

Subject: Re: Macavity

Date: Fri, 30 Nov 2018 03:58:40 +0000

Message-ID: <CAM7Ekxk6O1J53d2=wBChJbL7gq=z-zZQ=gN5Ukx7_da5HY9eSg@mail.gmail.com>

From: Dimi Chakalov <dchakalov@gmail.com>

To: Adam Helfer <helfera@missouri.edu>

Cc: Shuguang Wang <wangs@missouri.edu>

On Tue, 26 Mar 2002 10:18:45 -0600, Adam Helfer wrote:

>

> Macavity was created by T. S. Eliot, in the poem "Macavity, the

> Mystery Cat," in the collection "Old Possum's Book of Practical

> Cats."

The story about Macavity, which disappears at the very instant we look at it*, poses an exceptional mathematical challenge: how do we define "zero"? Your students will perhaps read in math textbooks that "zero" refers to an empty set, like the cardinality of the set of bananas you've stuck in your ears right now, as you are reading these lines. But this is relational definition, as it refers to something that is not present, relative to the instant of observation. By contrast, Macavity should be something like "absolute zero", because it is never present, ever. For example, the Schrödinger cat is such non-relational, absolute zero: http://www.god-does-not-play-dice.net/Erwin_Easter.jpg

Any time we "look" at it, we see only its physicalizable "jackets" as events in 4D spacetime, but never the generic quantum cat. That is, the probability for observing the Schrödinger cat or Macavity is *exactly* zero. But since we cannot answer the question "zero *what*?", the two cats refer to some "absolute", i.e., non-relational zero.

Why is this important? Quantum gravity: see p. 6 in

http://www.god-does-not-play-dice.net/q_coin.pdf

I hope one day you will write a paper on the 'common denominator' of quantum theory and gravitation: the two cats as "absolute zero". Hope Dr. Wang will be interested as well. Details at my website below.

Dimi

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D. Chakalov

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On Tue, 20 Aug 2002 17:02:51 +0300, Dimi Chakalov <dchakalov@surfeu.at> wrote:

[snip]

*Adam D. Helfer, Are Negative Energy Densities Detectable? [arXiv:gr-qc/9709047v1](https://arxiv.org/abs/gr-qc/9709047v1), p. 1:
“T. S. Eliot described a ‘mystery cat,’ Macavity, responsible for all sorts of mischief. But when the crime’s discovered, Macavity’s not there!”