

Heart Coherence, Energetic Connectivity, Intuition and The Global Field Environment

Rollin McCraty, Ph.D.

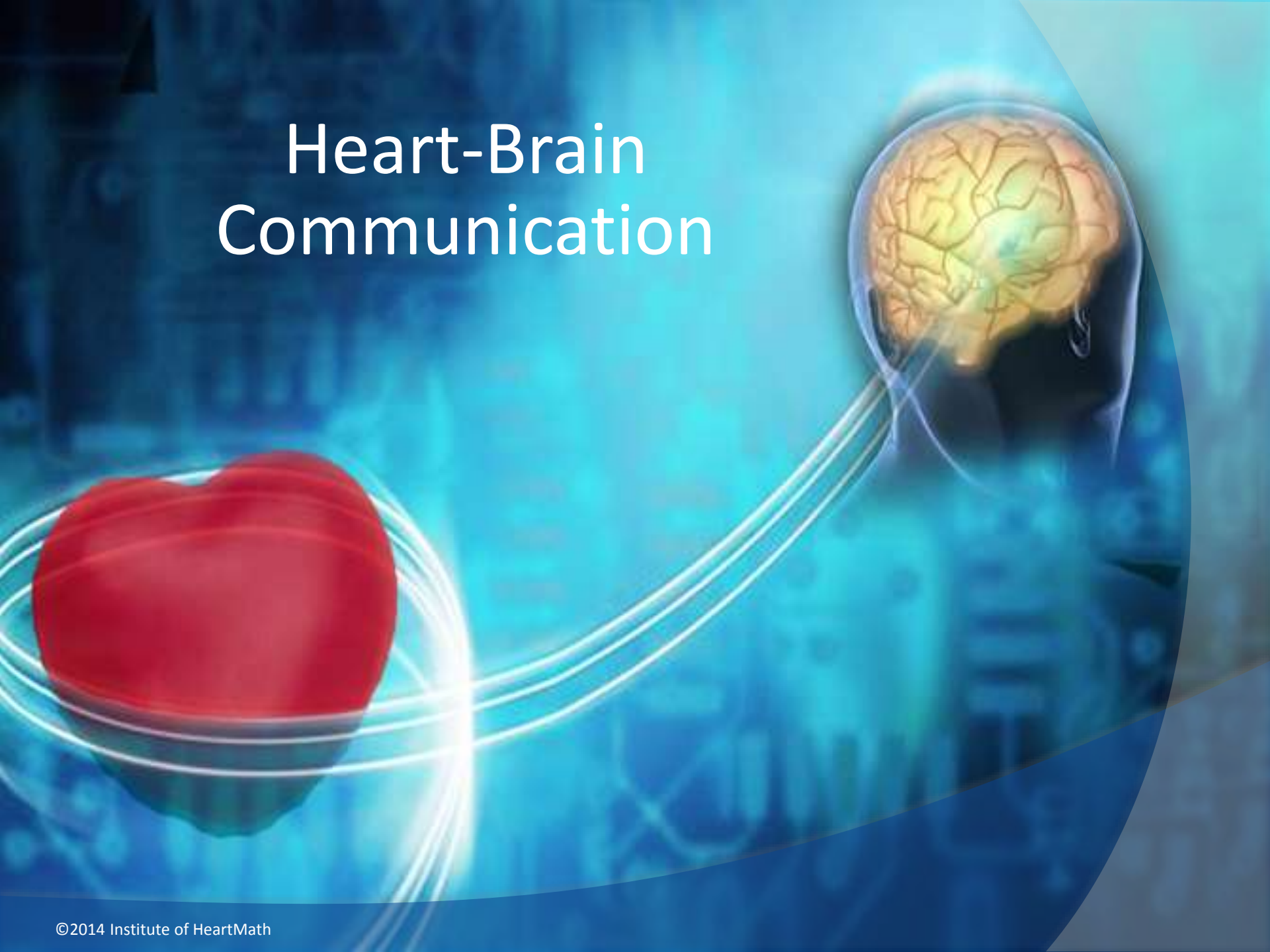


The HeartMath Mission

To help people bring their physical, mental and emotional systems into balanced alignment with their heart's intuitive guidance. This unfolds the steps to fulfillment through becoming “who we truly are” — heart-empowered individuals who choose the way of love; demonstrated through compassion and care for the wellbeing of others, ourselves and planet earth.



Heart-Brain Communication



Central Role of the Heart



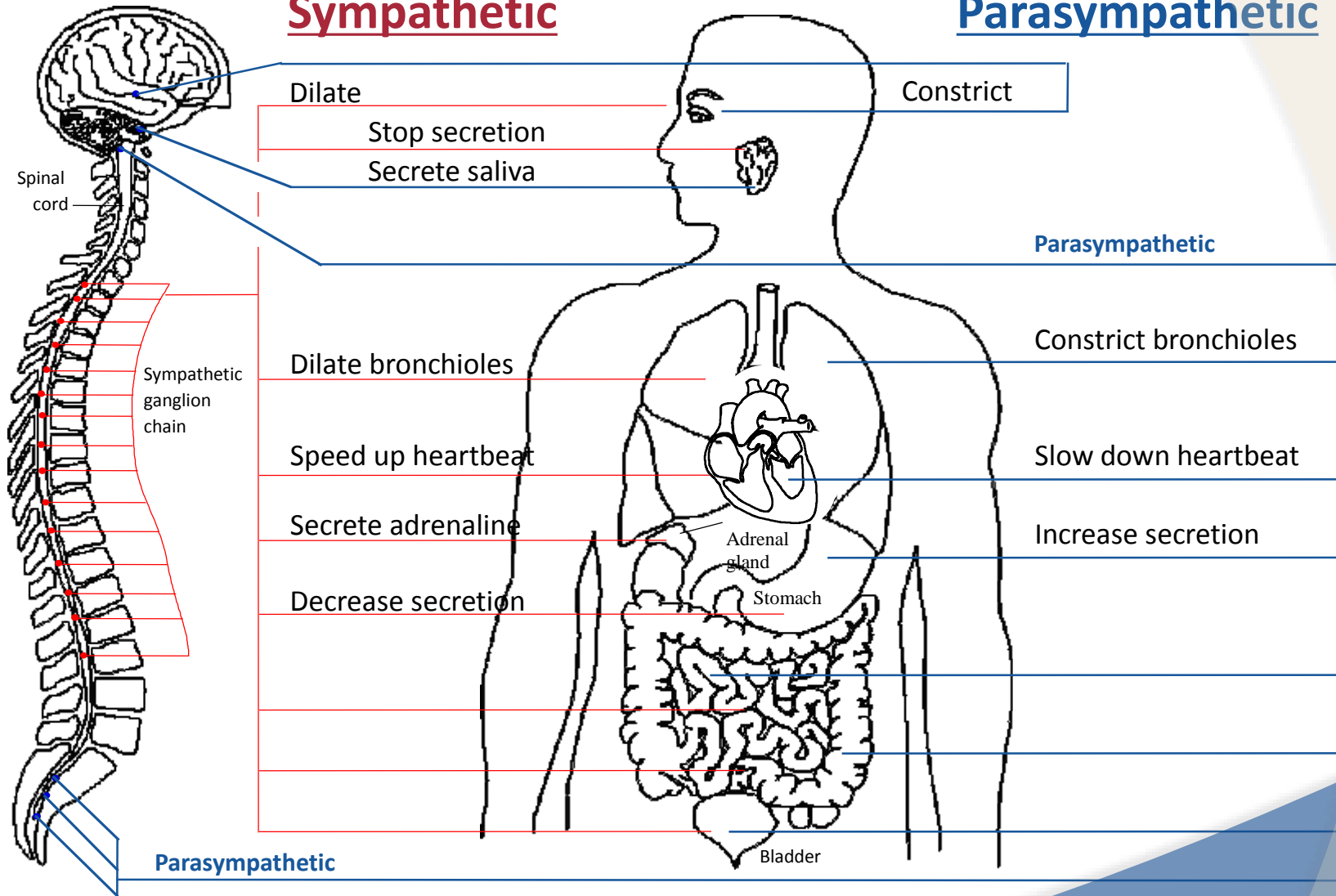
As the most powerful and consistent generator of rhythmic information patterns in the body, the heart is in continuous communication with the brain and body through multiple pathways:

- ✓ neurologically
- ✓ biochemically
- ✓ biophysically
- ✓ energetically

The heart is uniquely positioned to act as the “global coordinator” in the body’s symphony of functions and synchronize the system as a whole.

Sympathetic

Parasympathetic

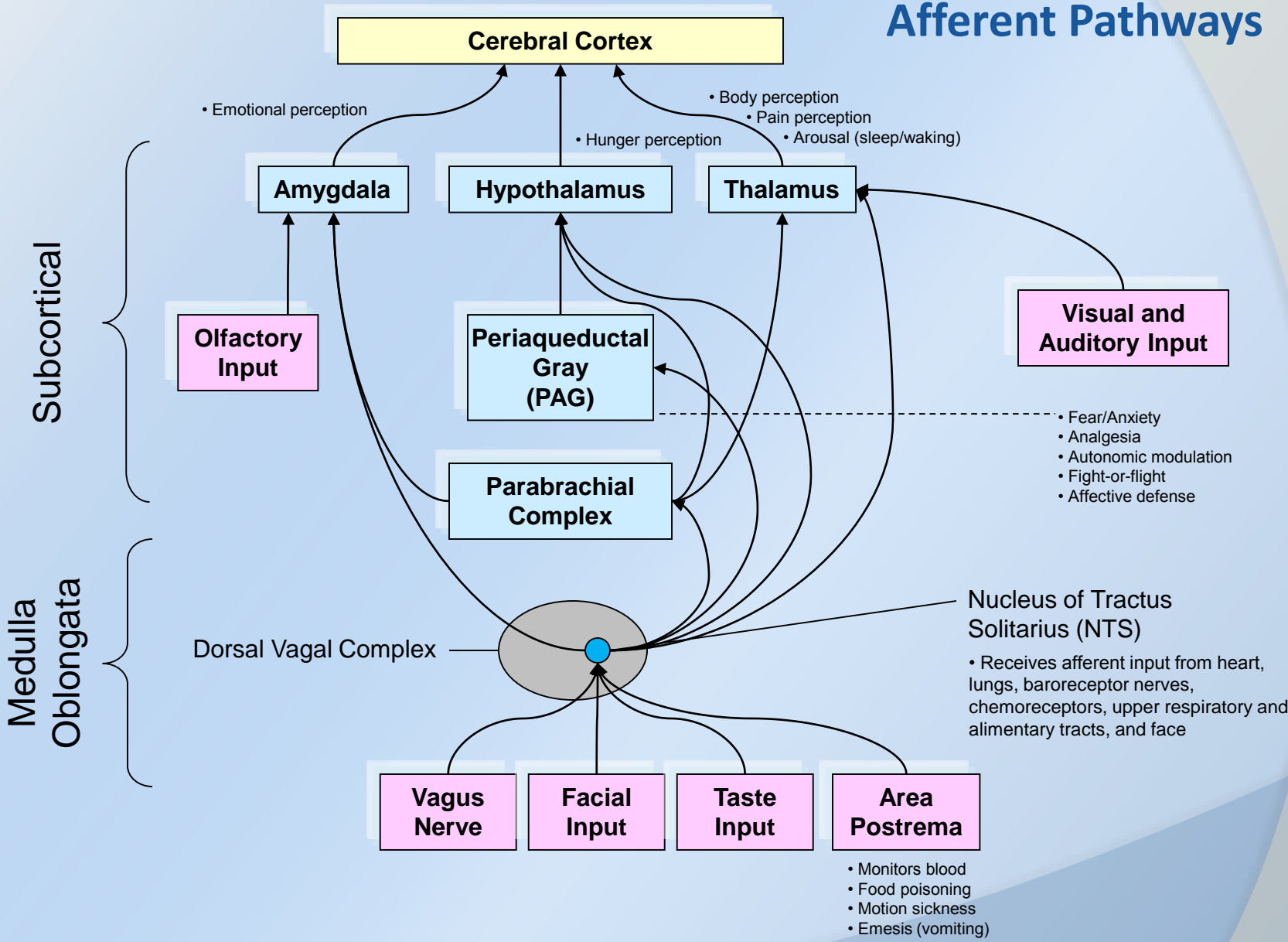


The Heart-Brain Relationship

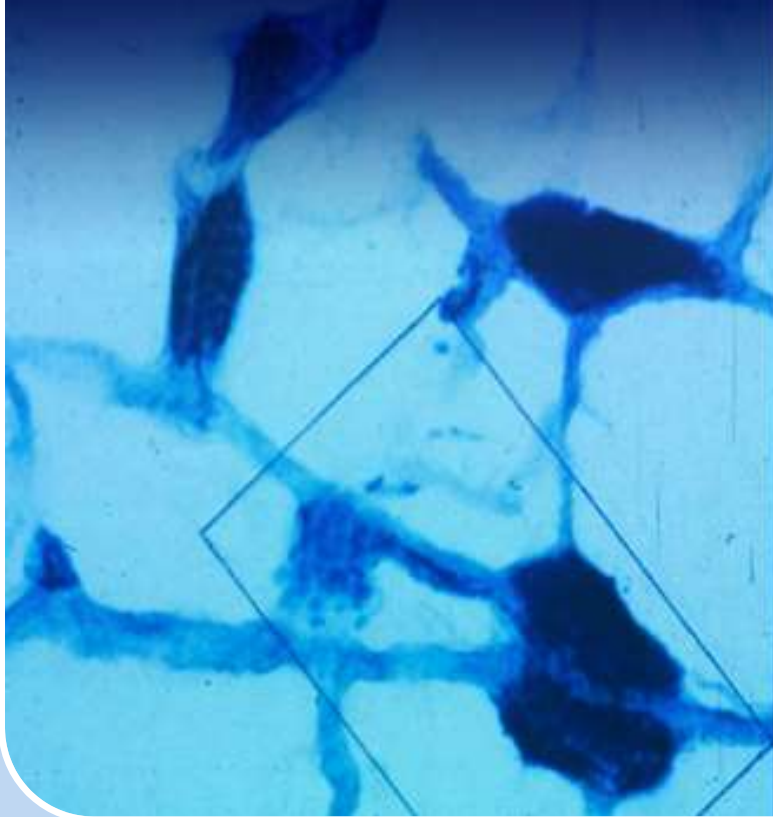


- The heart has its own complex nervous system: the “heart brain.”
- The heart sends far more information to the brain than the brain sends to the heart.
- Heart signals especially affect the brain centers involved in strategic thinking, reaction times and self-regulation.

