

Effects of Collective Attention Patterns Where There Should Be None *A Glimpse of Global Consciousness?*

Invited Presentation for the Internationaal Jubileumcongres
75 Jaar Wetenschappelijke Parapsychologie, Utrecht, 3 mei 2003

Yellow dots are nodes in the network. More than 50 hosts, Alaska to Fiji



Roger Nelson, <http://noosphere.princeton.edu>

Historical Seeds of a Global Network

- 1980 Conceptual design: Continuous REG monitor
- Then a decade of Intentional Mind/Machine experiments
- 1993 Adapt laboratory REG experiment as ContREG
- 1994 Laptop version, “Field” studies at ICRL, Esalen
 - FieldREG paradigm, Nelson & PEAR; Radin; Bierman
- 1995 Assassination of Itzakh Rabin – Global Effect
- 1996 O. J. Simpson verdict, Radin – 5 REGs
- 1997 January Gaiamind Global Meditation – 14 REGs
- 1997 September Princess Diana funeral ceremonies
- 1997 November Freiburg Physiology and Psi conference
- 1998 Gathering friends, resources, programming
- 1998 August, Network is running, Embassy Bombings

***When you put a thing in order,
and give it a name, and you are
all in accord, it becomes.***

- - From the Navajo, *Masked Gods, Waters*, 1950

The EGG Project

(aka the Global Consciousness Project)

International collaboration

75 Scientists, Artists, Friends, ...

Network of host sites world wide

The tools: REG technology, Field application

Make an EEG for the earth, an ElectroGaiaGram

Collect continuous parallel sequences of data

Identify engaging moments of global events

The question: Can we capture in correlations

A glimmering of Global Consciousness?

The technology is only now available Electronics, Computers, Networking

High quality, micro- REG/RNG devices

Synchronized computers and software

Internet transfer of data to central server

Automatic archiving, public access

Formal analyses and explorations

Background, methods, poetic history

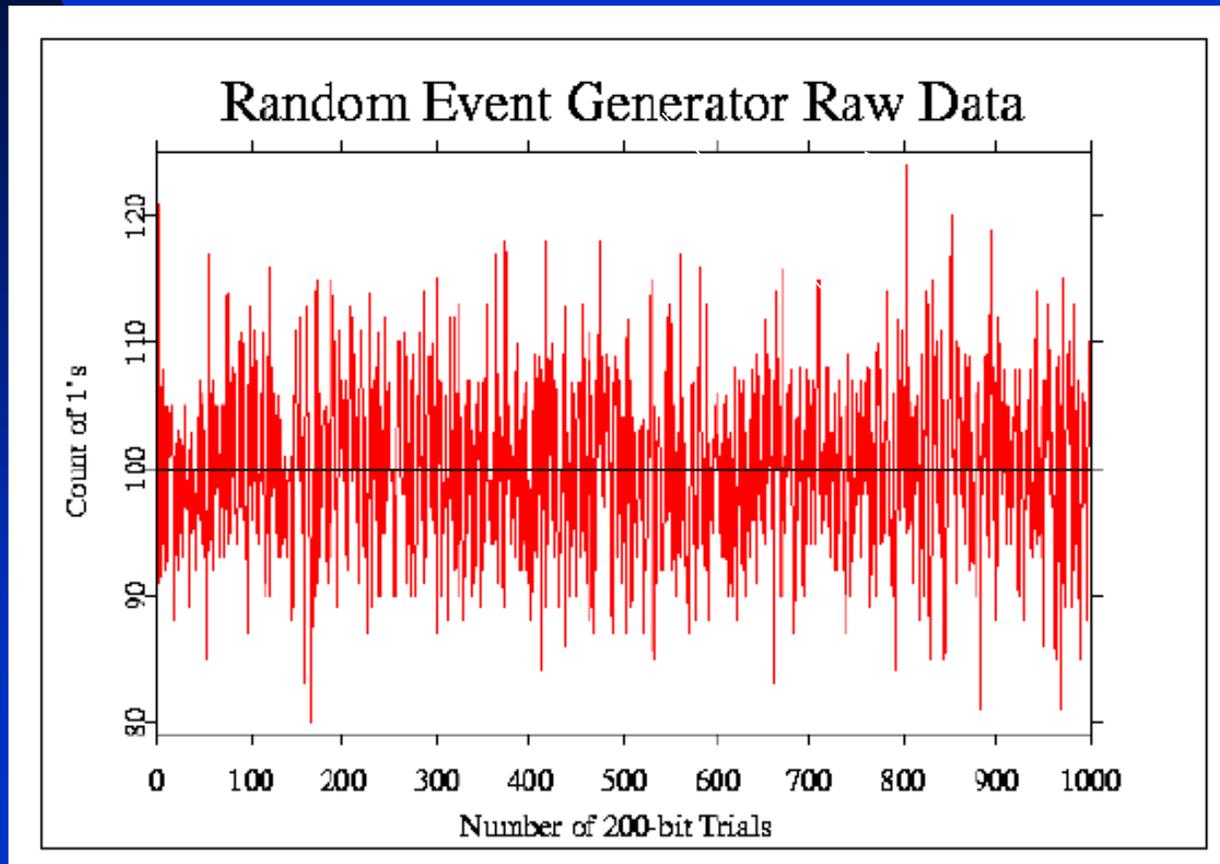
A Random Event Generator (REG or RNG)

Mindsong REG

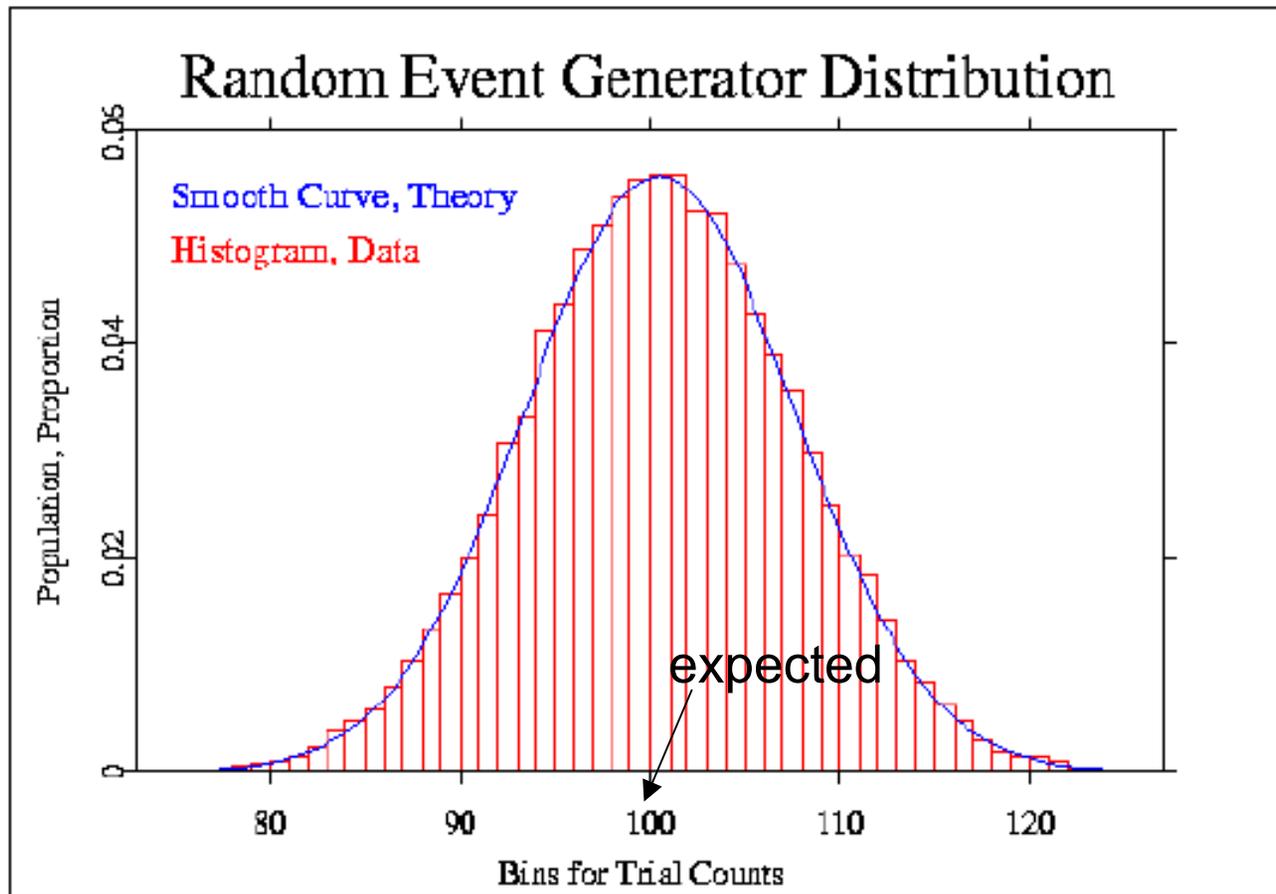


Orion RNG

**How it works: Here's 1000 Trials from
A physical random source
Each trial is the sum of 200 bits
Like tossing 200 coins and counting heads**

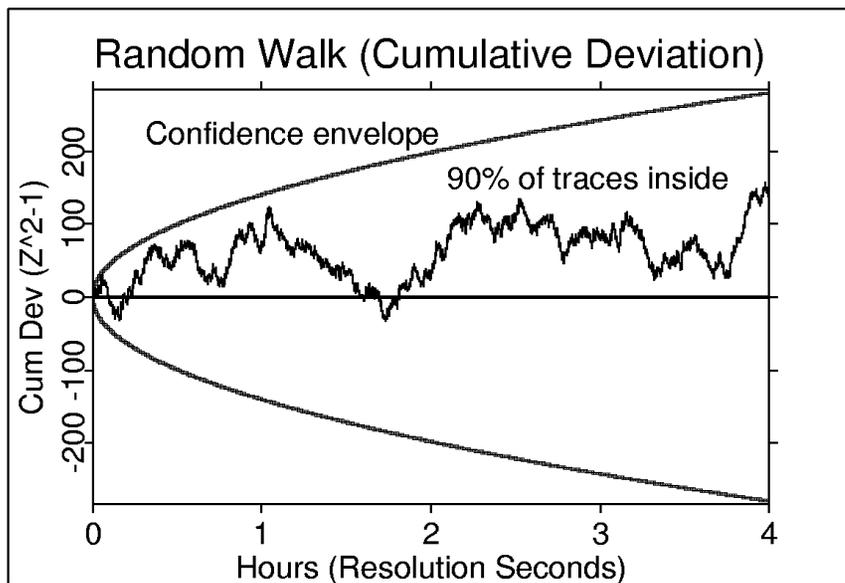


The binomial distribution of 1000 200-bit trials, compared with Theoretical normal distribution

