going to change the world as we know it?

IS THE SOURCE CREDIBLE?

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- Is the research coming from a known institution?

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- Is the research coming from a known institution?
- Is it published in a peer reviewed journal?
- Do the claims seem credible based on the research done?

WHAT IS THE IMPACT?

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Scientists Report First Cure Of HIV In A Child, Say It's A Game-Changer

by RICHARD KNOX

March 03, 2013 4:41 PM



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WHAT IS THE IMPACT?

Viewpoint: Statistical flickers in a Bose-Einstein Condensate of Photons

Cristiano Ciuti, *Laboratoire Matériaux et Phénomènes Quantiques, Université Paris Diderot et CNRS, Paris, France*

Published January 21, 2014 | *Physics* 7, 7 (2014) | DOI: 10.1103/Physics.7.7

Experiments with photons show that the number of particles in a Bose-Einstein condensate can have strong fluctuations.

The most familiar type of Bose-Einstein condensate (BEC) is one made of identical atoms, which, when cooled to extremely low temperatures, collectively fall into the same single-particle quantum state and form a giant matter wave. But BECs can form from other types of bosons, including polaritons and photons, and unlike atoms in an isolated trap, these particles can be easily created or destroyed within the medium in which they are produced. Researchers have now revealed unusual statistical effects in a BEC that can exchange particles and energy with such a medium. Julian Schmitt and colleagues at the University of Bonn, Germany, produced a BEC of photons within a bath of photoexcitable dye molecules that acted as a “reservoir” of photons and a heat bath, showing that particle fluctuations in the condensate could be a substantial fraction of the total number of particles [1]. Their experiment, reported in *Physical Review Letters*, is a rare example of a quantum gas in the so-called grand-canonical ensemble of statistical physics. Their work also shows that it is possible to make a BEC in which particle number isn't conserved, thereby addressing a long-standing question in statistical physics.

Like other systems containing large numbers of particles, BECs are described statistically. Different statistical ensembles, that is, large numbers of particles prepared under specific thermodynamic conditions, can have similar physical properties. But generations of physicists have argued that this should not be the case for particle fluctuations in a BEC [2]. Specifically, when a BEC can exchange both heat and particles with a thermal reservoir—

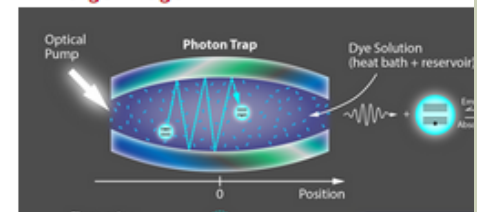
Observation of Grand-Canonical Number Statistics in a Photon Bose-Einstein Condensate

Julian Schmitt, Tobias Damm, David Dun
Frank Vewinger, Jan Klaers, and Martin V

Phys. Rev. Lett. 112, 030401 (2014)

Published January 21, 2014 | [PDF \(free\)](#)

[+Enlarge image](#)



WHAT IS THE IMPACT?

- What does this research mean for the average person?

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- Does this answer a common question or challenge what we thought we knew?

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- What does this research mean for the average person?
- Does this answer a common question or challenge what we thought we knew?
- How far along is the research?

COOLNESS FACTOR

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Who needs snakes? LAX has 'legless lizards' (Photos)

Sanden Totten | September 25th, 2013, 5:47am

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 Thumbnails



1 of 5



COOLNESS FACTOR

- Is this exceptionally cool or weird?

COOLNESS FACTOR

- Is this exceptionally cool or weird?
- Can you tie it to pop culture?

COOLNESS FACTOR

Meet SpongeBob Mushroom, a Funky New Fungus

LiveScience Staff | June 16, 2011 11:13am ET

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The new mushroom, called *Spongiforma squarepantsii*, was discovered in the forests of Borneo.

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COOLNESS FACTOR

- Is this exceptionally cool or weird?
- Can you tie it to pop culture?
- Does it bend the mind or pose a deep question about the world?

TIPS FOR HOOKING JOURNALISTS

HOW TO HOOK US

- **Speak plainly! No inside baseball allowed!**

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- **Make it matter: explain what it means for humans, put it in a global context, show us the eventual ramifications**

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- **Speak plainly! No inside baseball allowed!**
- **Make it matter: explain what it means for humans, put it in a global context, show us the eventual ramifications**
- **Explain how this challenges what we know**
- **Show emotion: Make it fun, sound worried, be baffled...**

LET'S KEEP TALKING

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