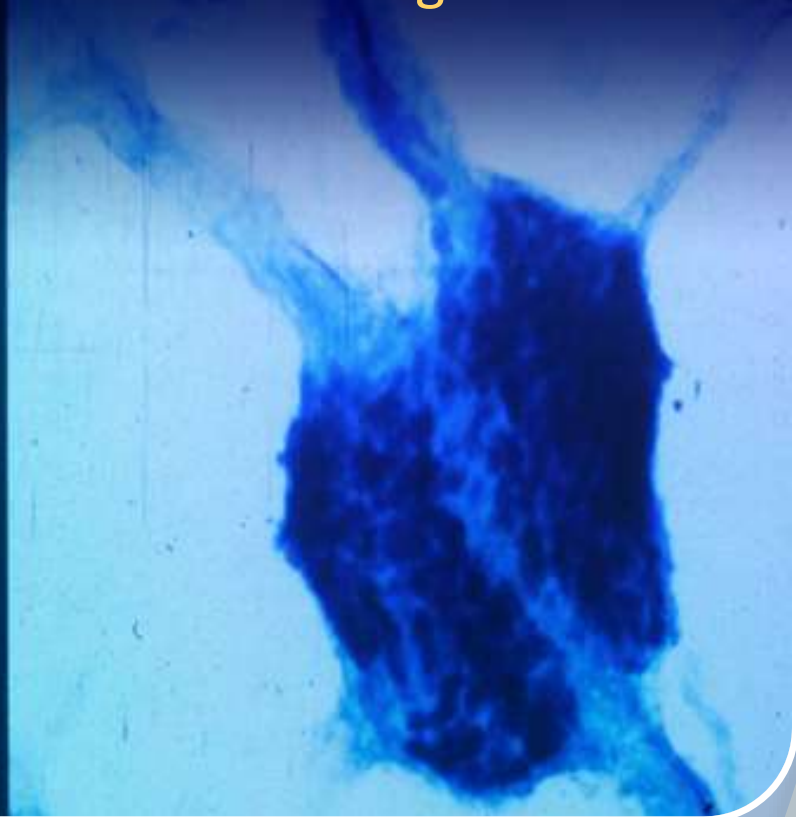
Afferent Pathways



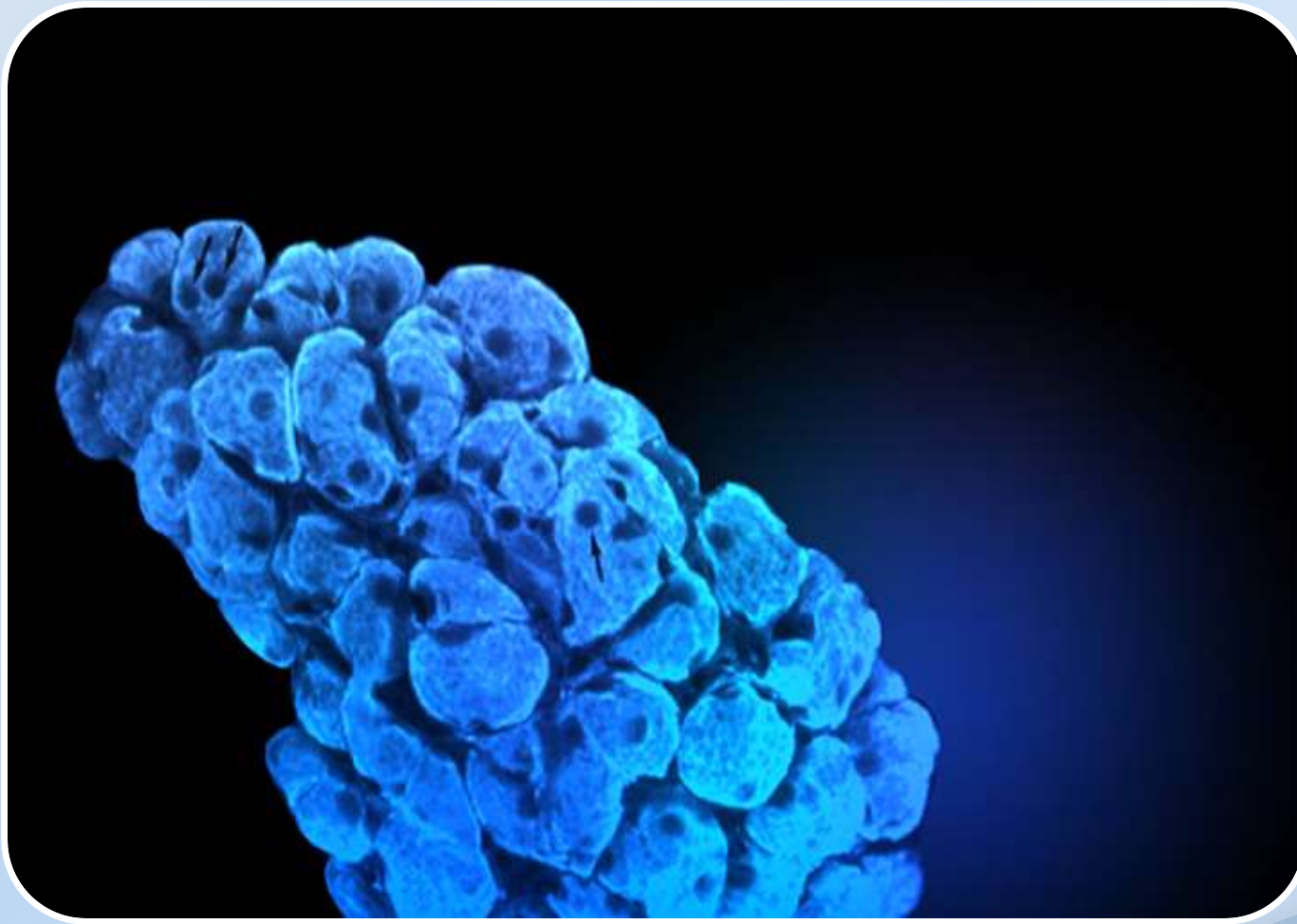
Interconnectivity between Intrinsic Ganglia in the human heart



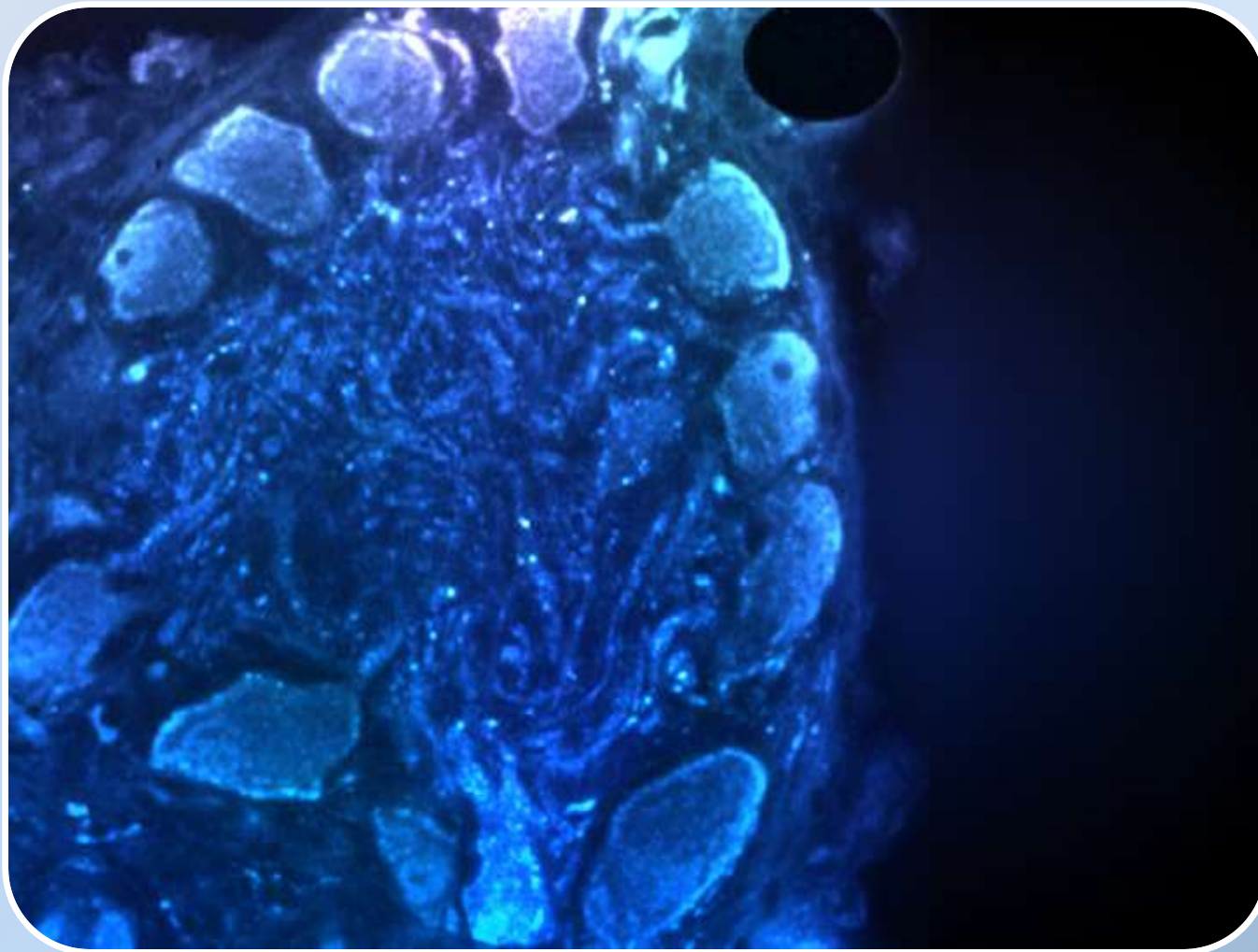
Magnified view of Intrinsic Cardiac Ganglia