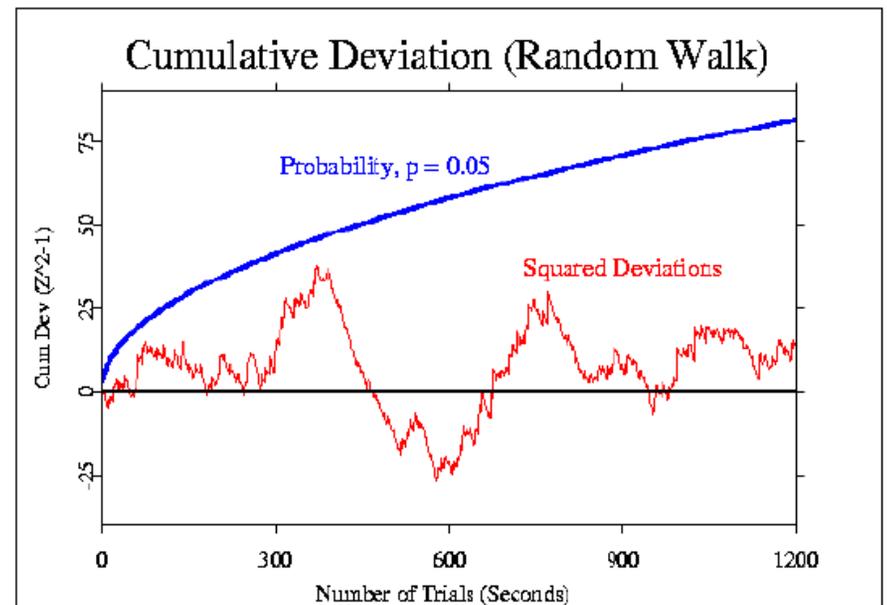


What happens to the data over time? Plot cumulative deviation from expectation

A General Case

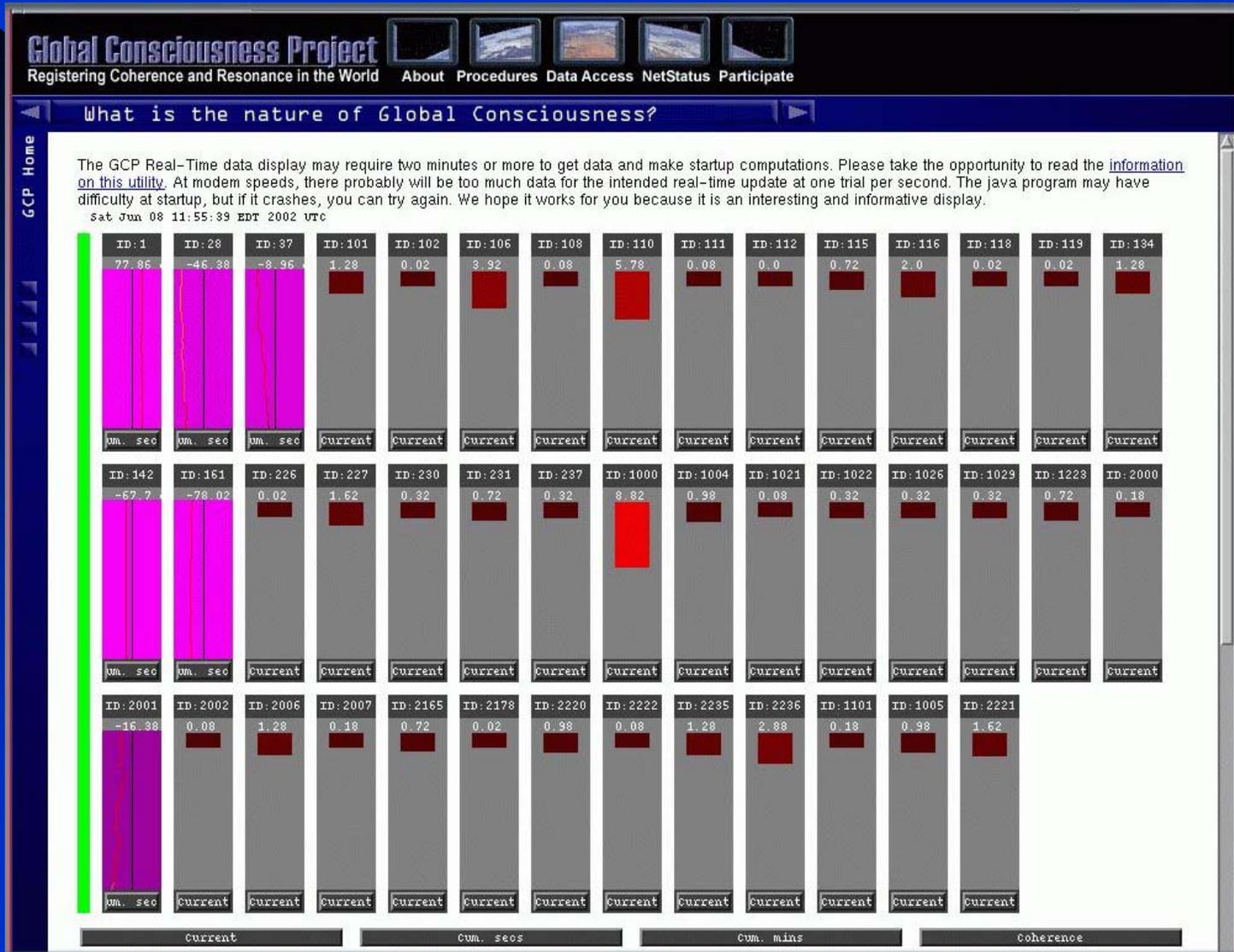


GCP Standard Analysis

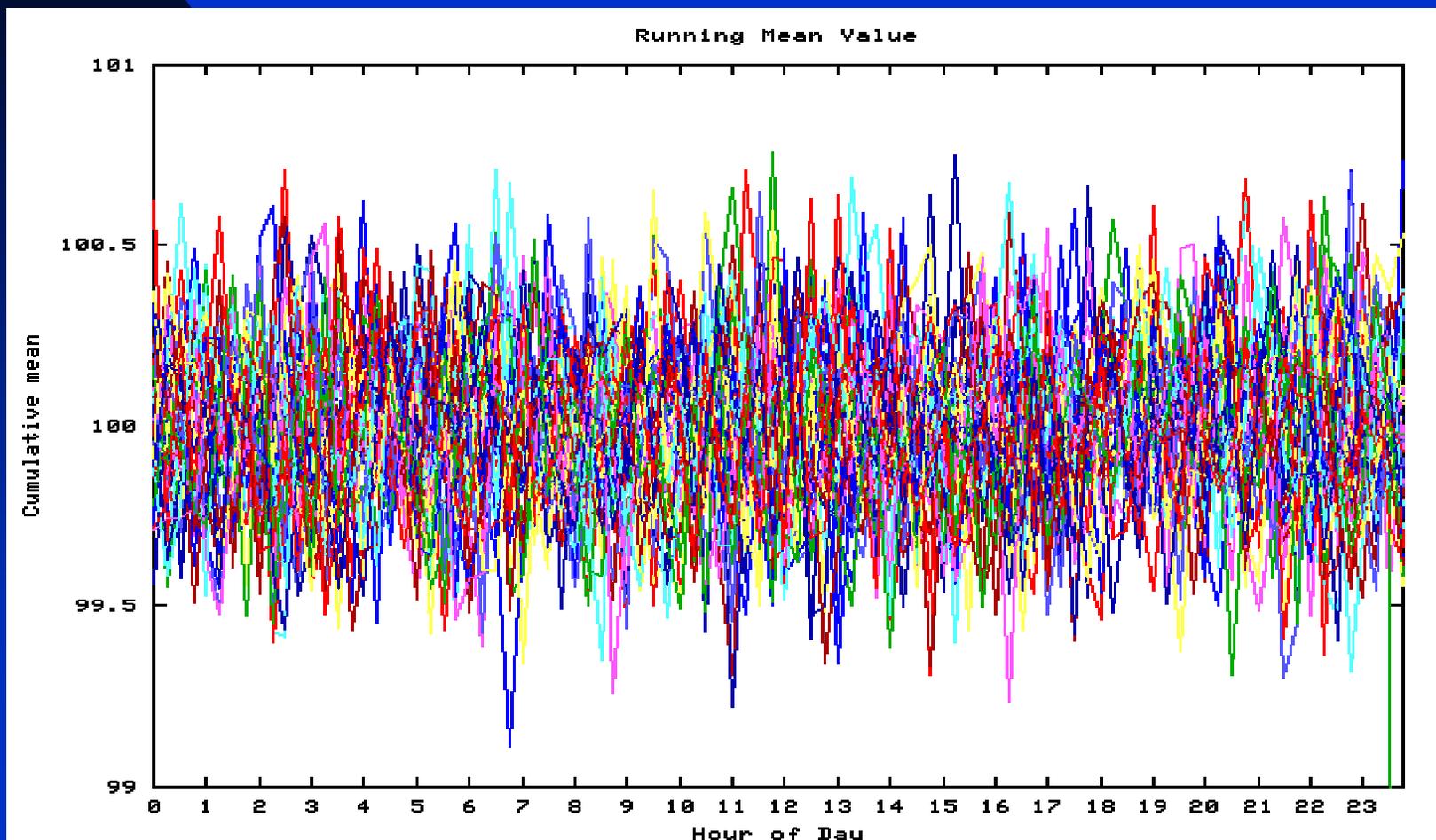


Should be a Random Walk (a “drunkard’s walk”)

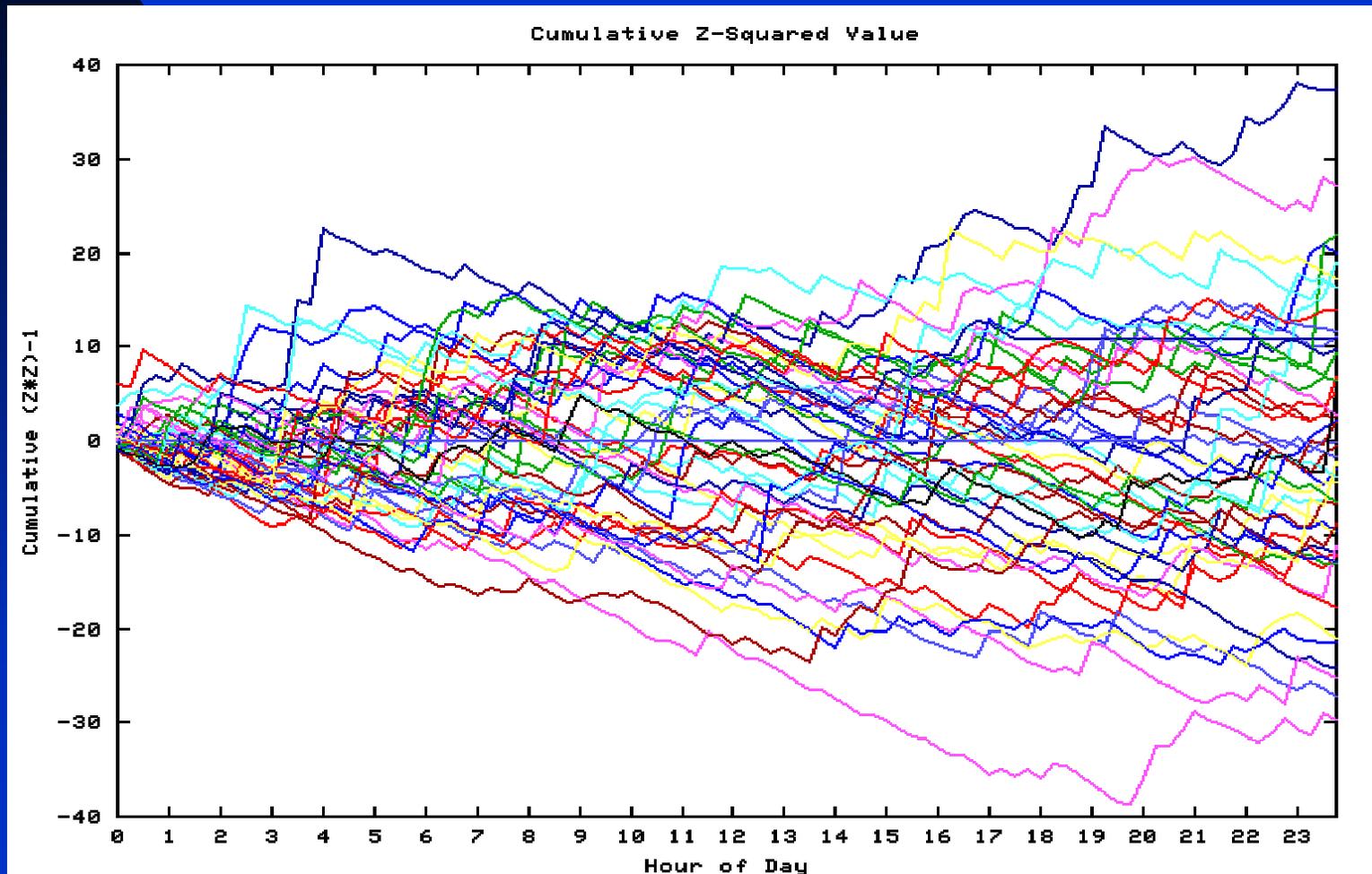
A network of eggs around the world



Here we see the raw trial data
For a whole day, from 48 eggs
This is “Noise” – Is there a Signal?



We can see better what's happening by Plotting the cumulative deviations Correlation Tilts ... Variance Spreads



Making a Summary Statistic

Combining Data Across the Network

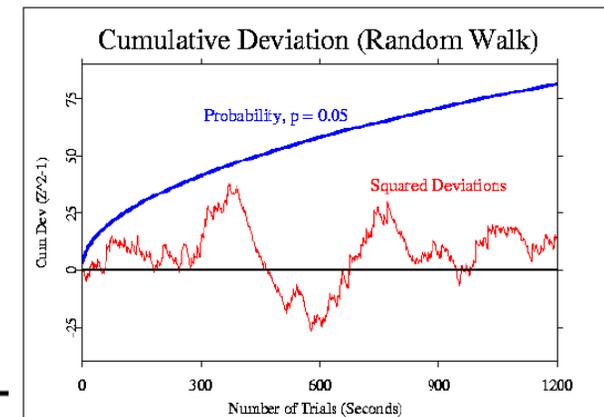
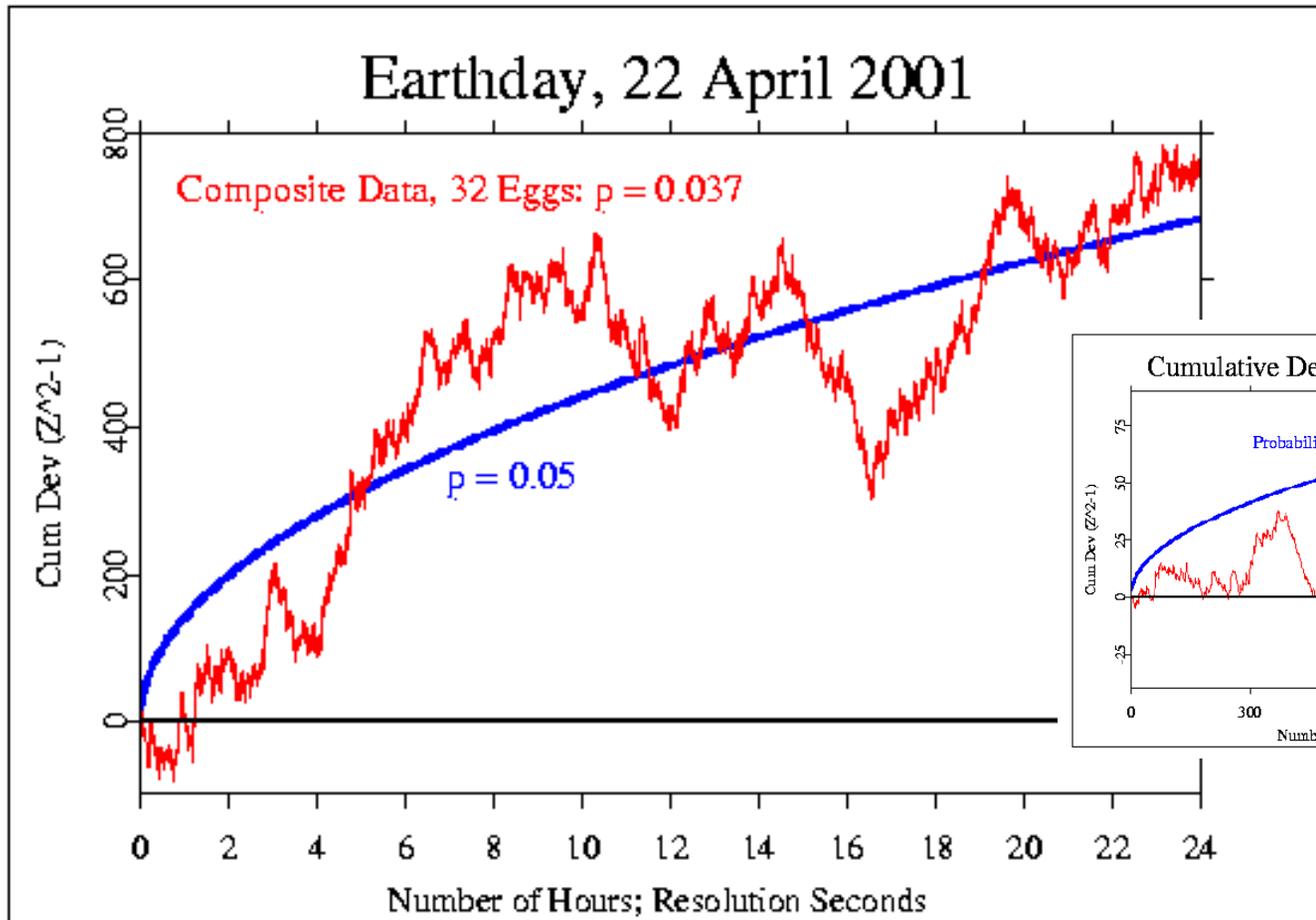
Meanshift (eggs show trend over time)

Stouffer Z-Score = Sum of Z's divided by root N of eggs
Square the Z and compose as χ^2 over the period of interest