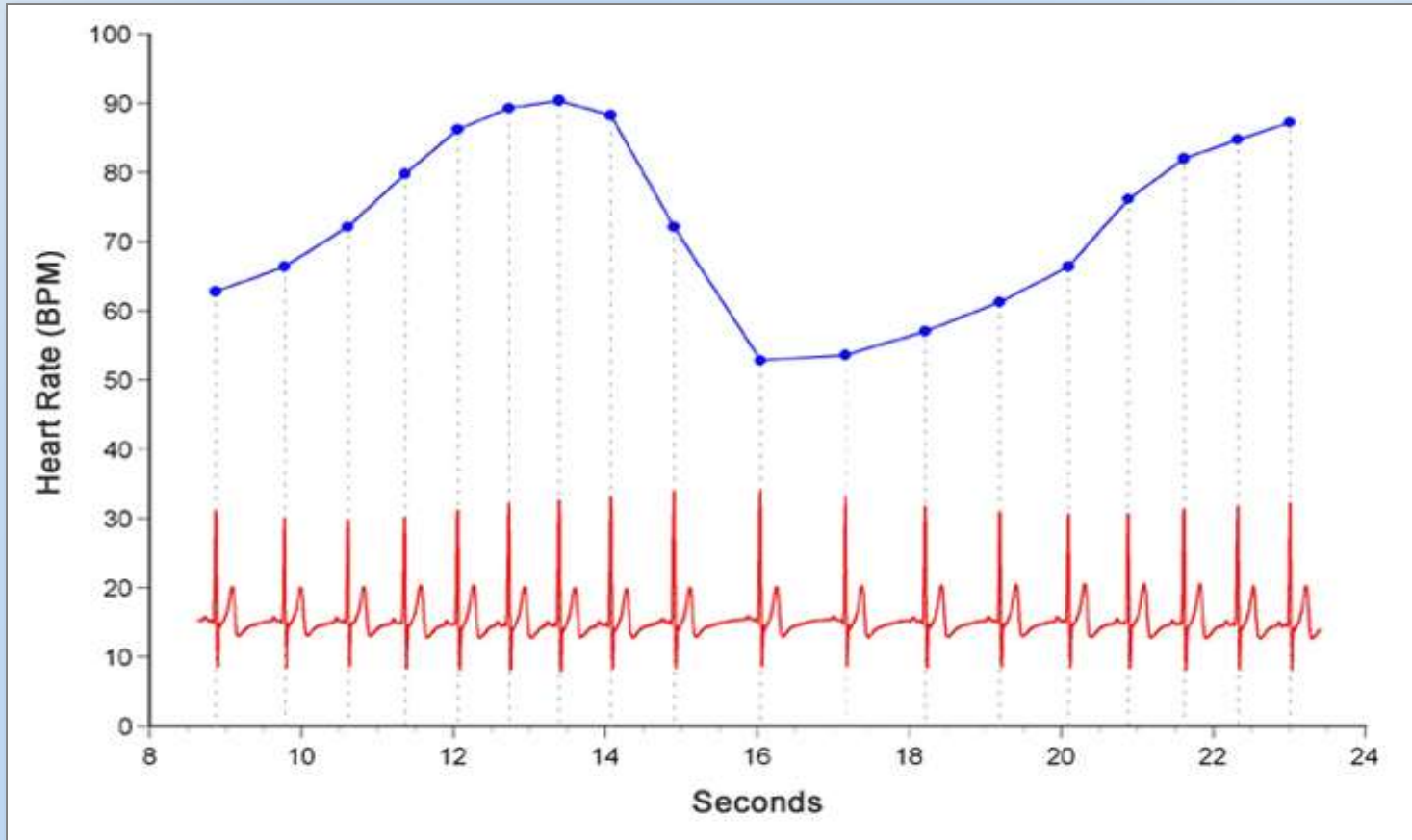
Intrinsic Cardiac Ganglia



Cross Section of Intrinsic Cardiac Ganglion



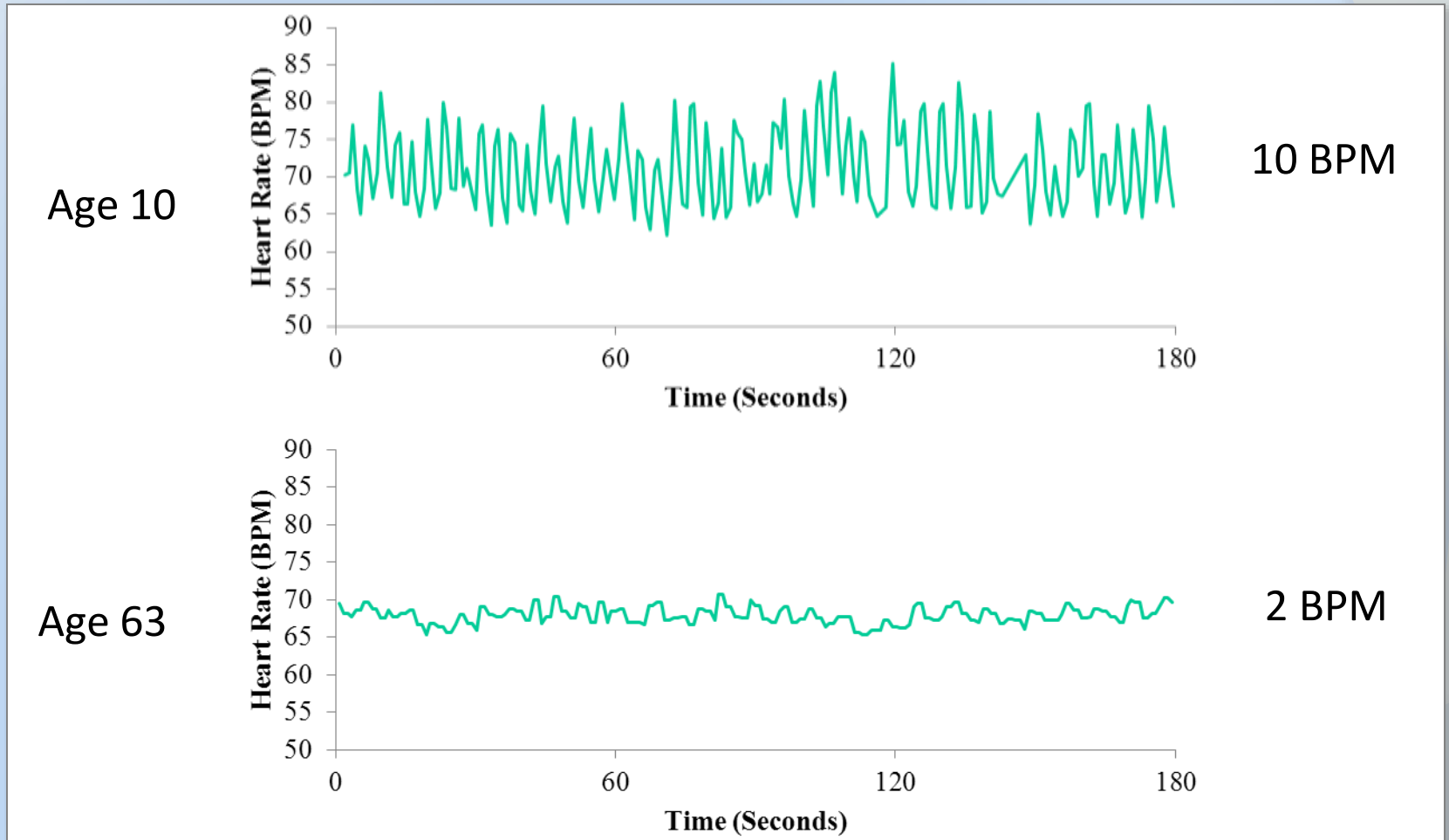
Heart Rate Variability: The Heart's Rhythm



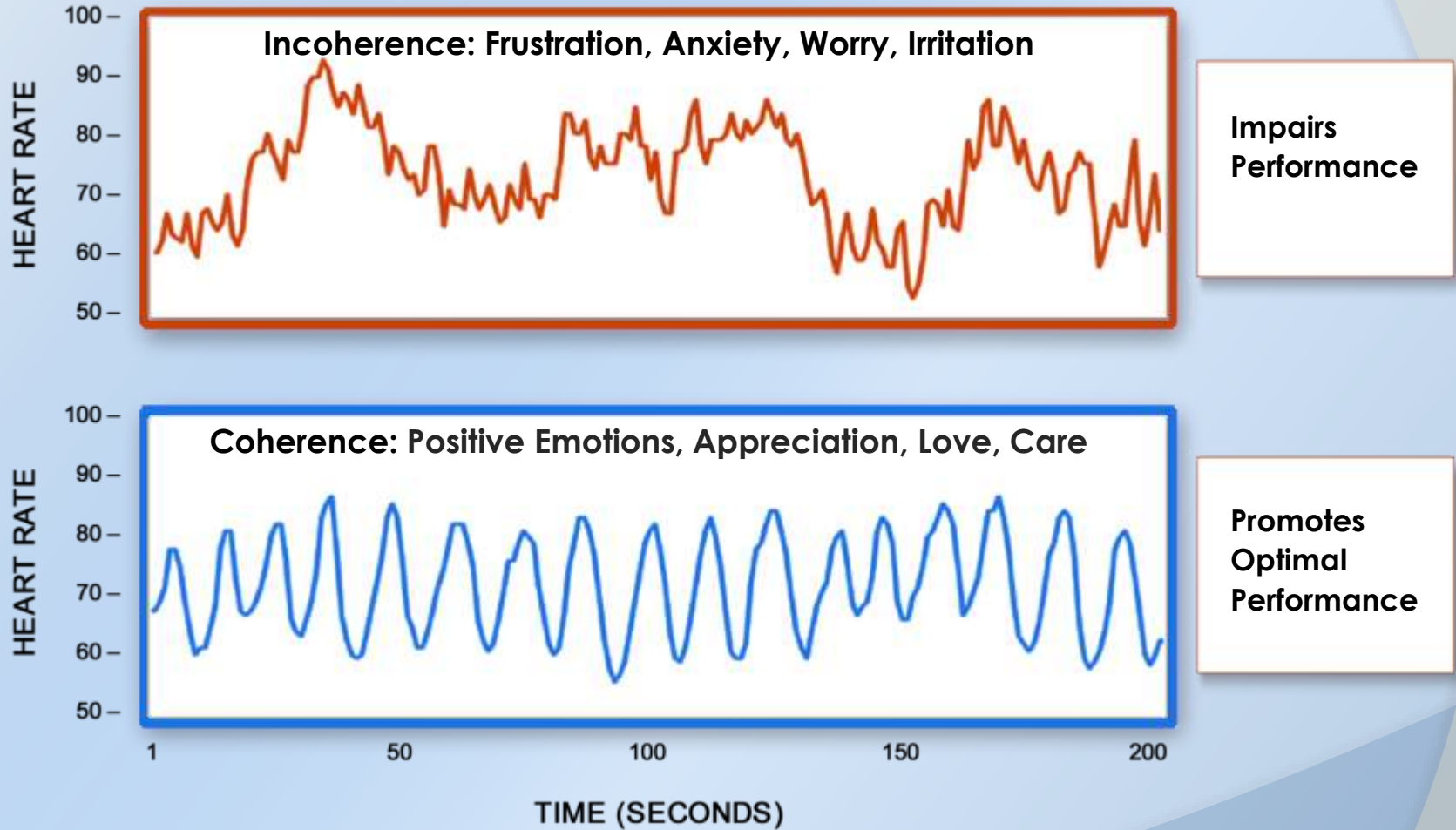
Heart Rate Variability (HRV)

- Abnormally low HRV, is a strong and independent predictor of future health and behavioral problems.
- HRV is an important indicator of psychological resiliency and ability to adapt to stress.
- Higher level of resting HRV are associated with superior performance on tasks requiring executive functions.
- HRV coherence: used for optimal state training to support leaning of the self-regulation tools and improved mental functions.