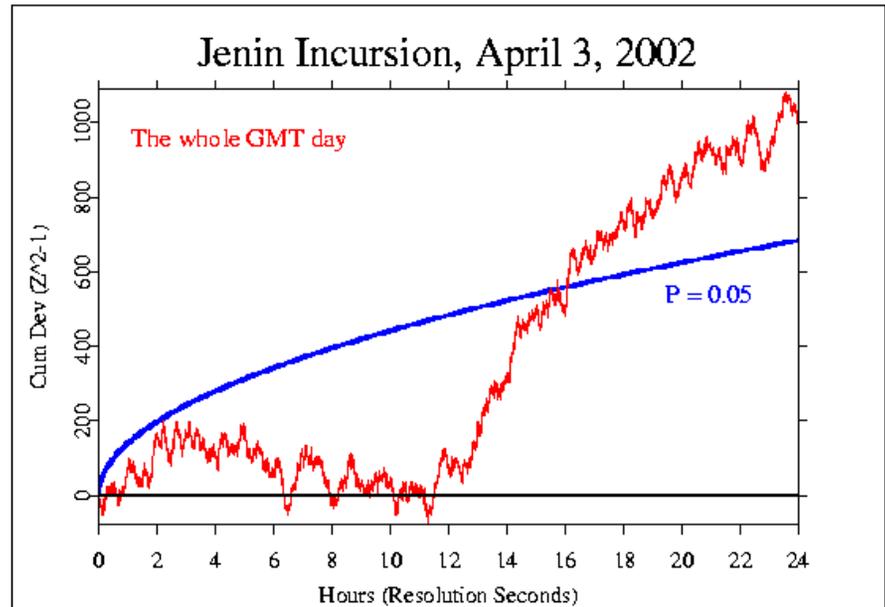
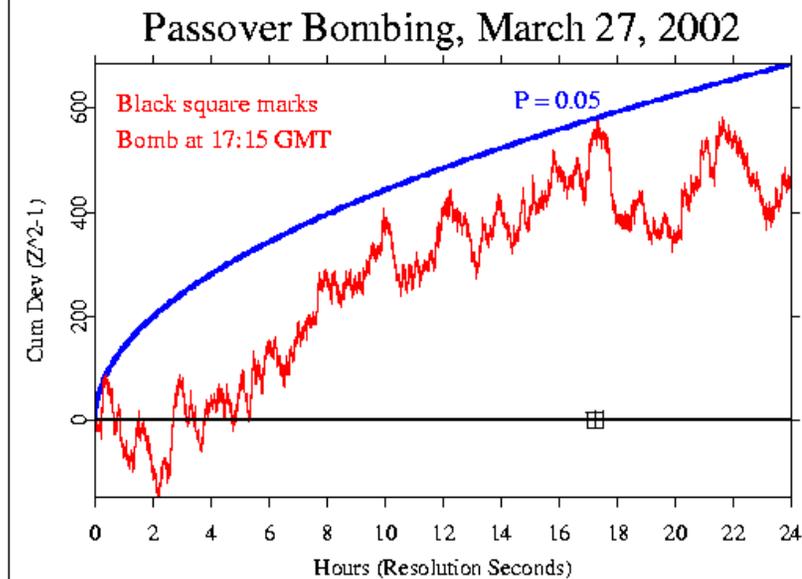
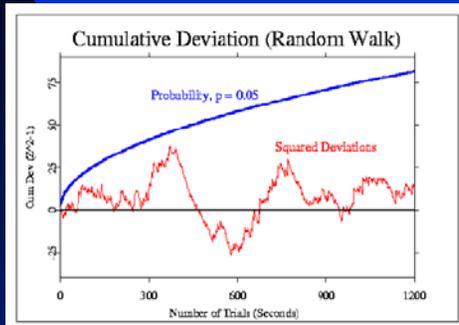
Variance (eggs spread or compress)

Inter-Egg Variance \approx Sum of Z^2 across Eggs
Compose with df over the period of interest

When we make a composite across eggs, the cumulative deviation may show a trend



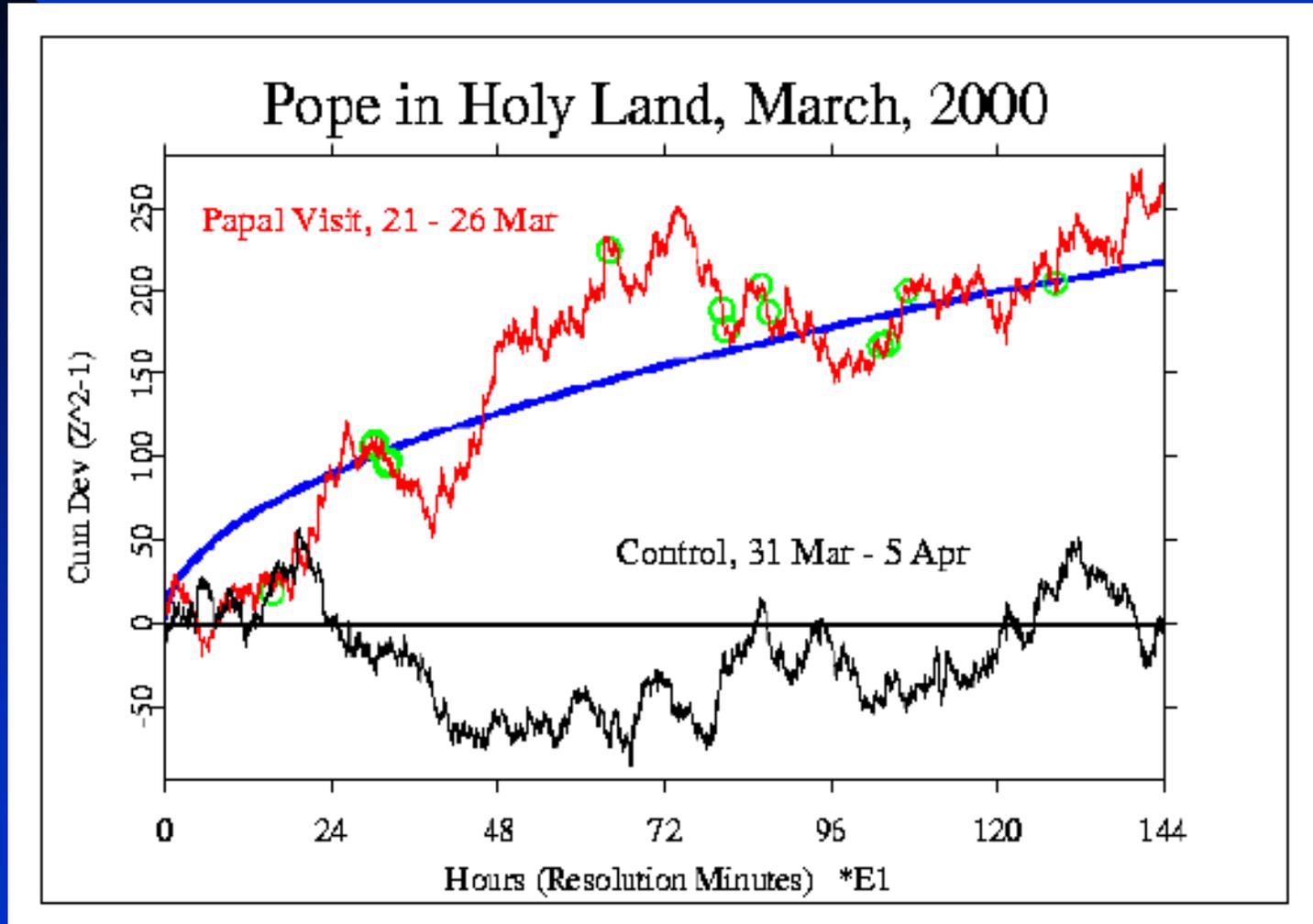
Maybe a trend in the cumulative Deviation is Meaningful?



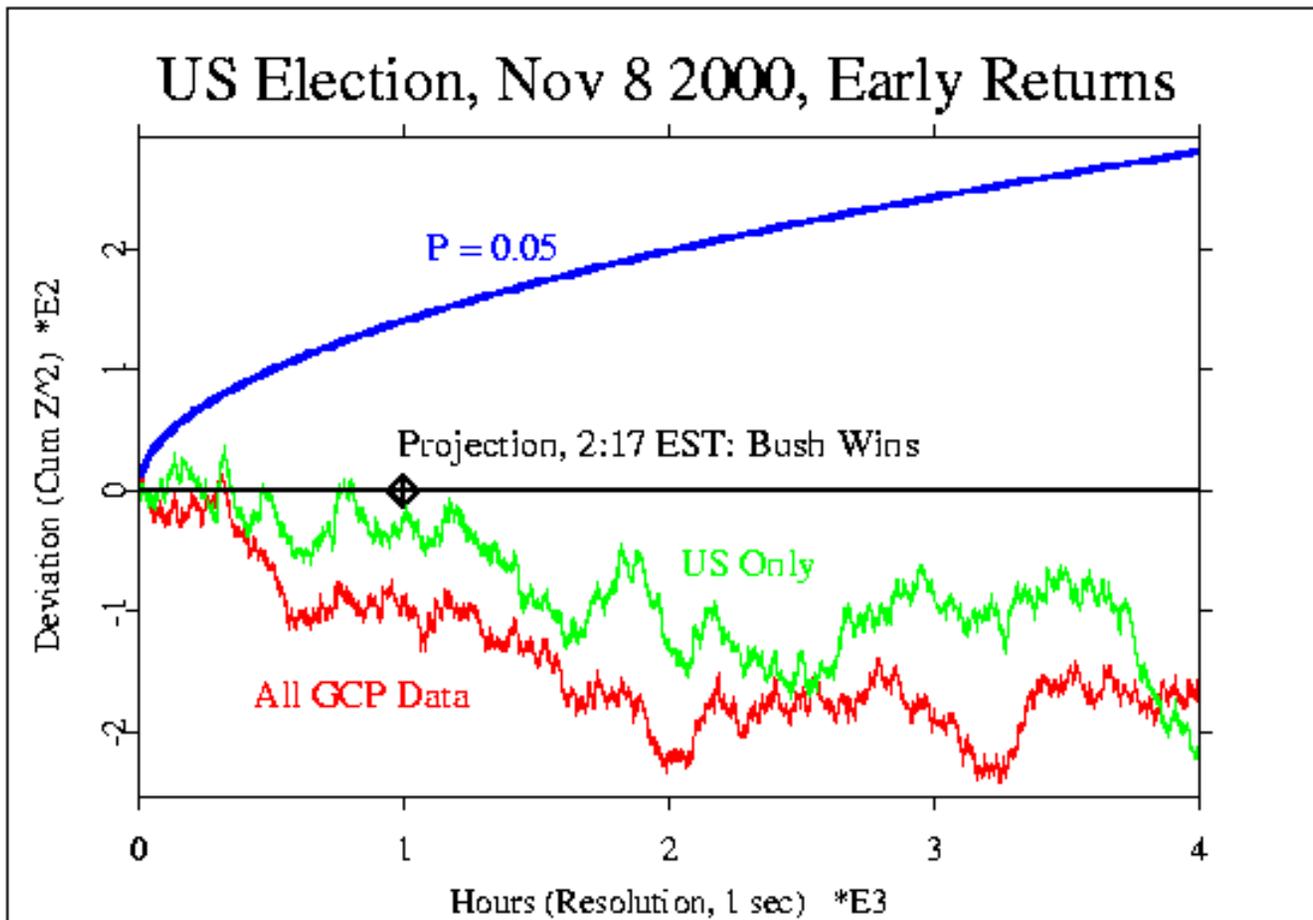
Examples of the range of Potential Global Events:

**Natural disasters
Terrible accidents
The beginning of war
The Pope's pilgrimage
Grand celebrations
Political excitement
Astrological hot spots
World-wide meditations**

The Pope's 6-day pilgrimage to the middle east An occasion of hope for resolution of differences



Political events, even big ones, are not necessarily of interest to the EGG



Tearing the Social Fabric:

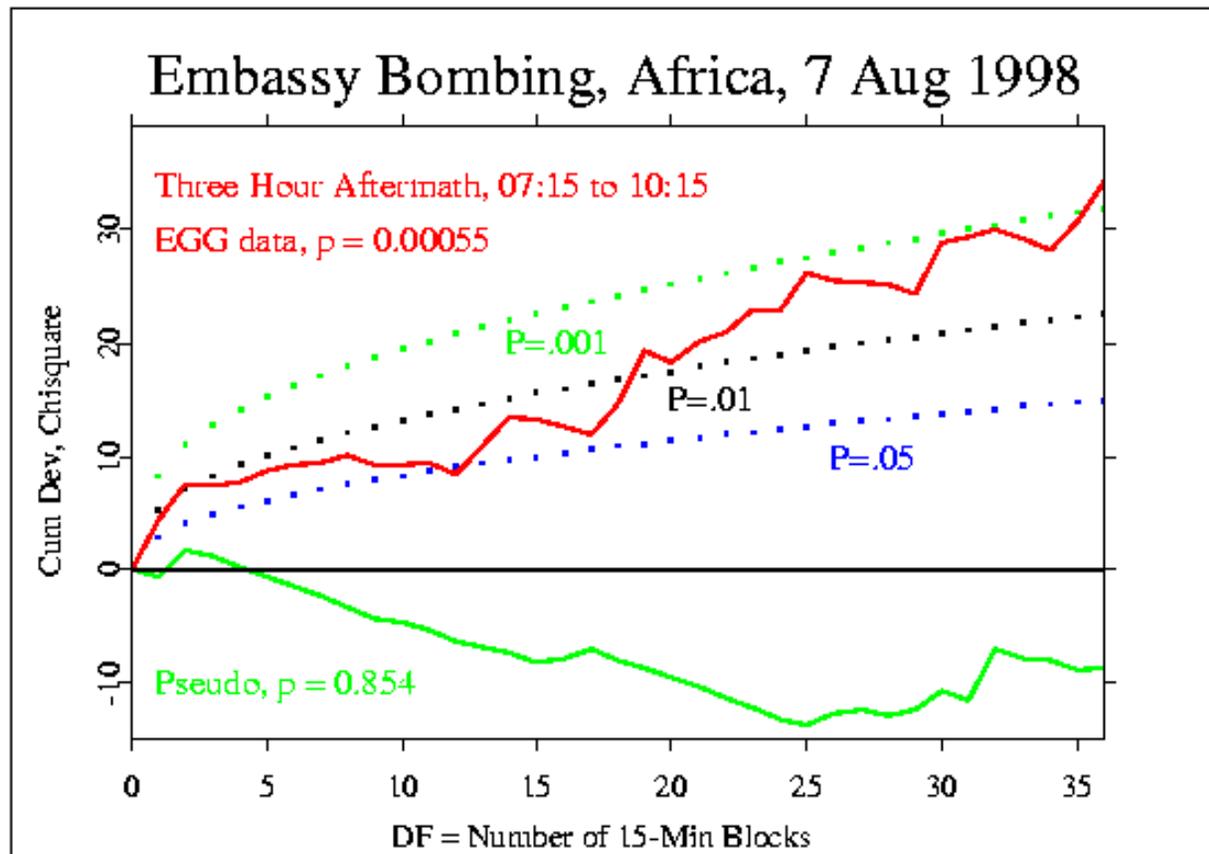
Terrorists Attack Civilians and Diplomats

Nato Bombs Kosovo to End Ethnic Cleansing

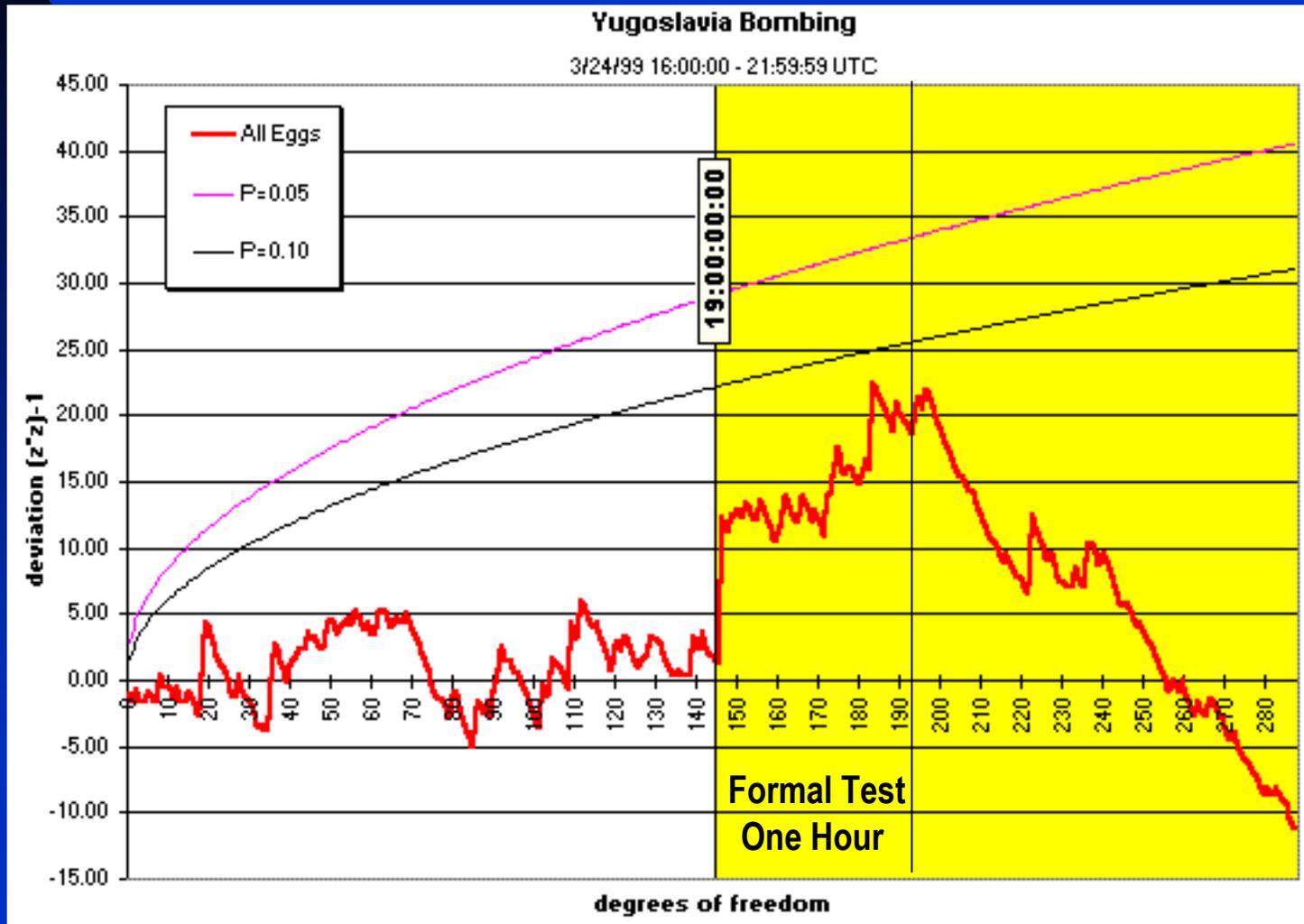
Taliban Destroy Ancient Buddhist Treasure

September 11 Enters History of the Earth

Major disasters that engage us powerfully Often correlate with big deviations



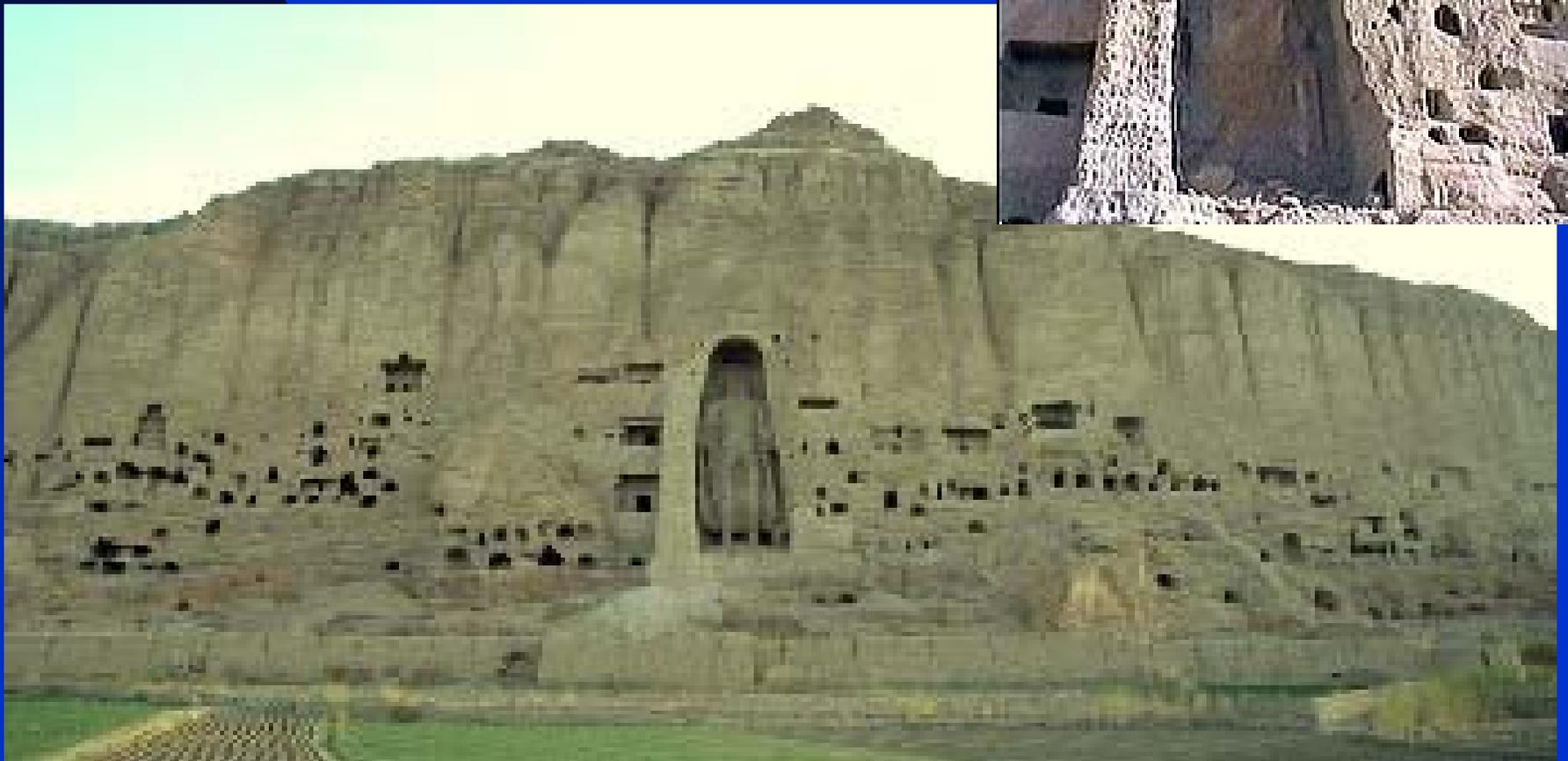
An exploration of context: Six hours of data Around the beginning of bombing in Kosovo



The Buddhas of Bamiyan

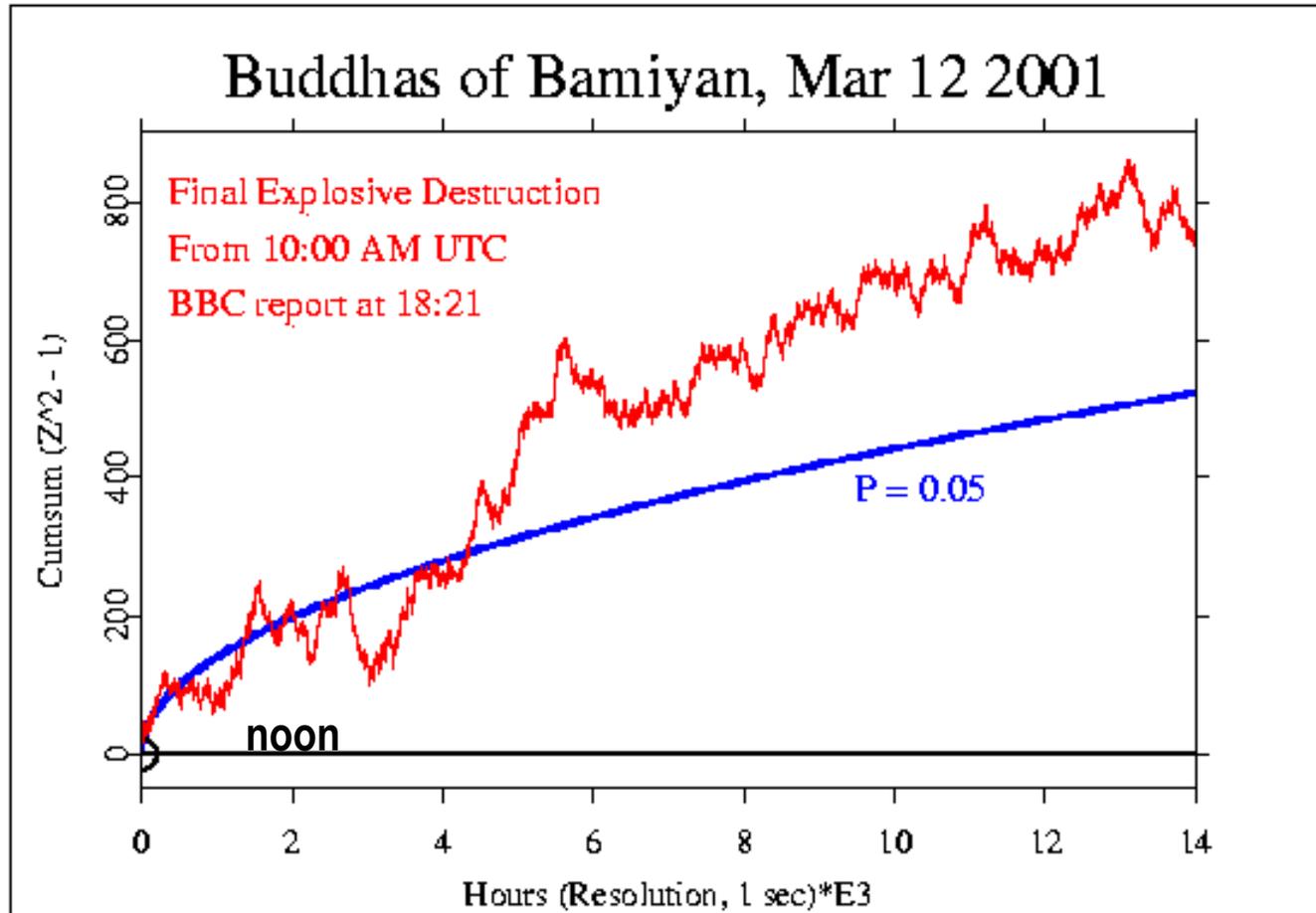
After

Before March 12 2001



The destruction of a world treasure

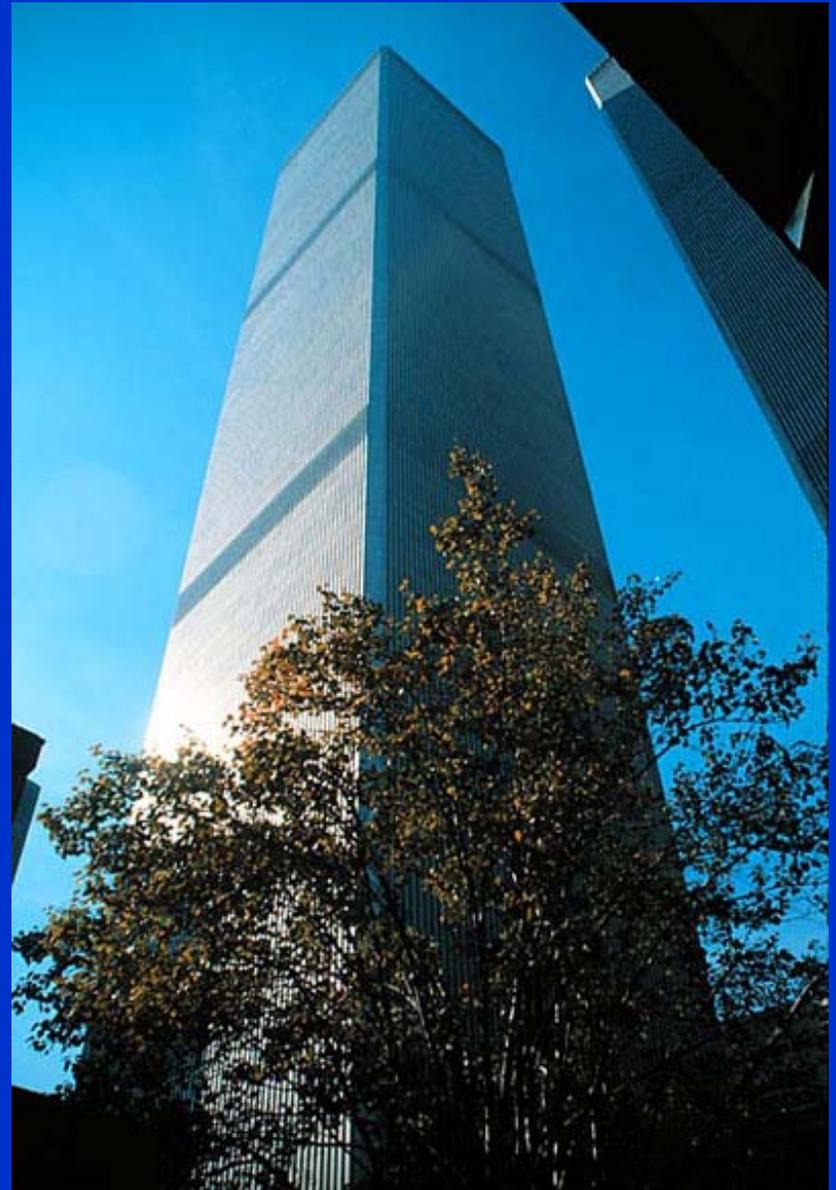
Approximate time, noon in Afghanistan



The World Trade Center Fall, 2001



Carol M. Highsmith



Al Dove

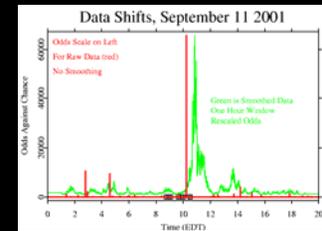
**The World
Trade Center
September 11
2001**



Creative Collective Attention Correlated Patterns in Data

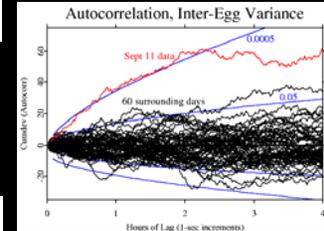
Profound Engagement Shared Focus, Compassion, Emotion

On September 11 2001, early in the morning, a network of physical random event generators (called "eggs") took on a striking trend. By 8:45 the non-random behavior was unmistakable. It peaked at about 10:30 with odds against chance of more than a thousand to one.