Amount of Resting HRV

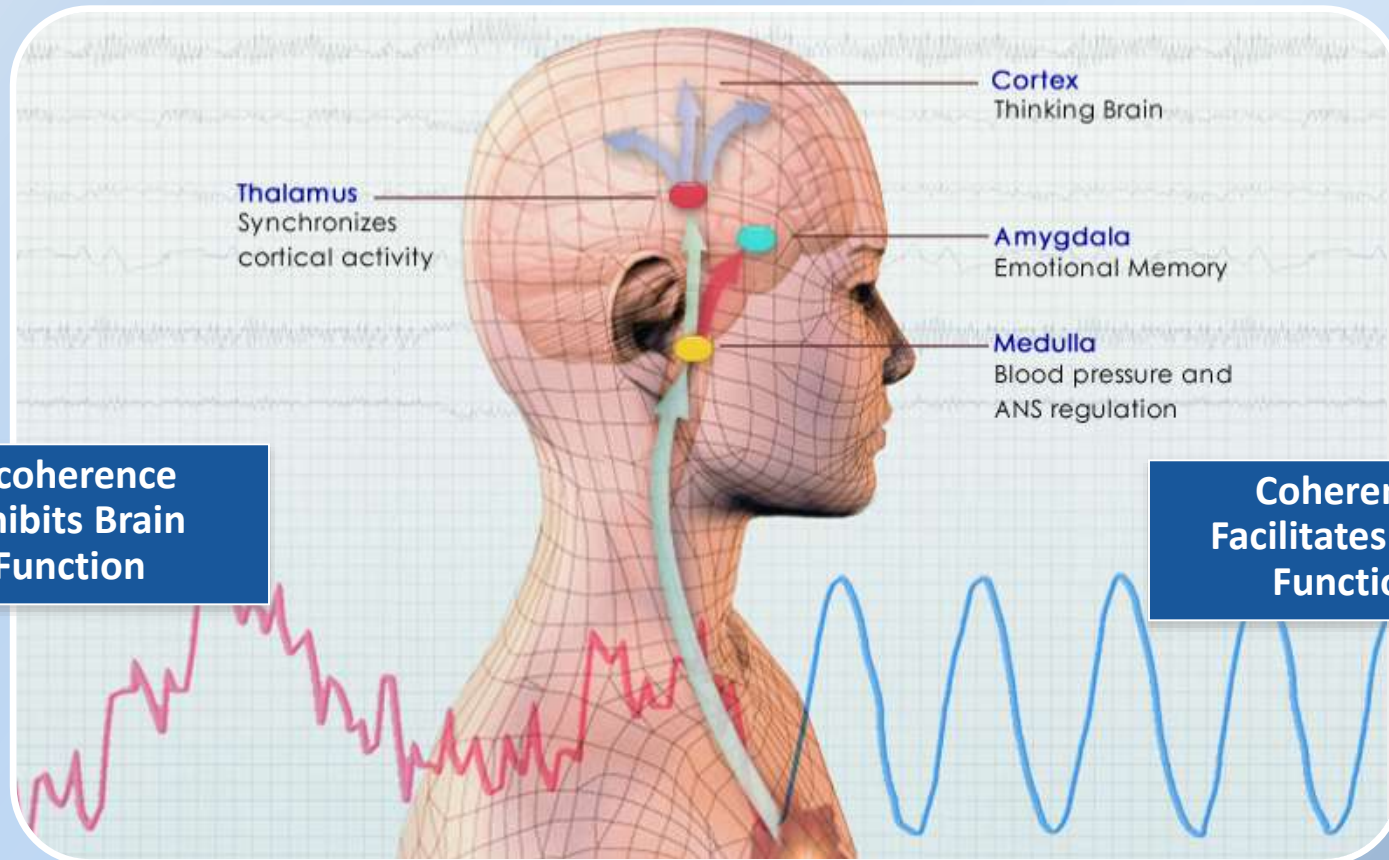


Heart Rhythm Patterns



Heart Rhythms Directly Affect Physical and Mental Performance

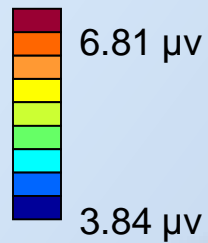
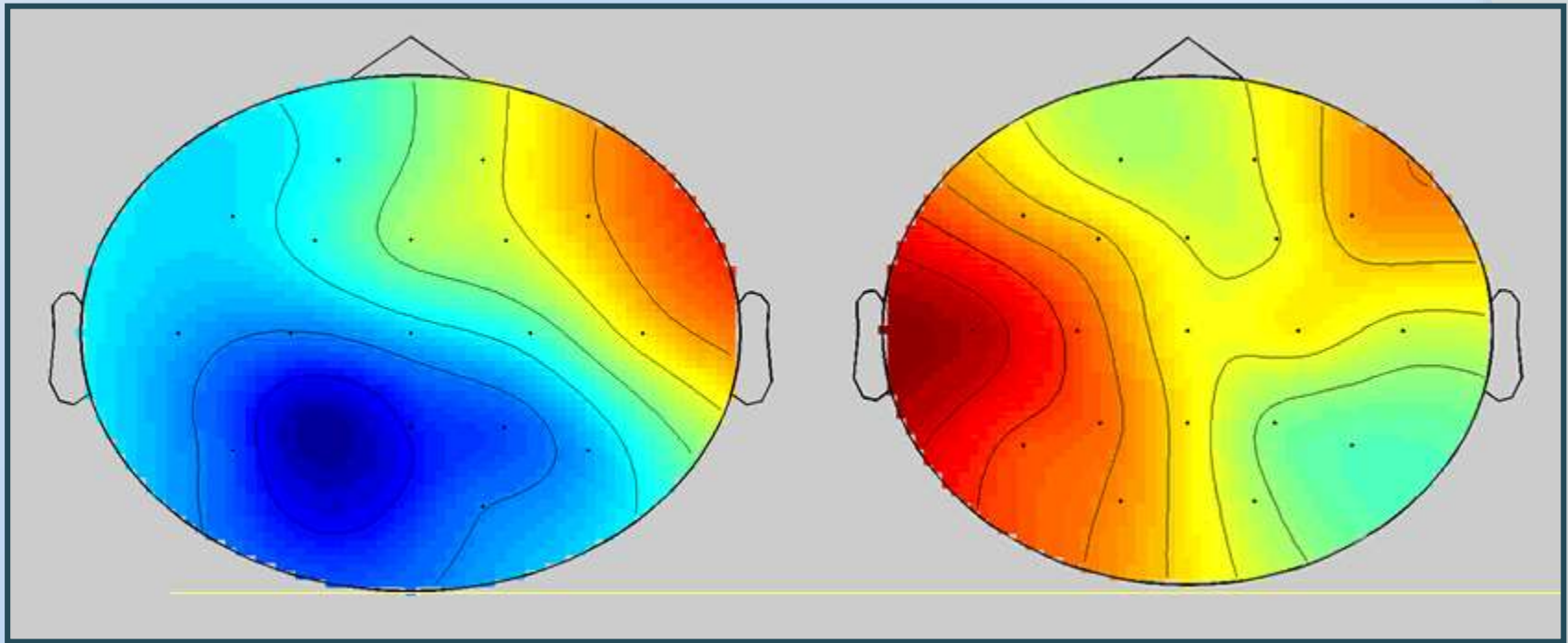
Heart signals affect the brain centers involved in emotional perception, decision making, reaction times, social awareness and the ability to self-regulate.



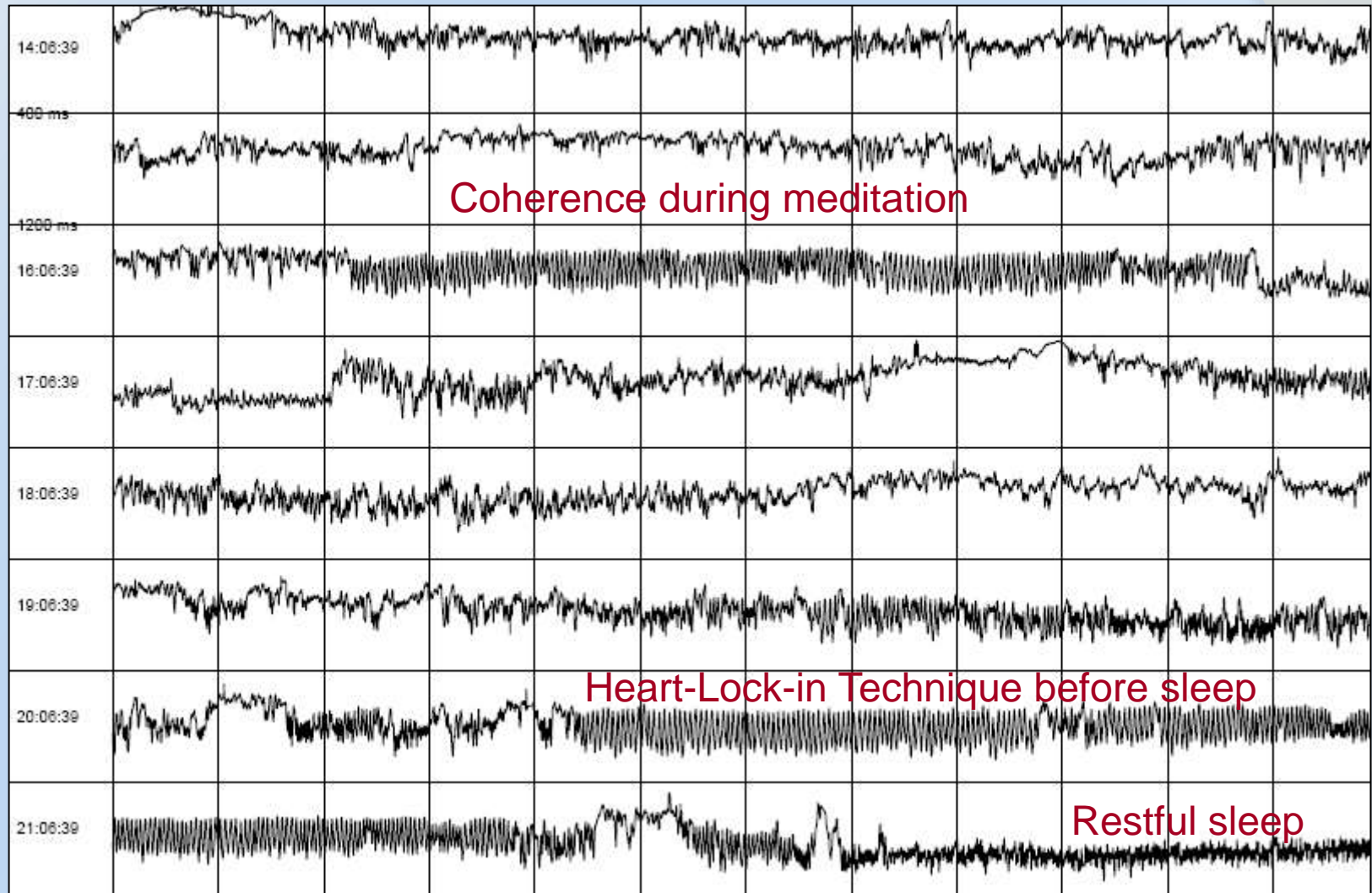
Cardiac-Synchronized Alpha Activity

Baseline

Coherence

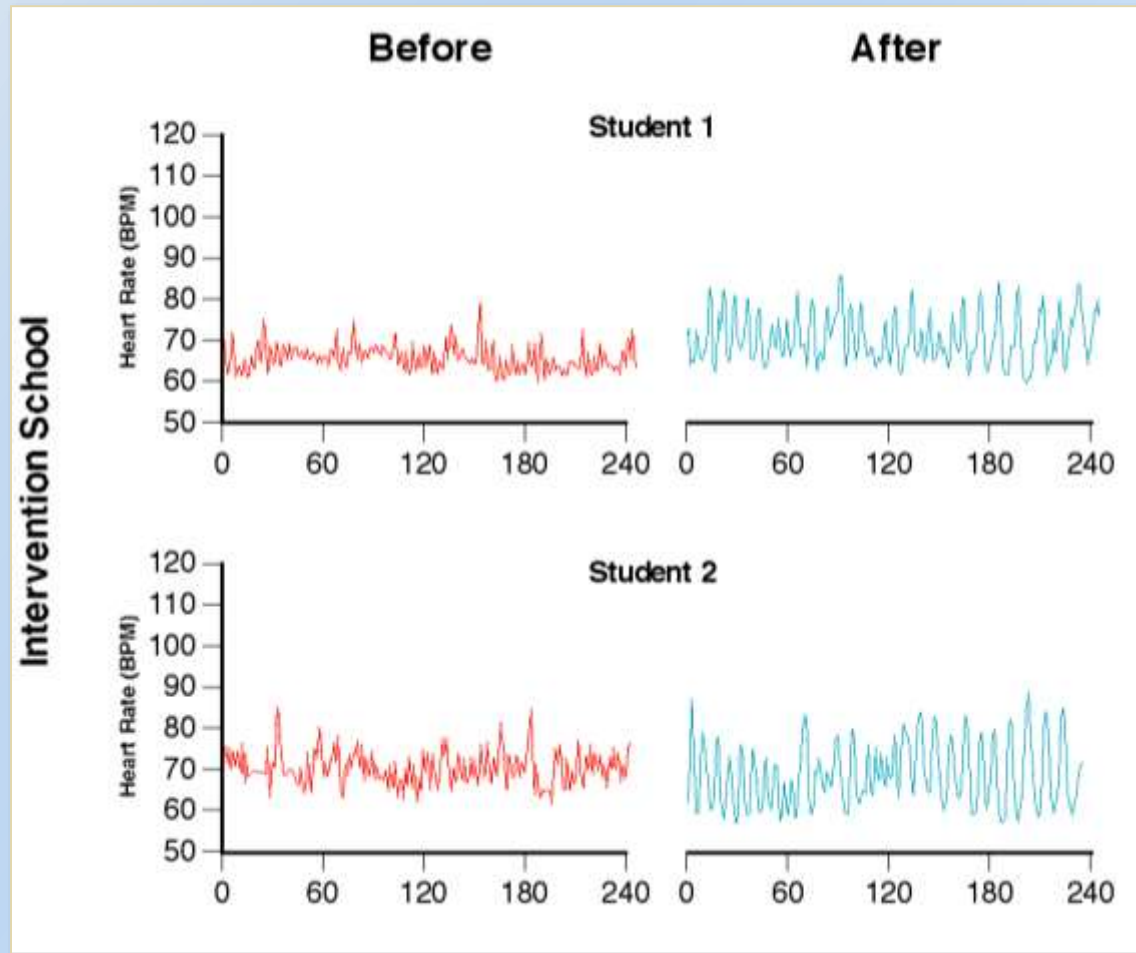


HRV Reflects ANS Activity



Ambulatory HRV Recording

Research Showing Increased HRV and Baseline Shift



Resting HRV baselines before and after four months of practicing HeartMath techniques.