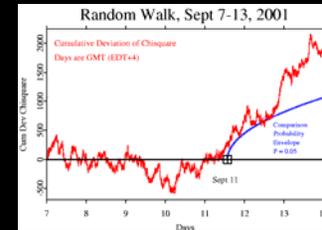


On 9/11 the data contained unique sequential structure

On 9/11 the data showed extraordinary moments



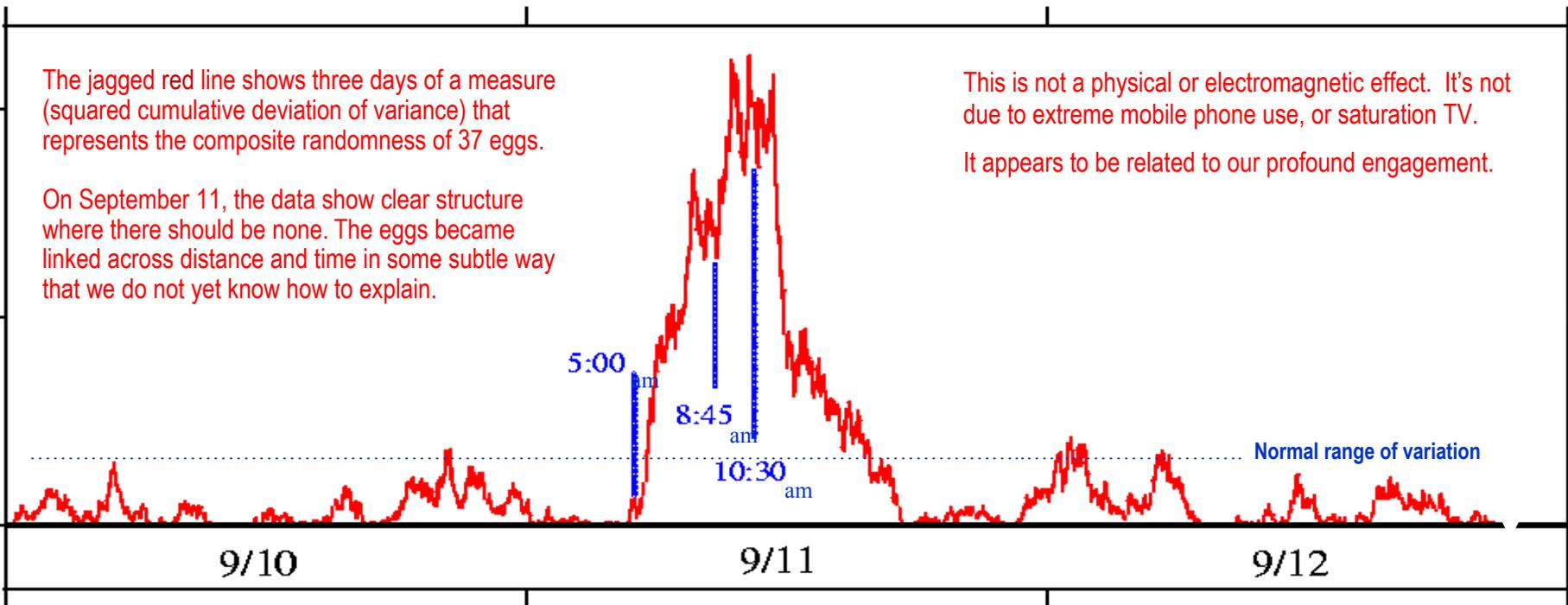
On 9/11 deviations began that persisted for 2 days



The jagged red line shows three days of a measure (squared cumulative deviation of variance) that represents the composite randomness of 37 eggs.

On September 11, the data show clear structure where there should be none. The eggs became linked across distance and time in some subtle way that we do not yet know how to explain.

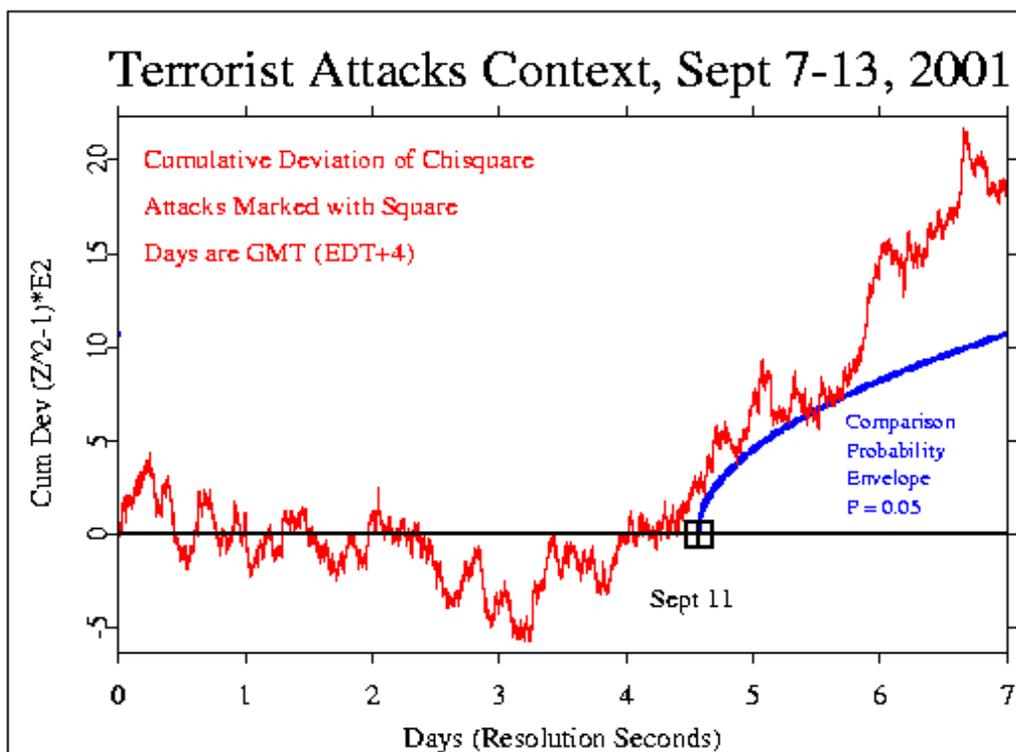
This is not a physical or electromagnetic effect. It's not due to extreme mobile phone use, or saturation TV. It appears to be related to our profound engagement.



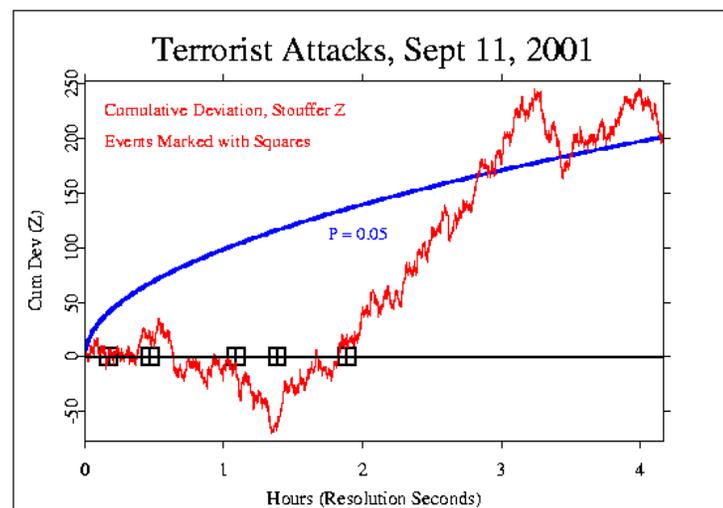
The destruction of the World Trade Towers Sept 11 2001

A 50-hour trend followed the attacks

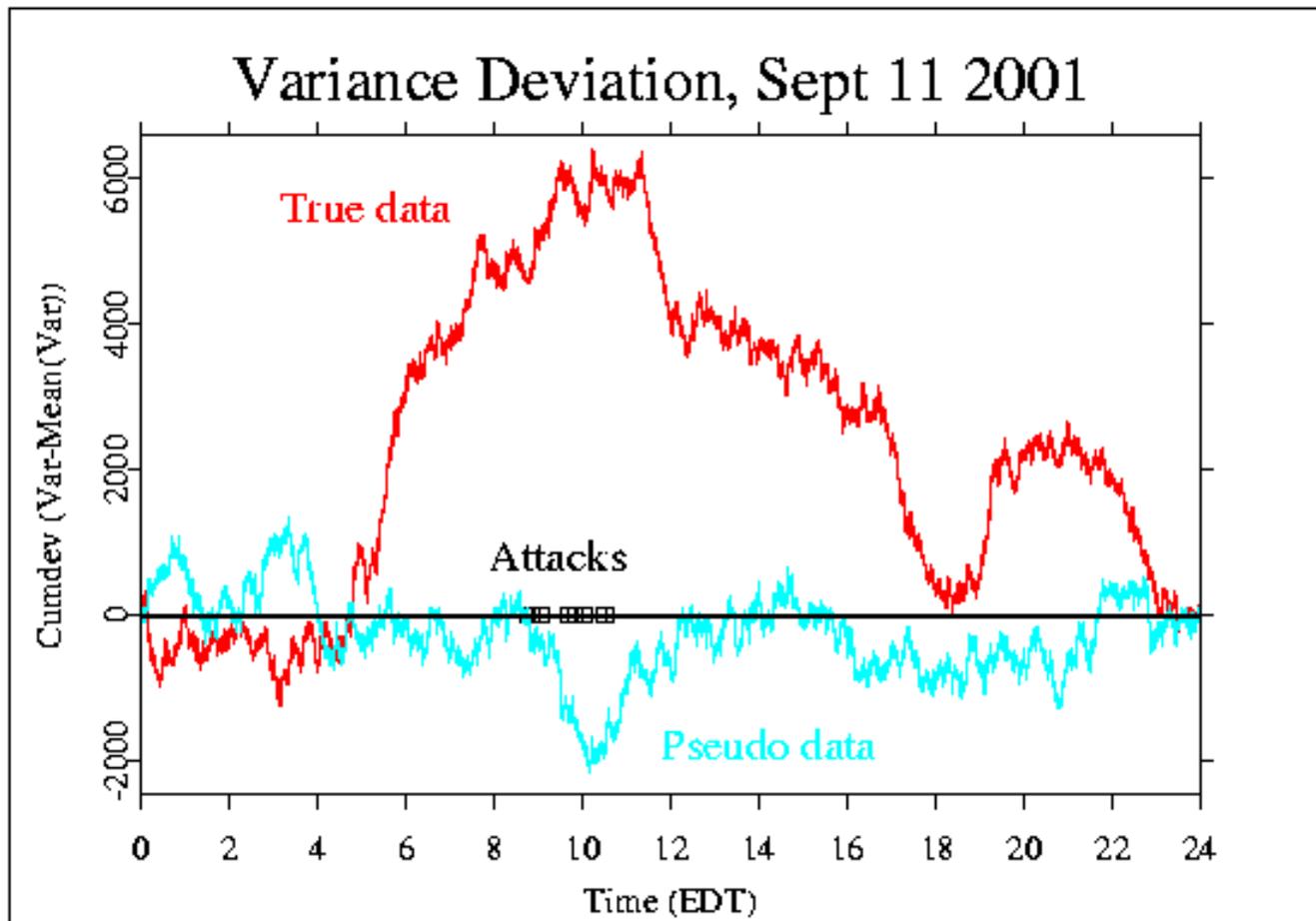
Contextual Exploration



Formal Test



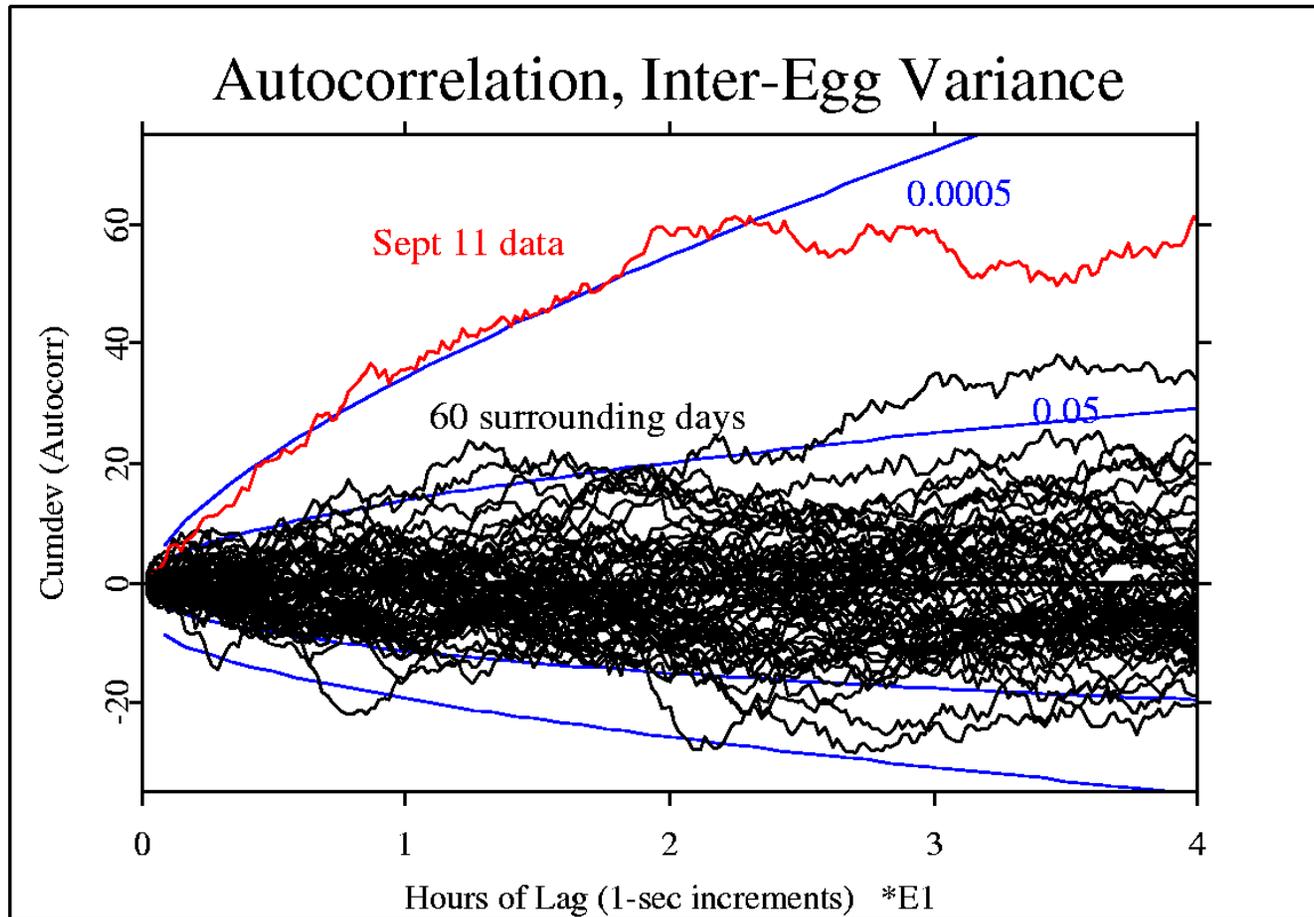
Sept 11 Radin prediction: Inter-egg Variance will fluctuate Red is real data, Green is Pseudorandom



Autocorrelation on Sept 11

Structure where there should be none

Calculations: Peter Bancel



What is there to say?



Repairing the Social Fabric:

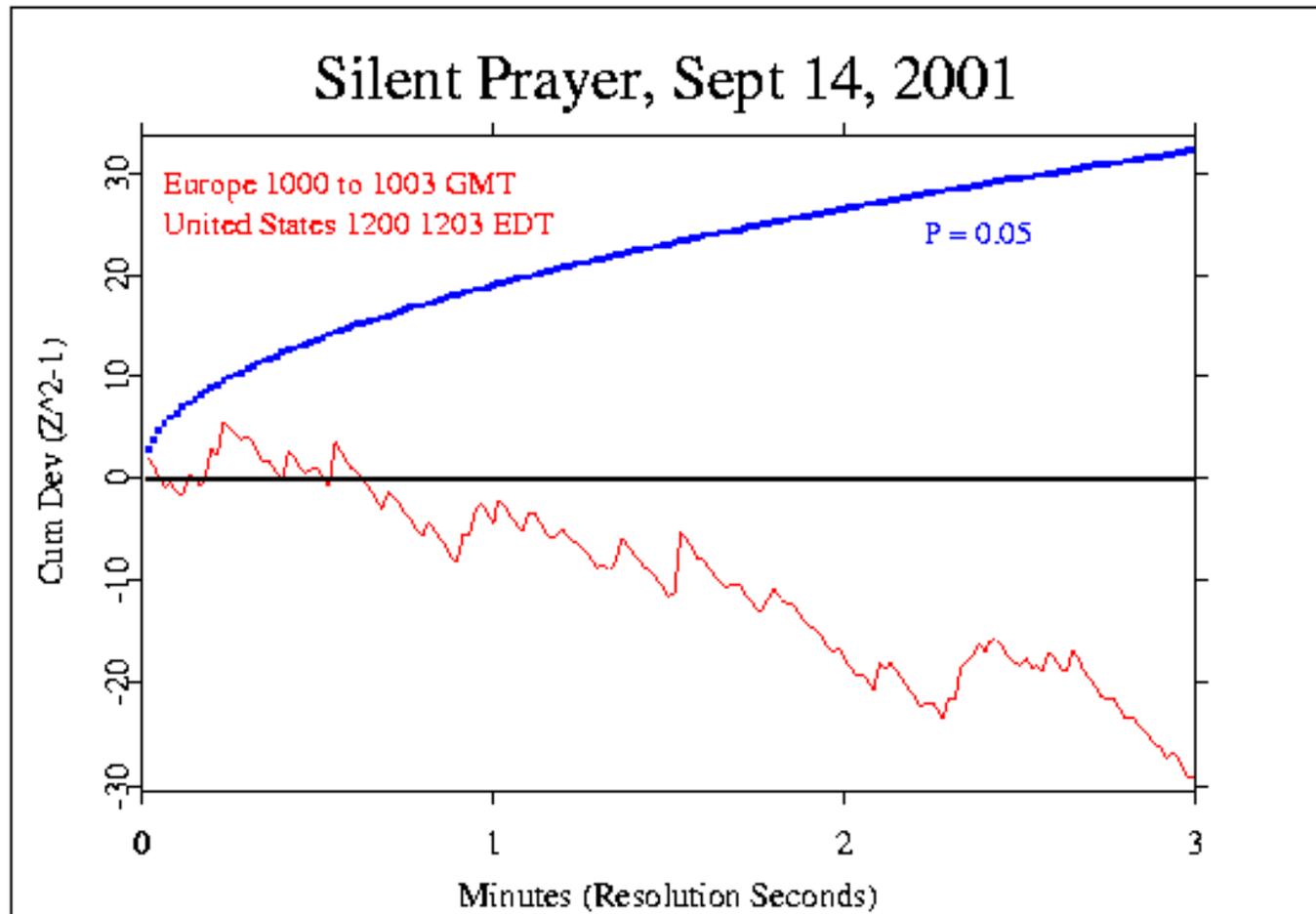
**Healing
Meditations
Prayer Vigils
Ceremonies
Holidays**