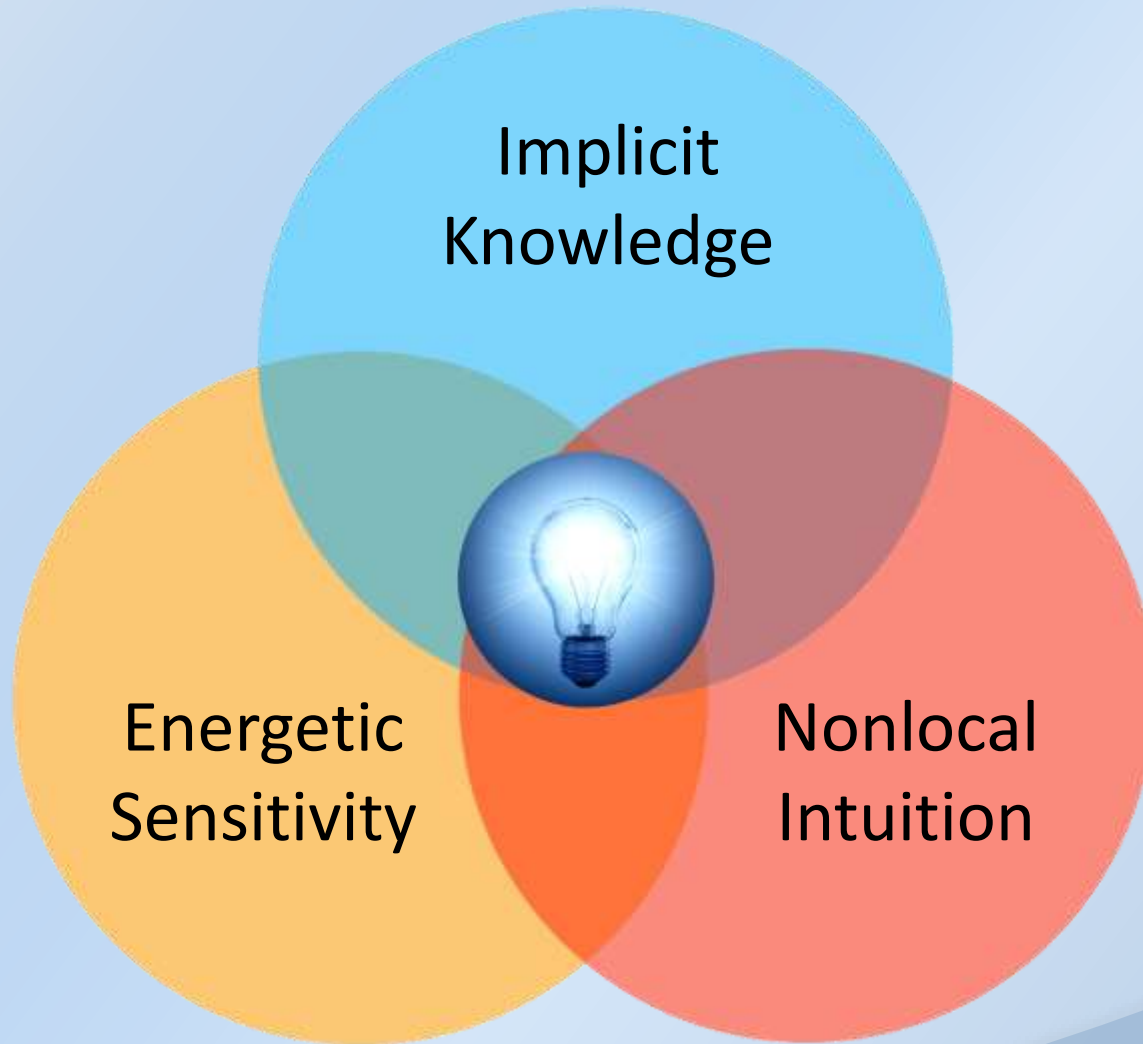
Coherence Practice Outcomes

- Ability to think clearly and find more efficient solutions.
- Maintain poise and composure during challenges.
- Improved family and social harmony.
- Reduced fatigue and exhaustion.
- Facilitates the body's natural regenerative processes.
- Improved coordination and reaction times in sports.
- Improved ability to learn and achieve higher test scores.
- Sitting in coherence for a while activates more intuition throughout the day.

Practical Intuition



Types of Intuition

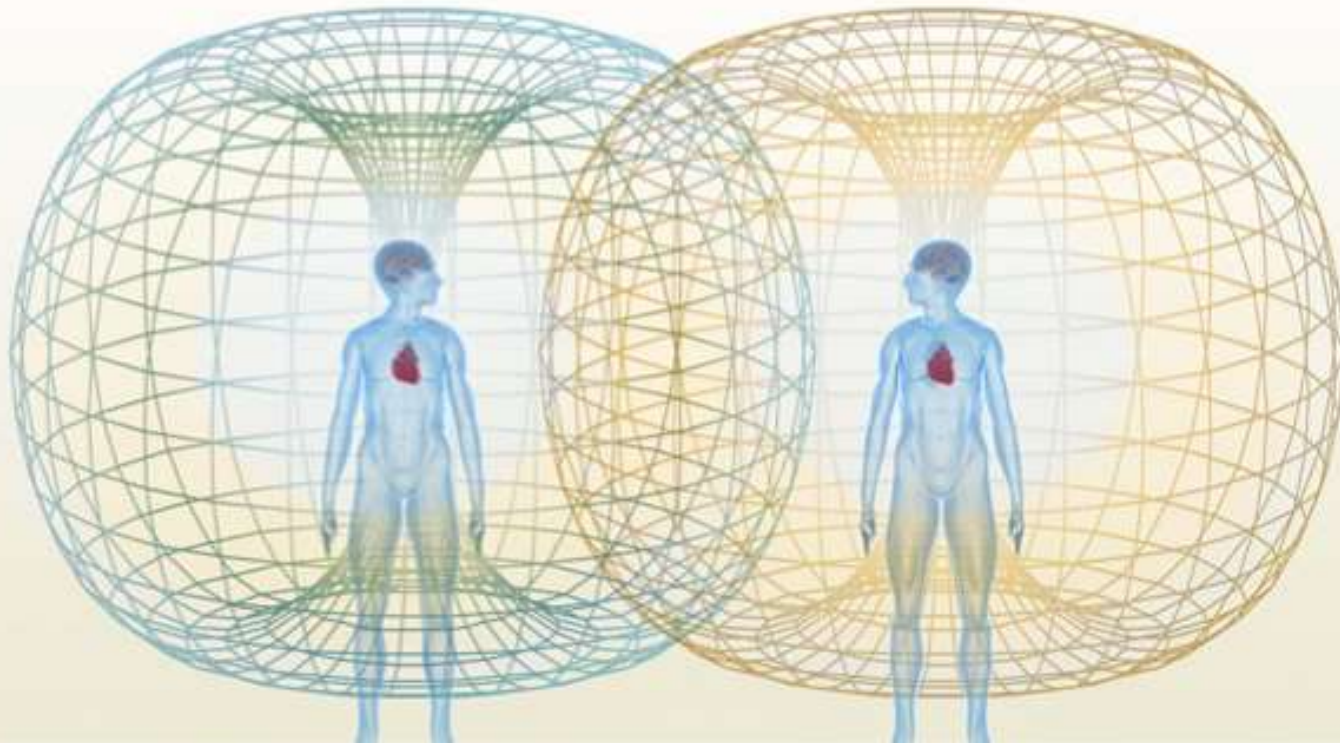


Energetic Communication

Research conducted in our laboratory has confirmed that when an individual is in heart coherence, the heart radiates a more coherent electromagnetic signal into the environment that can be detected by the nervous systems of other people and animals.

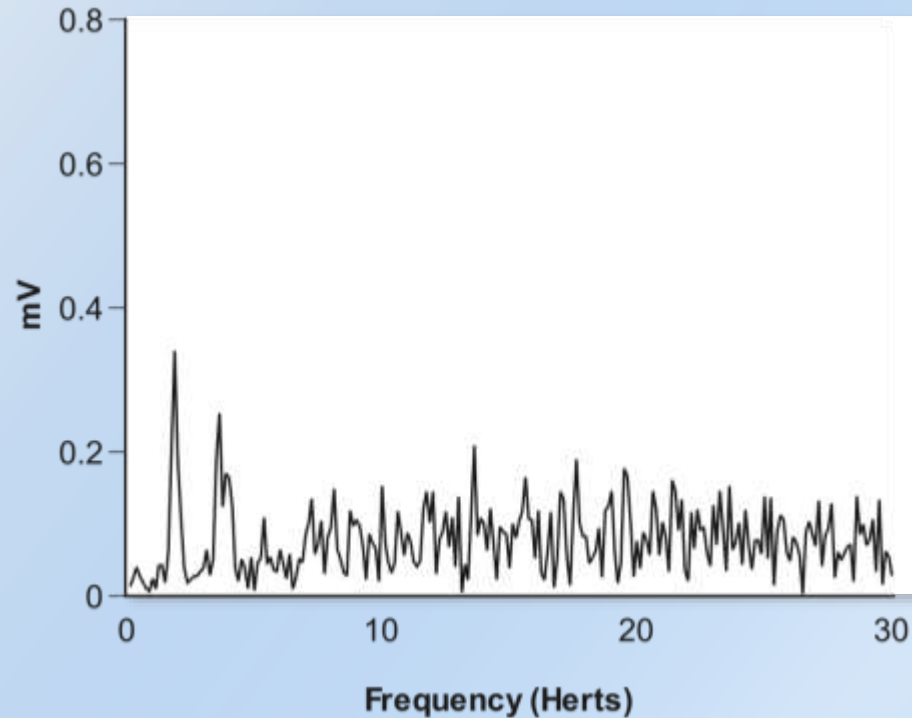


Our thoughts and emotions affect the heart's magnetic field, which energetically affects those in our environment whether or not we are conscious of it.

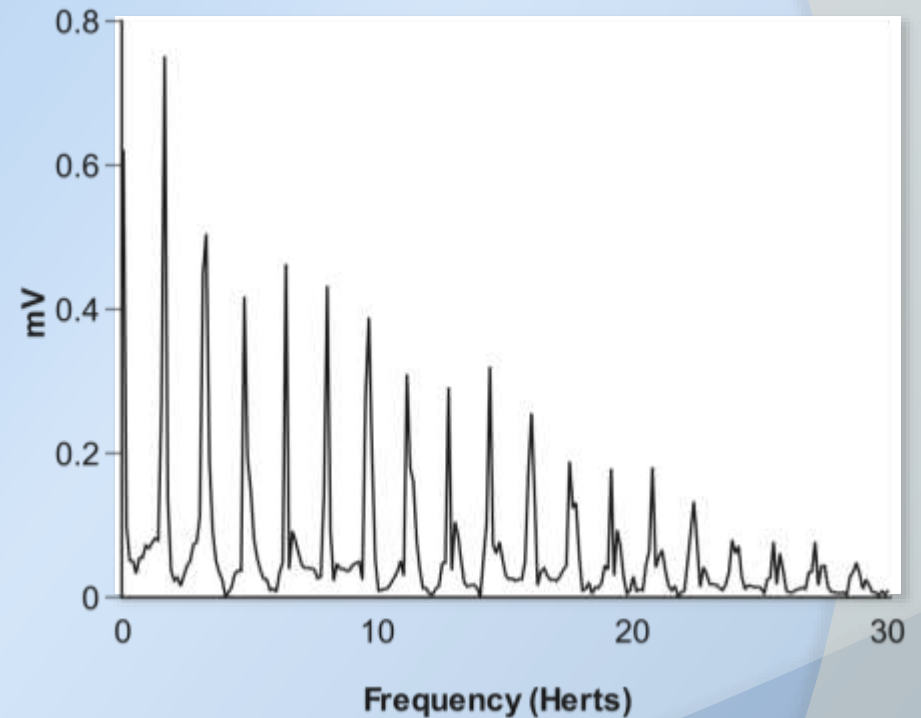


The Heart's Magnetic Field Acts as a Carrier Wave

Frustration (Incoherent)



Appreciation (Coherent)



ECG Frequency Spectra

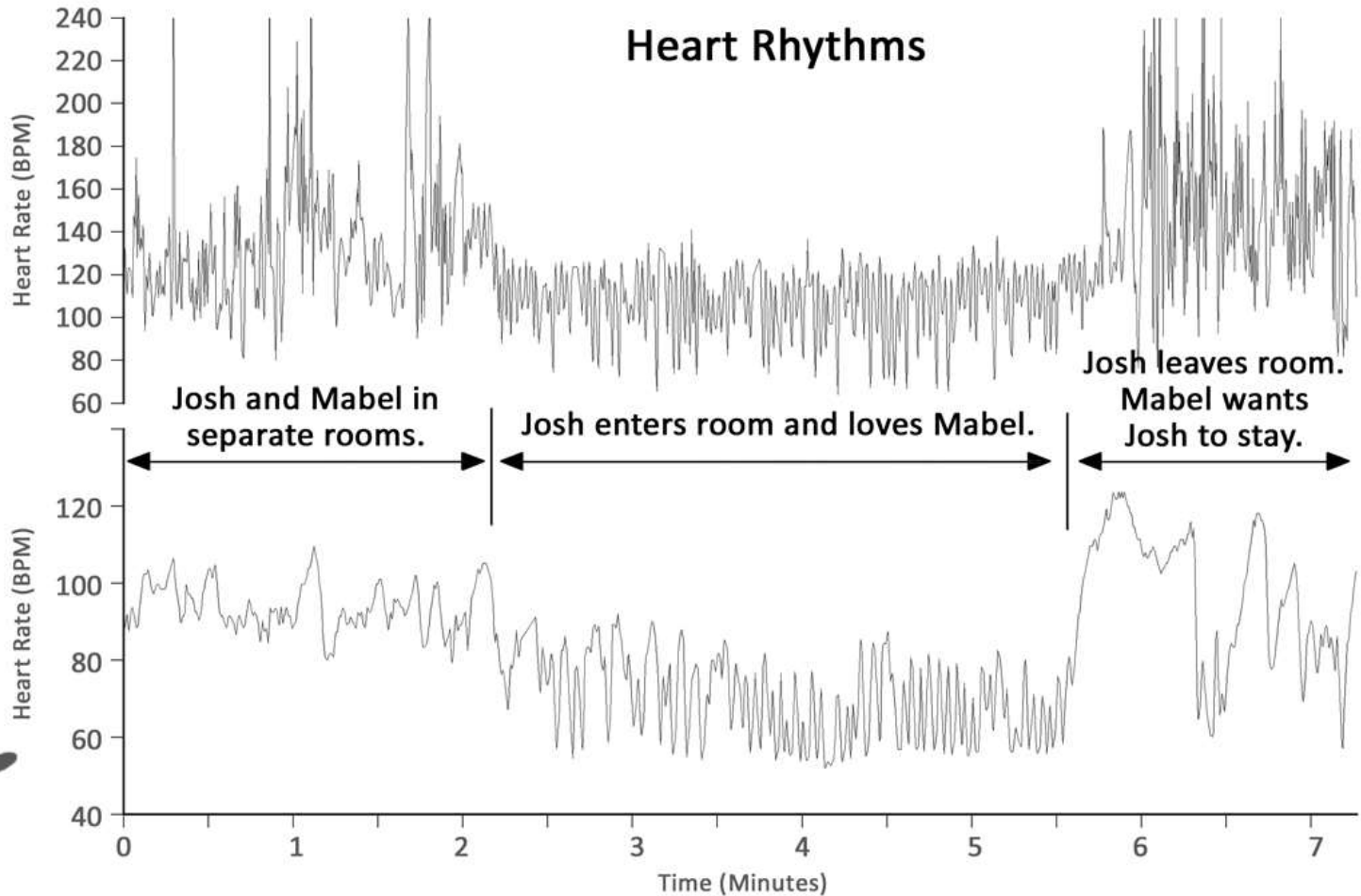


Josh and Mabel

A Boy and His Dog

Heart Rhythms

Mabel
(The Dog)