Chicago, Moment of Silence

September 14 2001

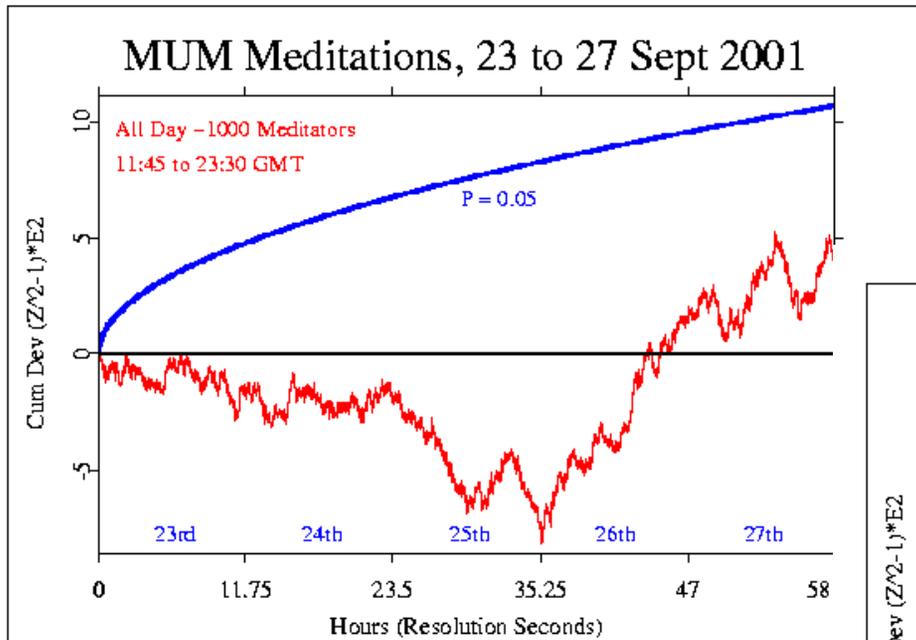


Three Minutes of Silence September 14 2001

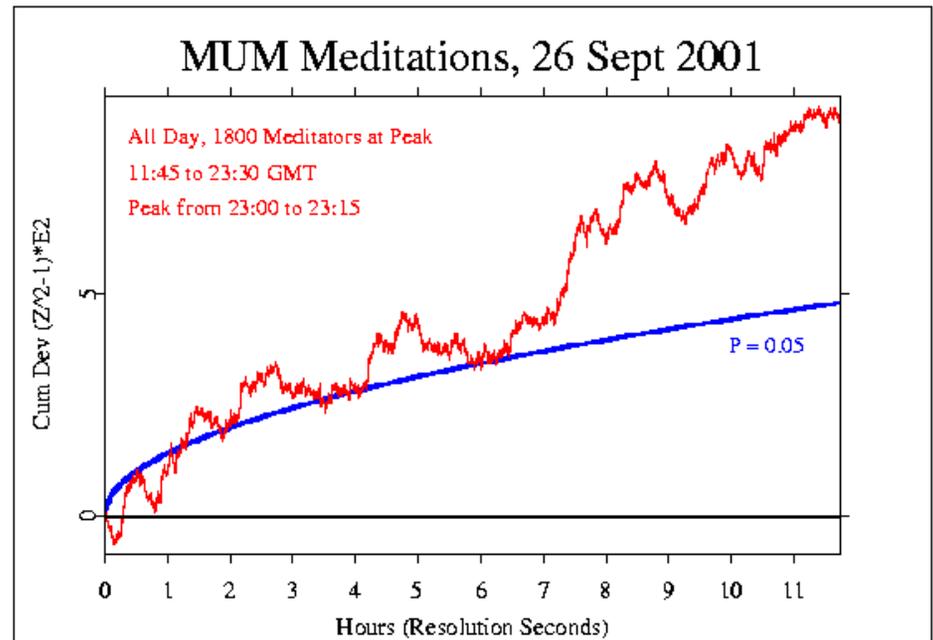


Focused Siddhi Meditations Post September 11, 2001

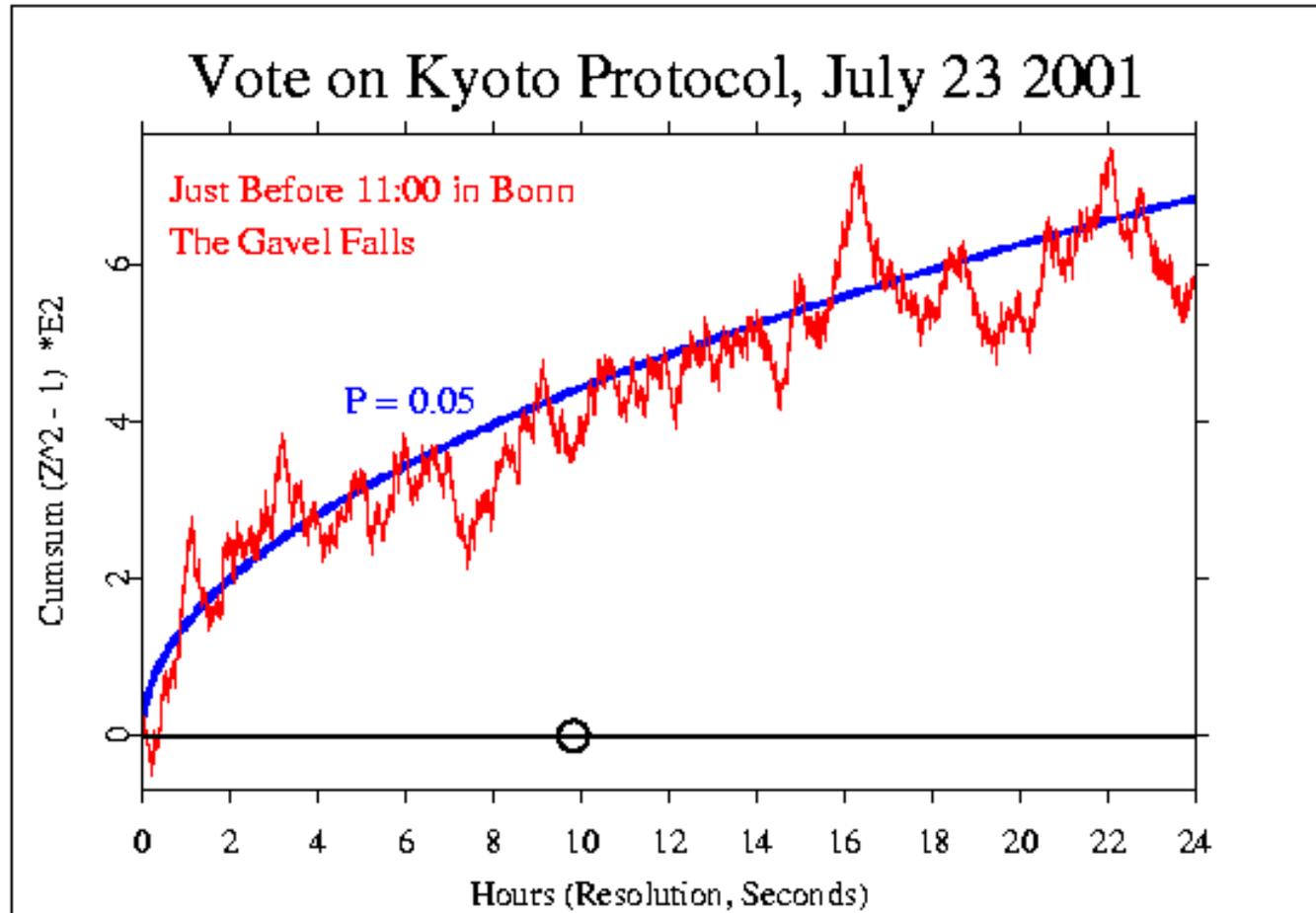
Context, Five Days



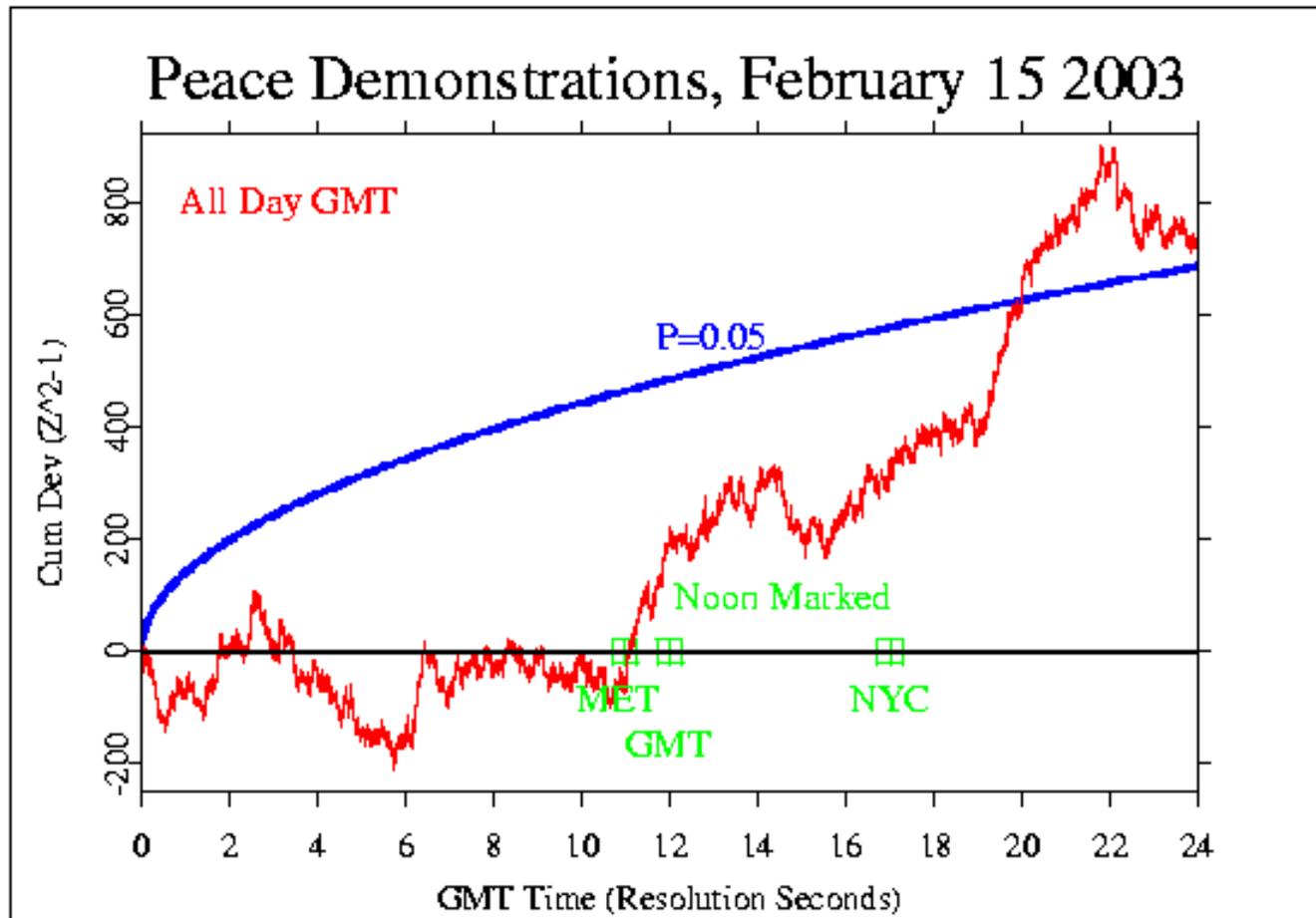
Peak Day,
Threshold Exceeded



A Substantial Agreement on Getting Our Ecological Act Together

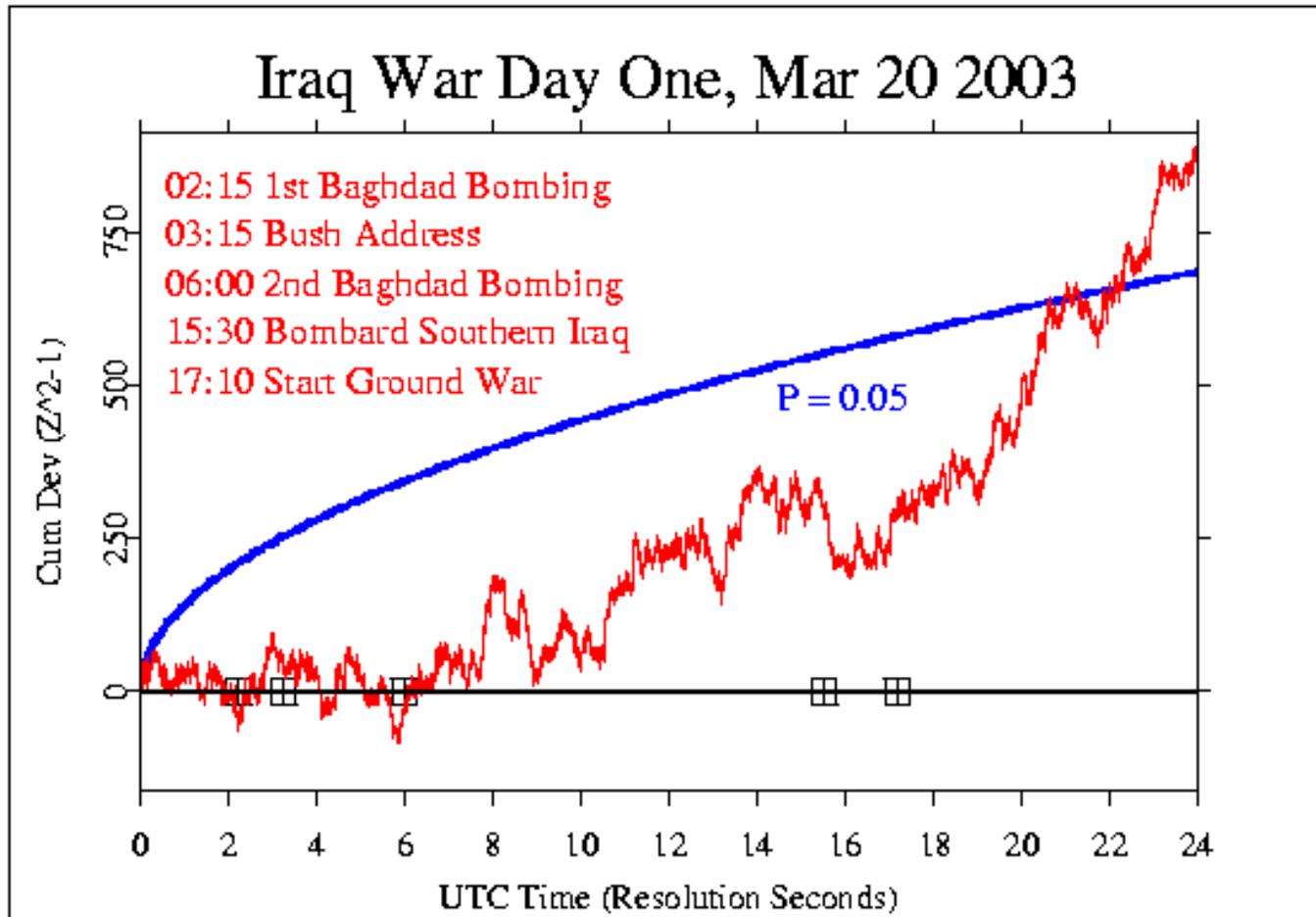


Voices For Peace -- World-Wide Conscience -- Global Consciousness



And Yet -- A Preemptive Attack

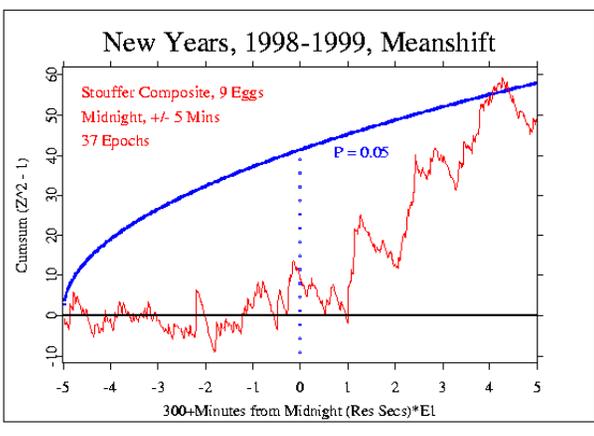
The March to War is No Random Walk



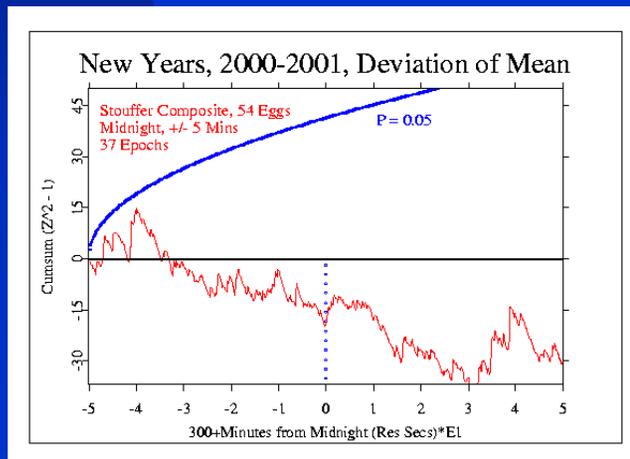
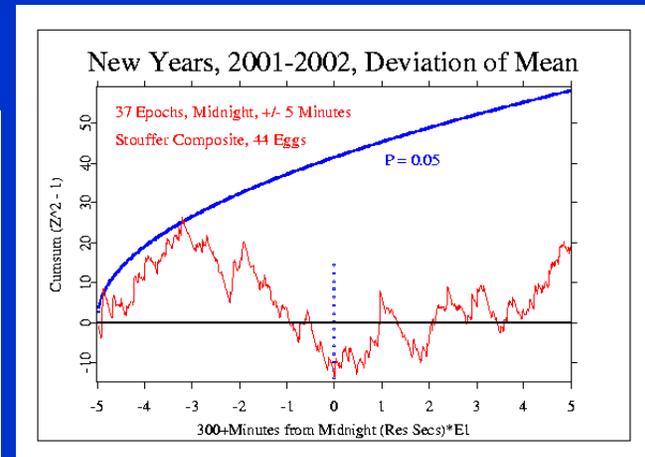
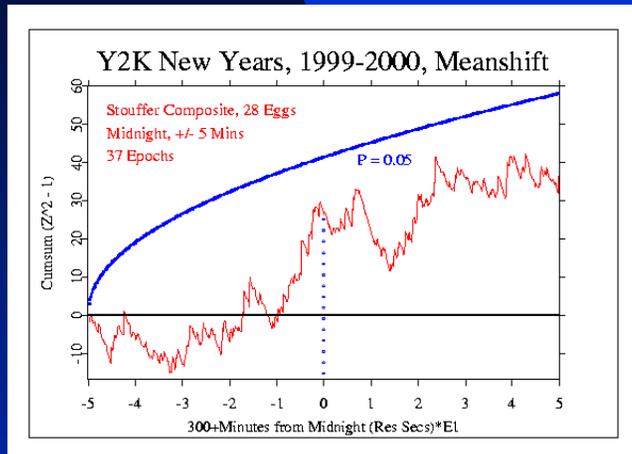
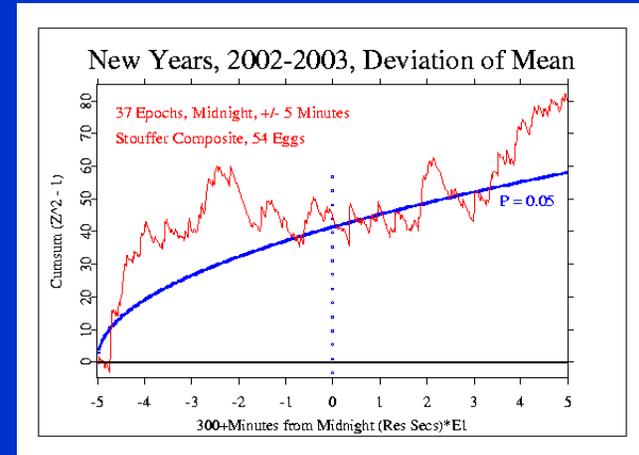
The Lighter Side

**Celebrations:
What better example than
New Years?**

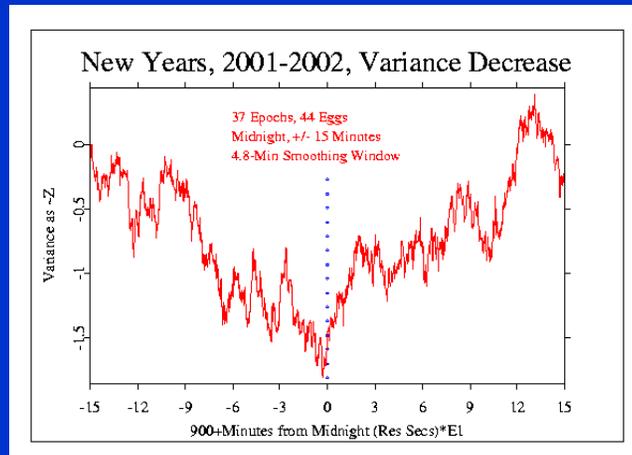
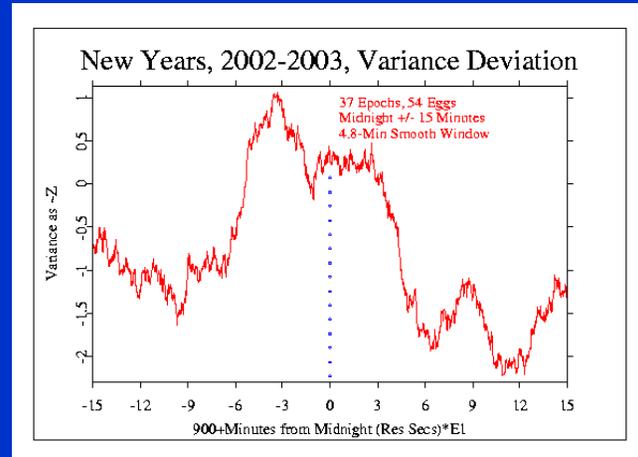
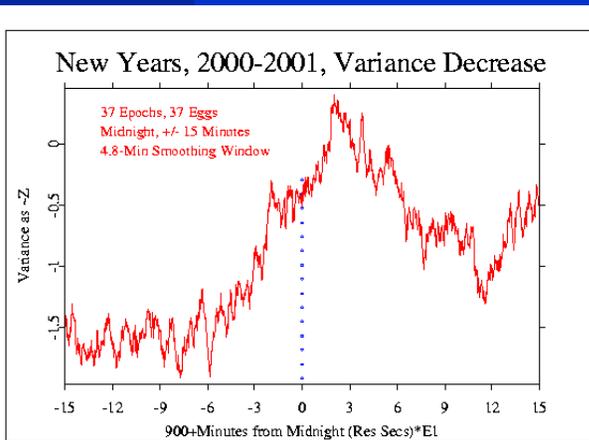
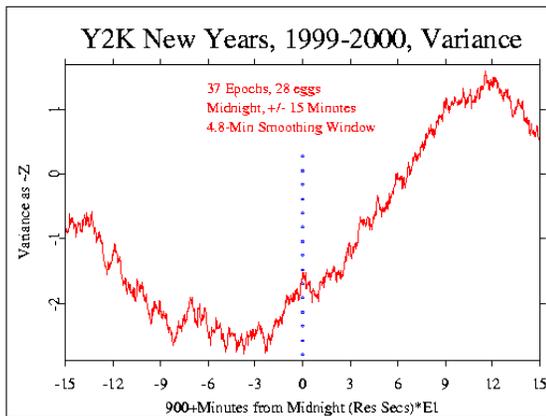
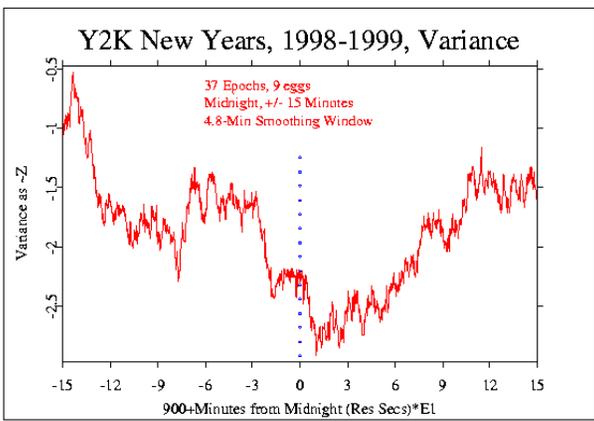
An obvious prediction: New Years celebrations Across all (37) time zones



Three of five
are classic
examples



New Years, another look: Reduction of Variance Among the Eggs



Three of five
are classic
examples

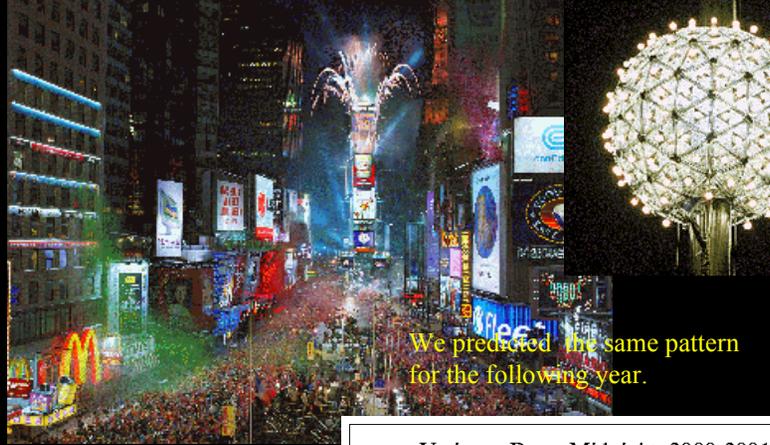
Note: These figures differ from those in the composite figure, next, which had an error in timezone calculation.

Global Attention: Sharing New Year's Eve

All over the world, people celebrate the change to a New Year. Since 1998, we have recorded data from a network of physical random event generators (called "eggs"). Here we look at what happens at midnight around the world.