Josh
(The Boy)

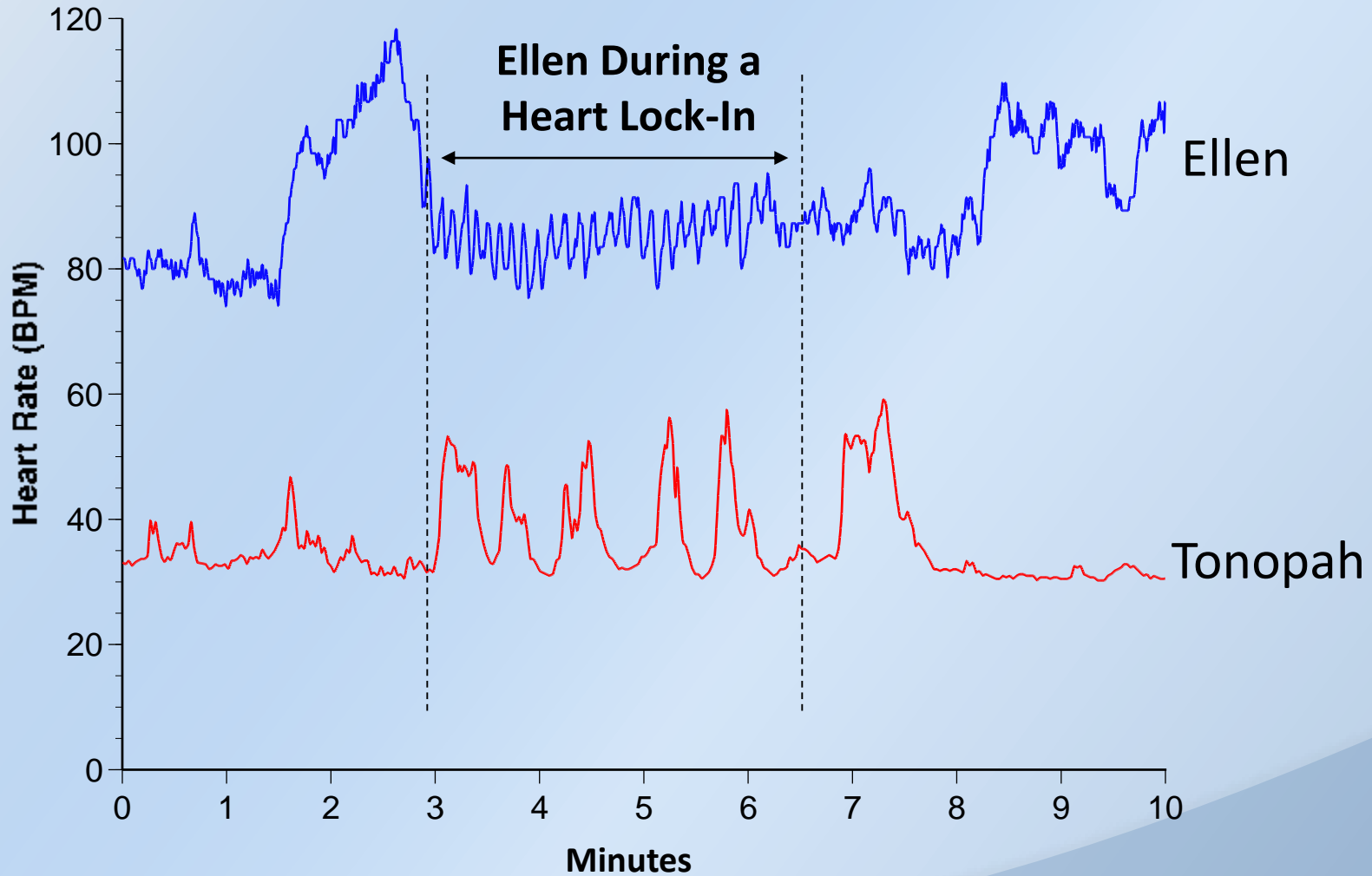




Ellen and Tonopah



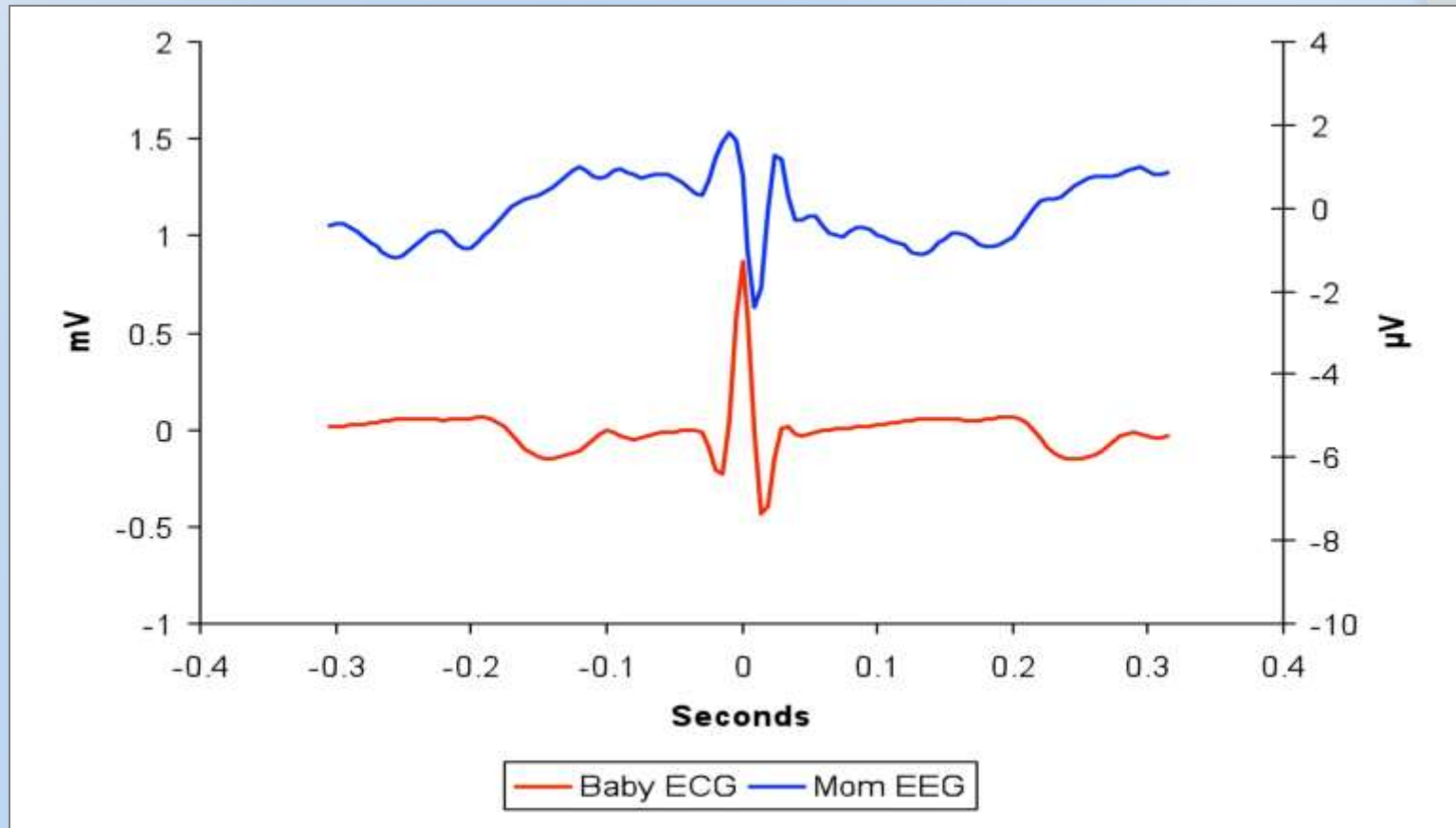
Ellen and Her Horse



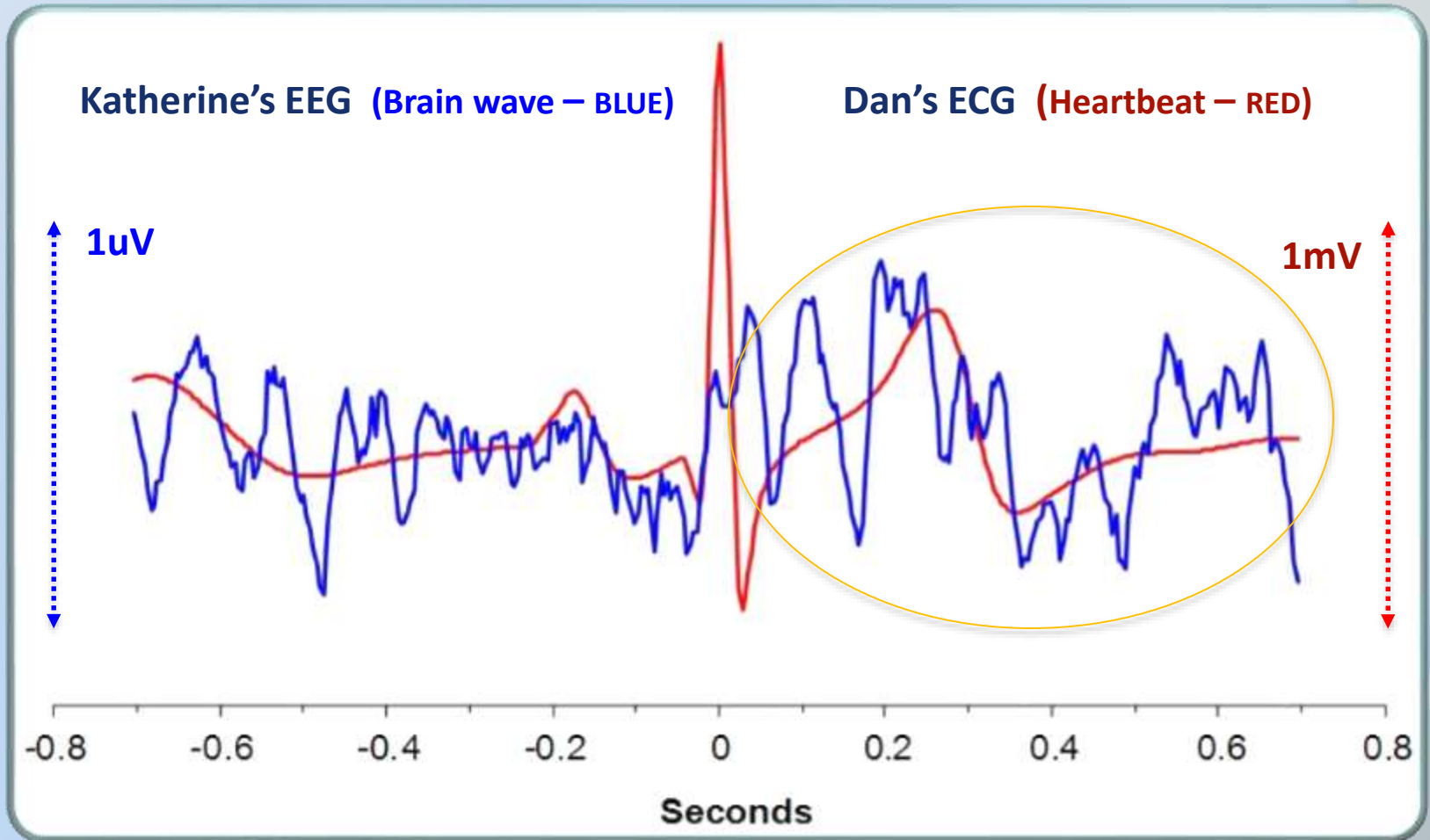
Mother and Baby



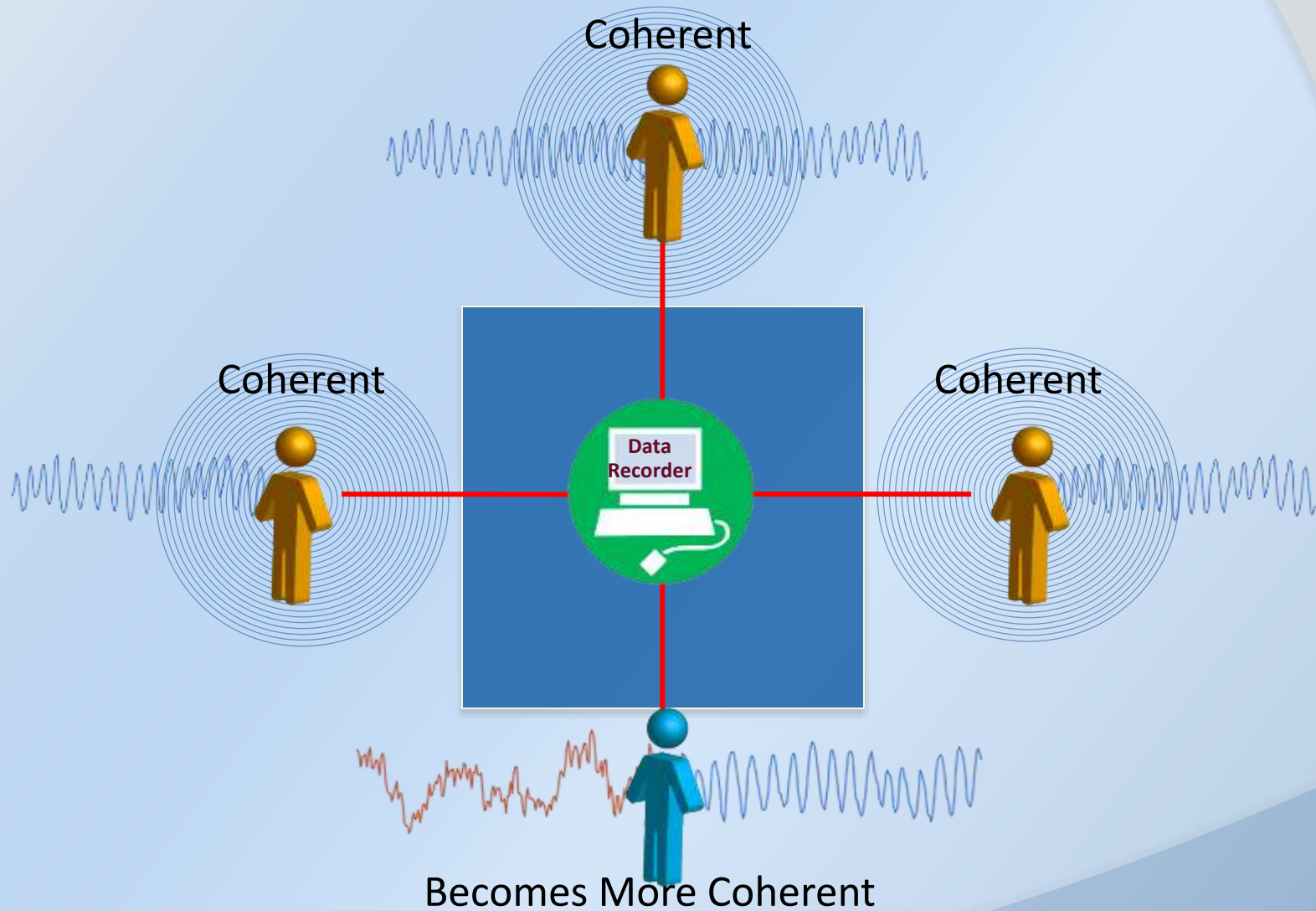
Baby's Heartbeat Detected in Mother's Brainwaves



Heart-Brain Synchronization



Research Confirms the Benefits of a Coherent Field Environment



The Electrophysiology of Nonlocal Intuition



Nonlocal Intuition

Sometimes, if a future event is emotionally relevant, the heart can produce a signal that pre-alerts you before the event takes place.

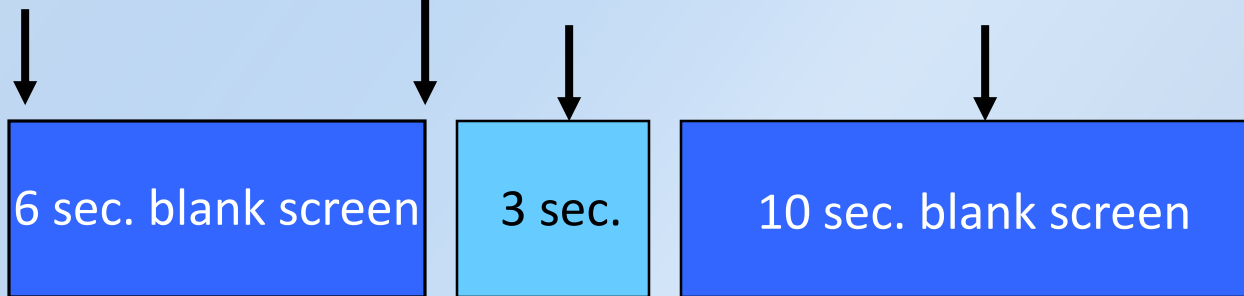
This intuitive intelligence reacts faster than the mind can perceive and bypasses standard thought processes.

Computer randomly
selects picture

Participant
presses button

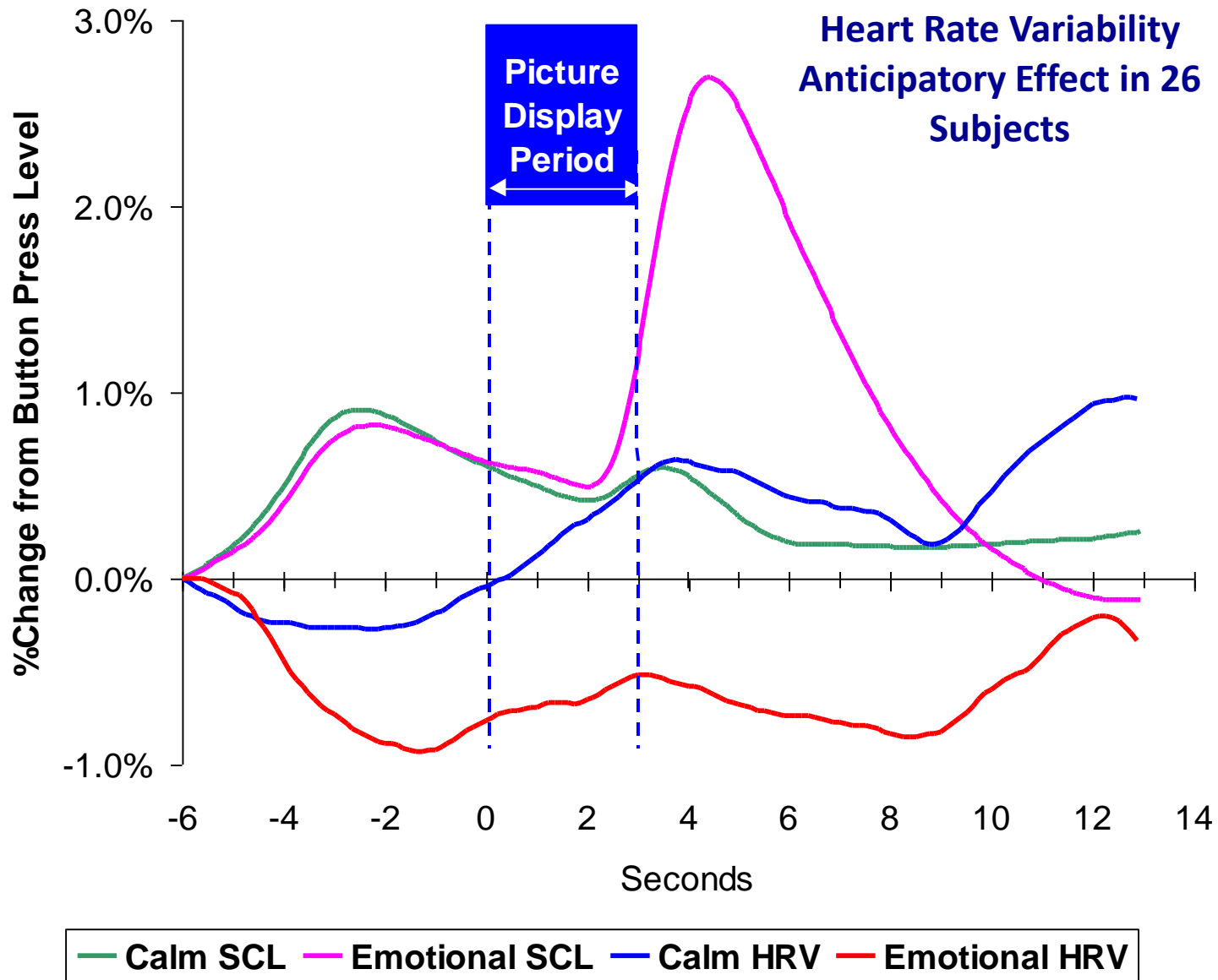
Computer
displays
picture

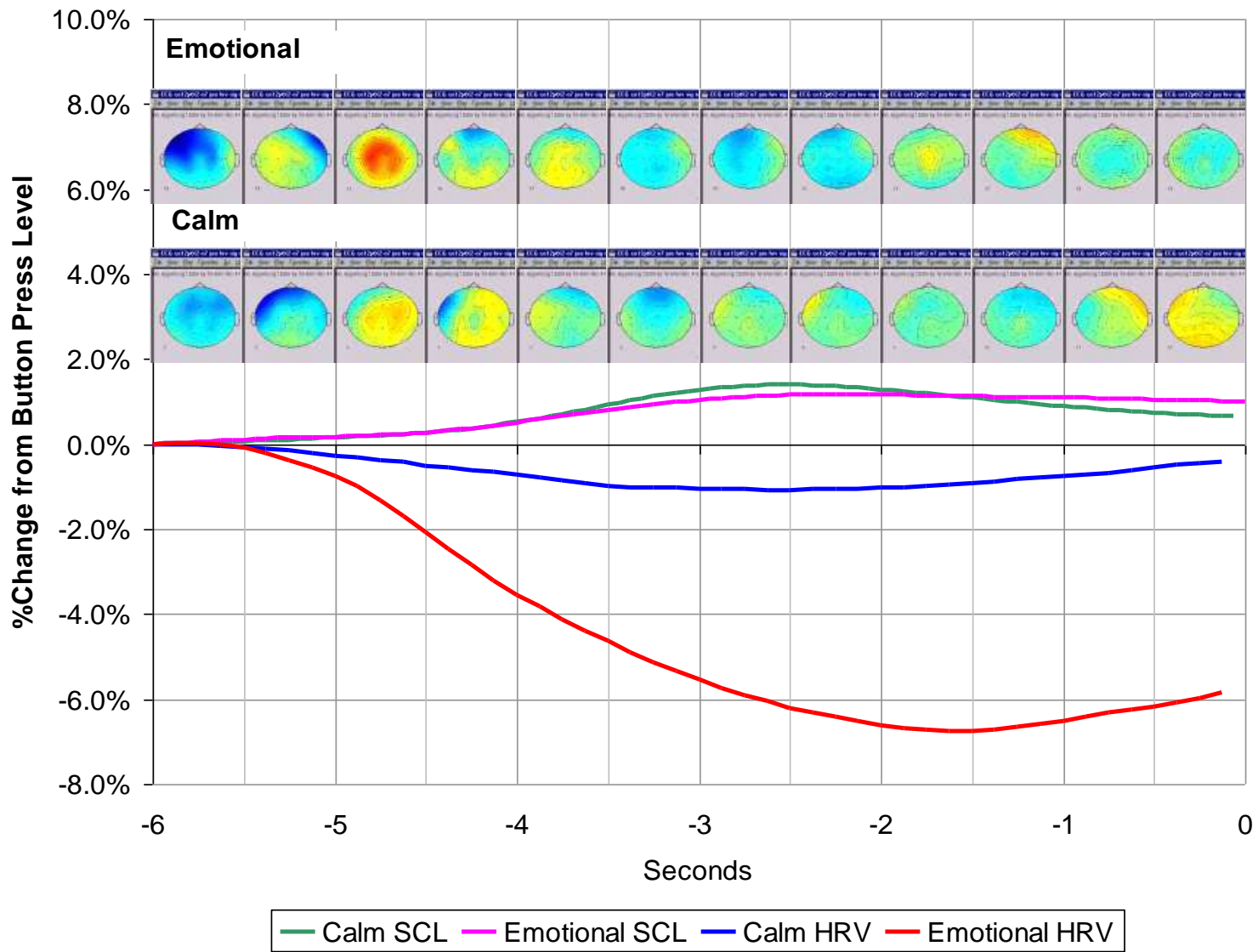
Screen goes
blank



← Physiological data recording →

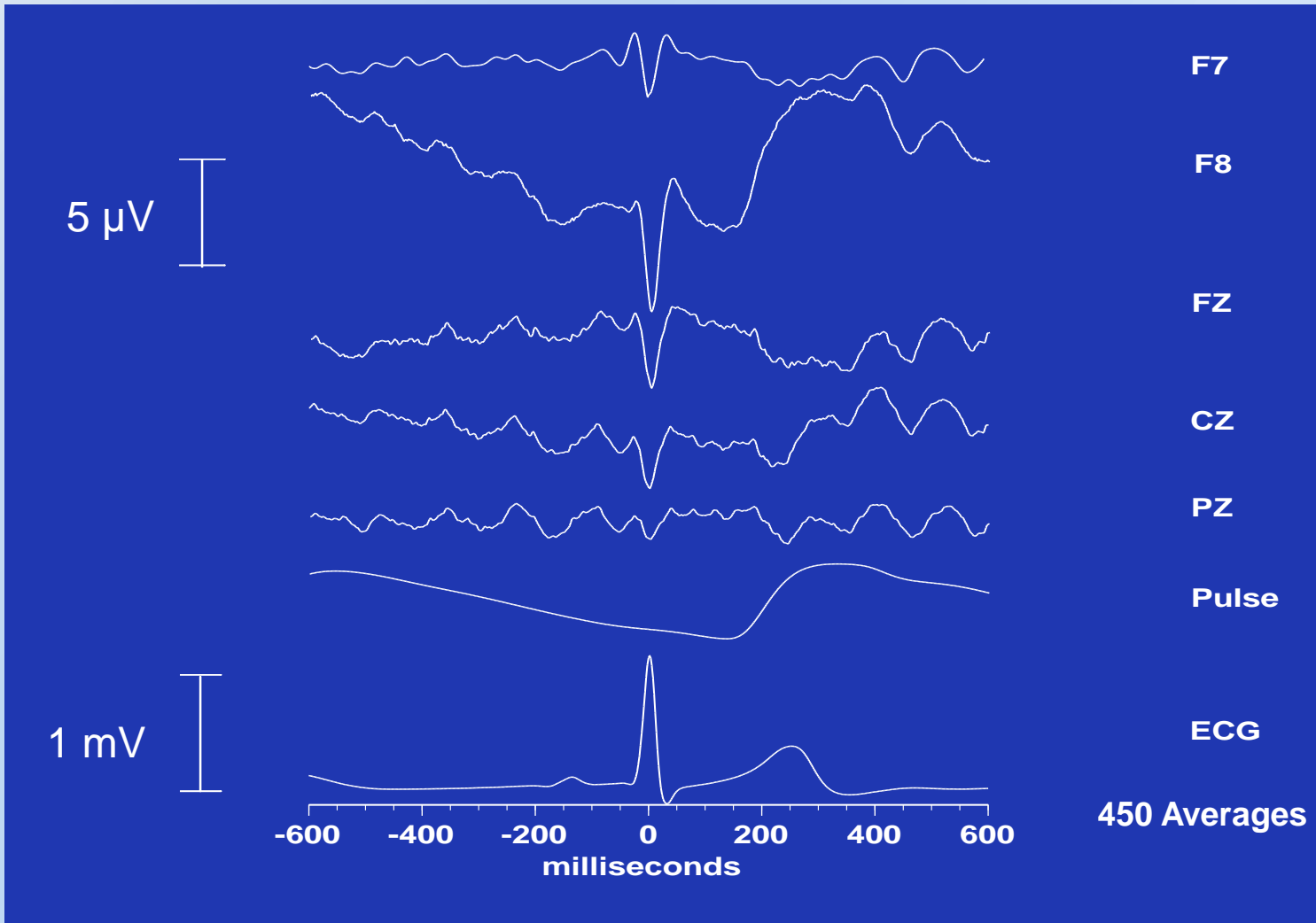
Heart Rate Variability Anticipatory Effect in 26 Subjects





The Brain's Response to the Heart's Signals

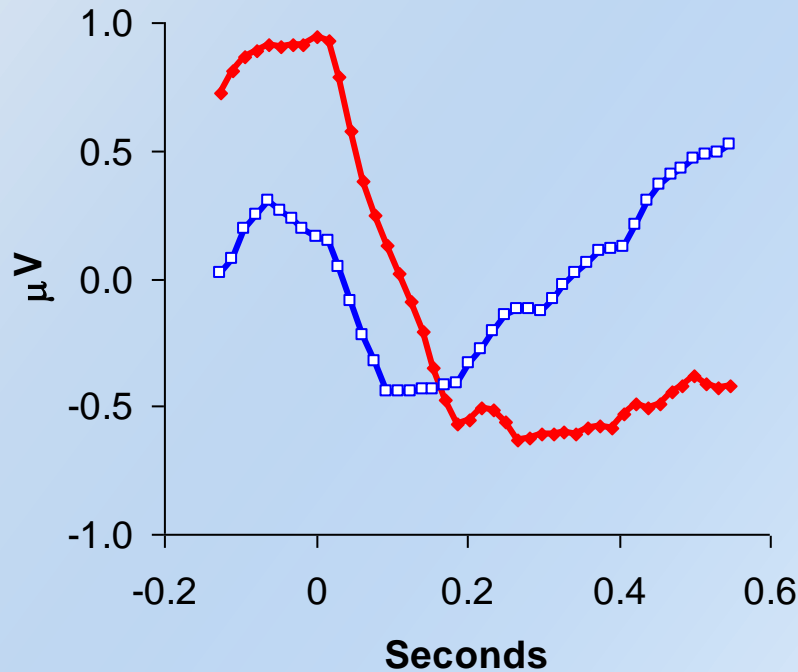
(Heartbeat Evoked Potentials)