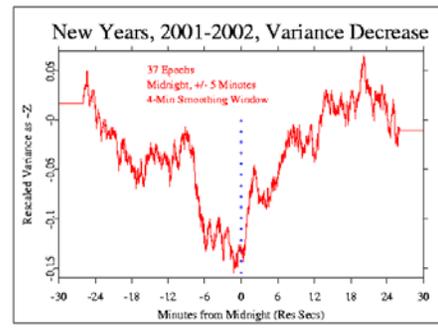
The scientific prediction is that there will be a pattern of increased correlation among the eggs. We test for trends away from the expected "random walk". We have learned to expect reductions in the variation across the eggs.

The figures on this page almost speak for themselves. They are pictures of our engagement with each other.

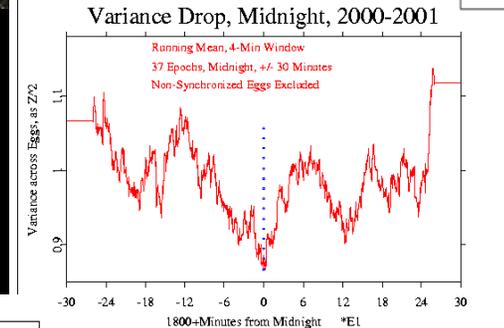


We predicted the same pattern for the following year.

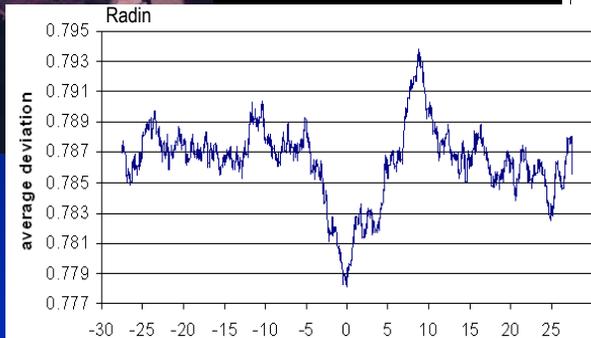
And again for last year. The pattern is replicated for the third time.



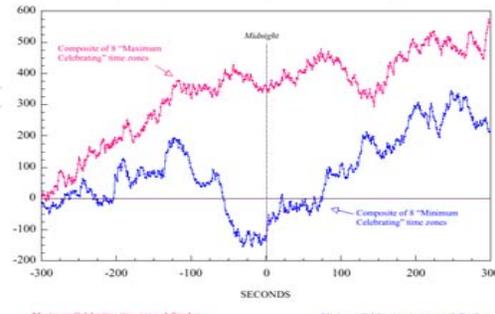
Then, for the infamous Y2K transition, we looked at a measure of the variability among the eggs and predicted it would decrease as we all focused on midnight.



In the first year, 1998-1999, we looked for a change in the average deviation, and compared Maxi- and Mini-celebration time zones.



Broughton New Year's "Evoked Response" 9-EGG Comparison of "maximum celebrating" vs. "minimum celebrating" global time zones.



More at <http://noosphere.princeton.edu>



What do we have in hand? Where do we want to go with it?

Four and a half years of data

More than 130 formal studies

About 65% positive outcome

About 15% individually significant

Many questions to ask

Questions outnumber answers

Deep engagement is essential

Great numbers most likely contribute
but

Does distance from the focus matter?

How about relevance to local people?

Is human consciousness necessary?

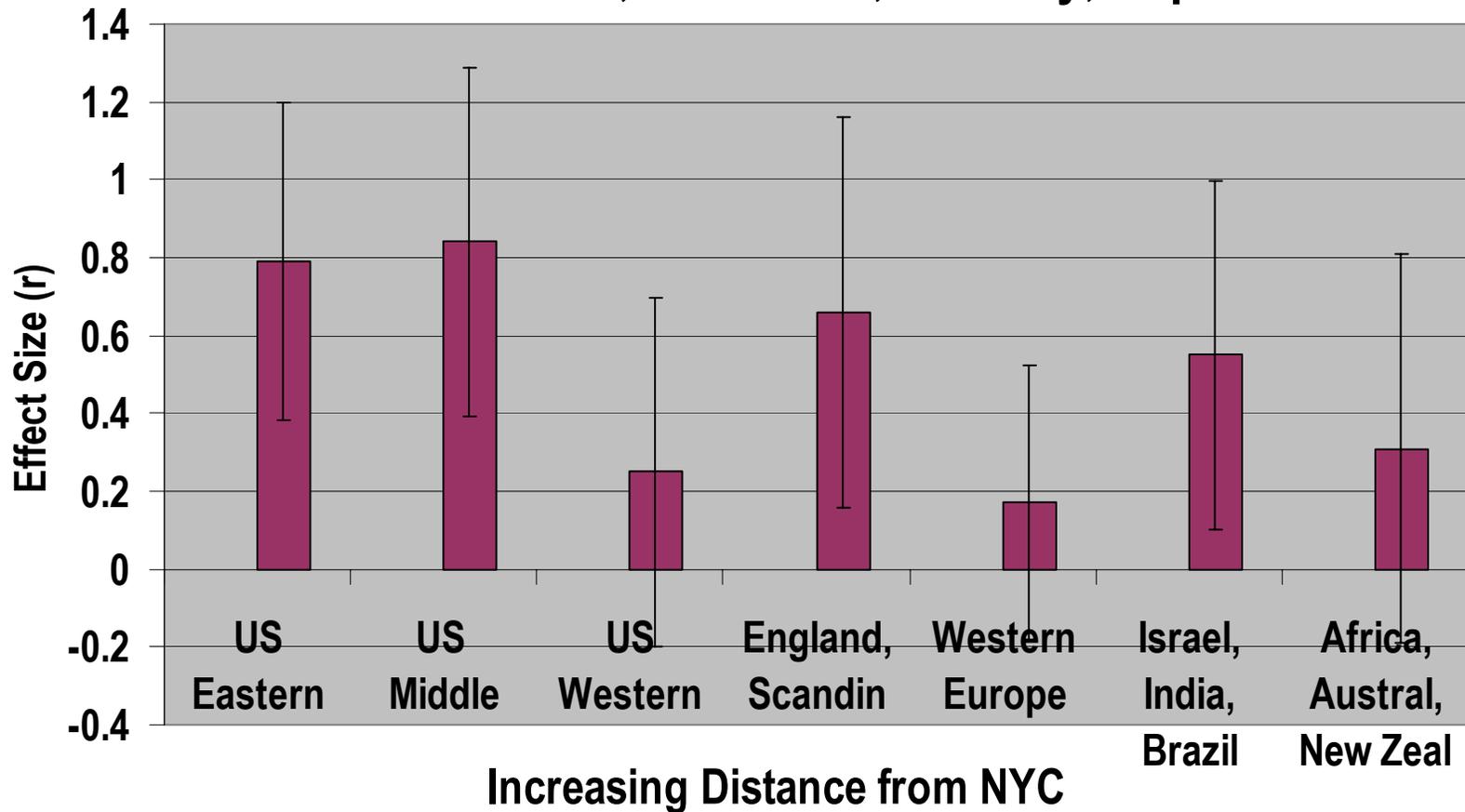
Are “experimenter effects” the source?

What kinds of events are “strongest”?

Is the effect repeatable and reliable?

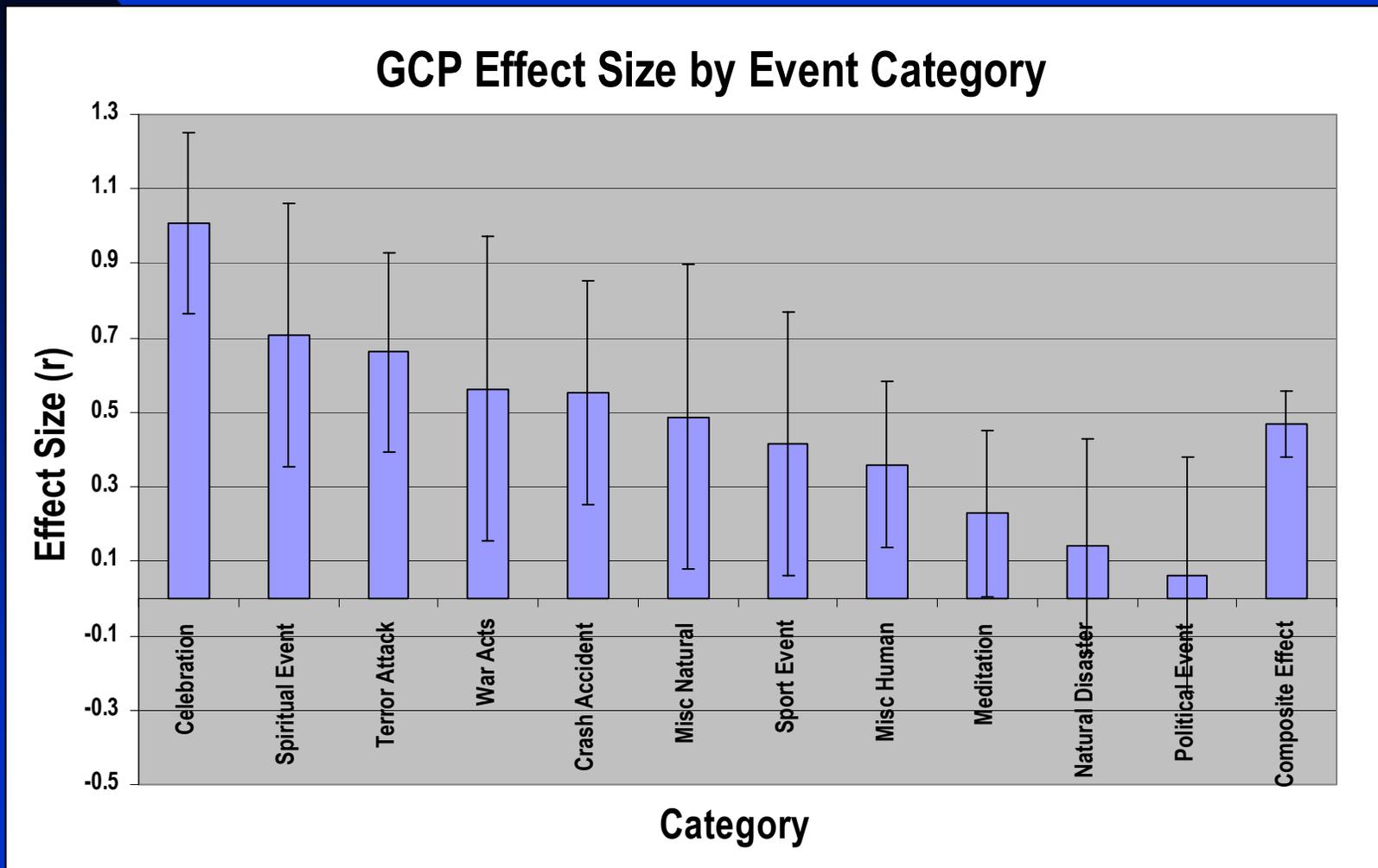
Does the distance of the eggs From the event make a difference?

Effect vs Dist, Stouffer Z, Full Day, Sept 11

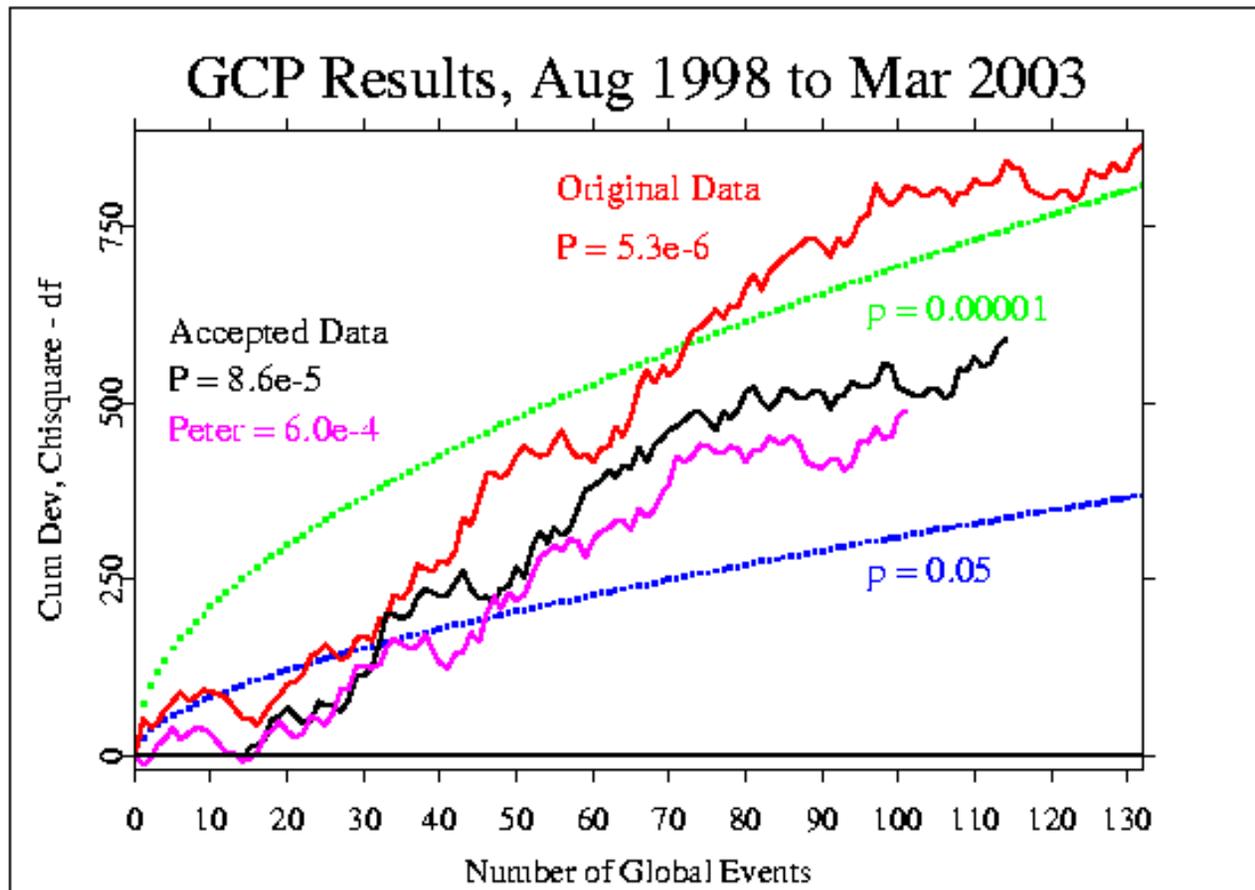


Categories: What seems to touch the EGG Network?

Four and a Half Years, 132 Formal Predictions



The Bottom Line: 132 global events over 4.5 years Odds: More than 10,000 to 1



Bigger Picture: What is our aspiration?

Sharpen and focus our questions

Aim for theoretical understanding

Capture insight about creative mind

Consider evidence that we are one

Contribute to better future for culture

We think the world apart. What would it be like to think the world together?

-- Parker Palmer, educator



<http://noosphere.princeton.edu>