Heartbeat Evoked Potentials at Frontal Cortex: Normal vs. Coherent State

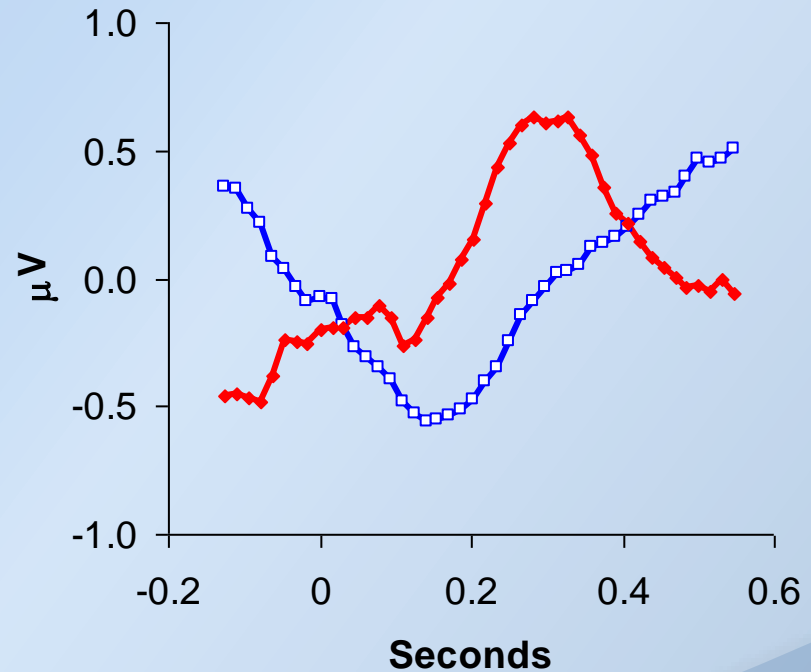
Before Calm and Emotional Visual Stimulus

FP1 : Normal physiological state

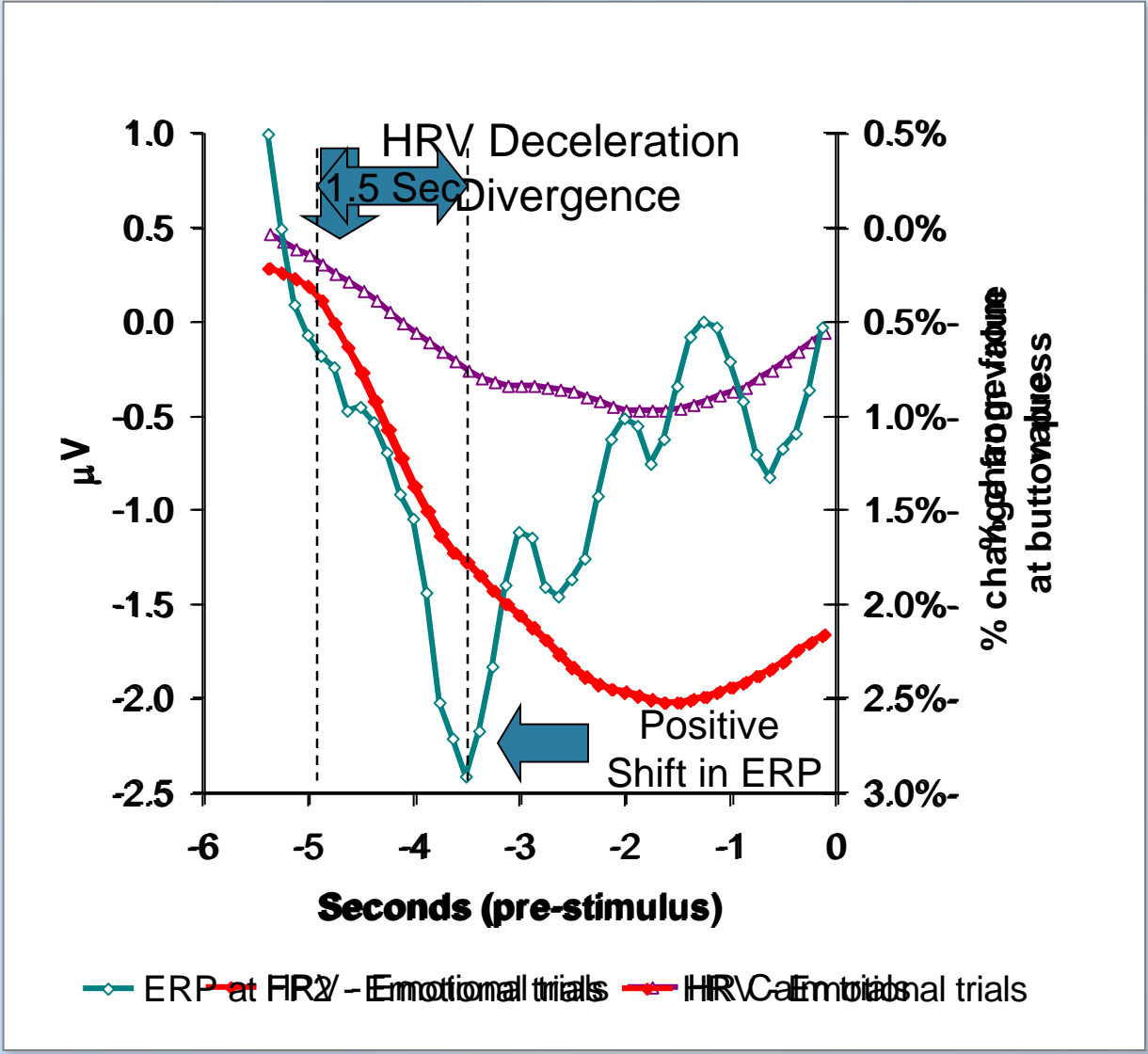


—□— Calm —◆— Emotional
Female sub group

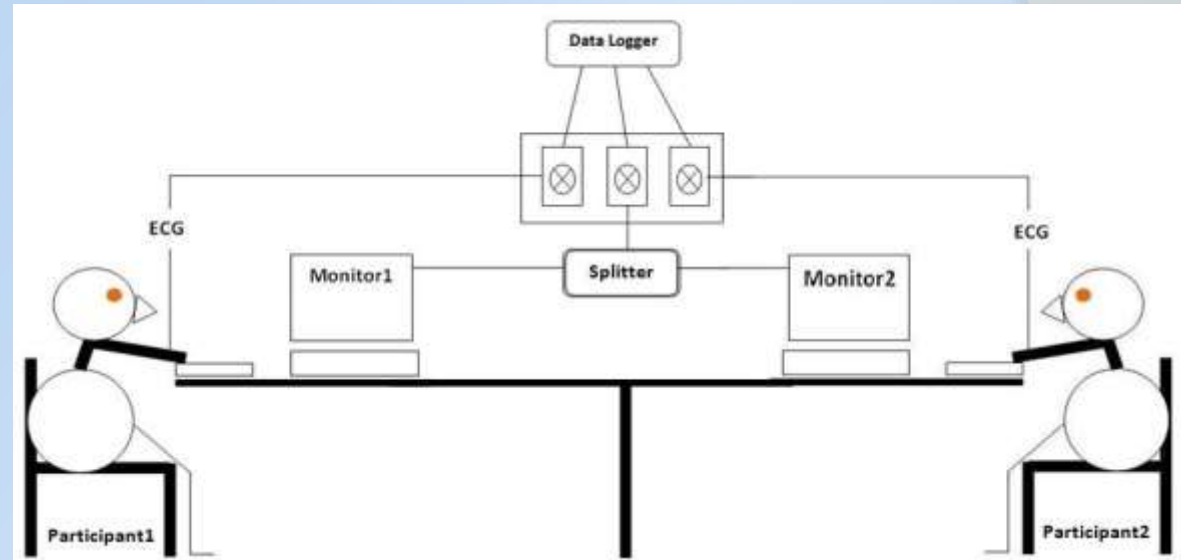
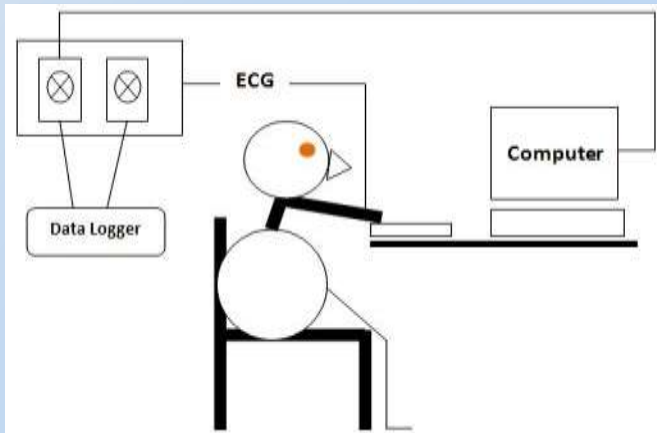
FP1 : Coherent physiological state



—□— Calm —◆— Emotional

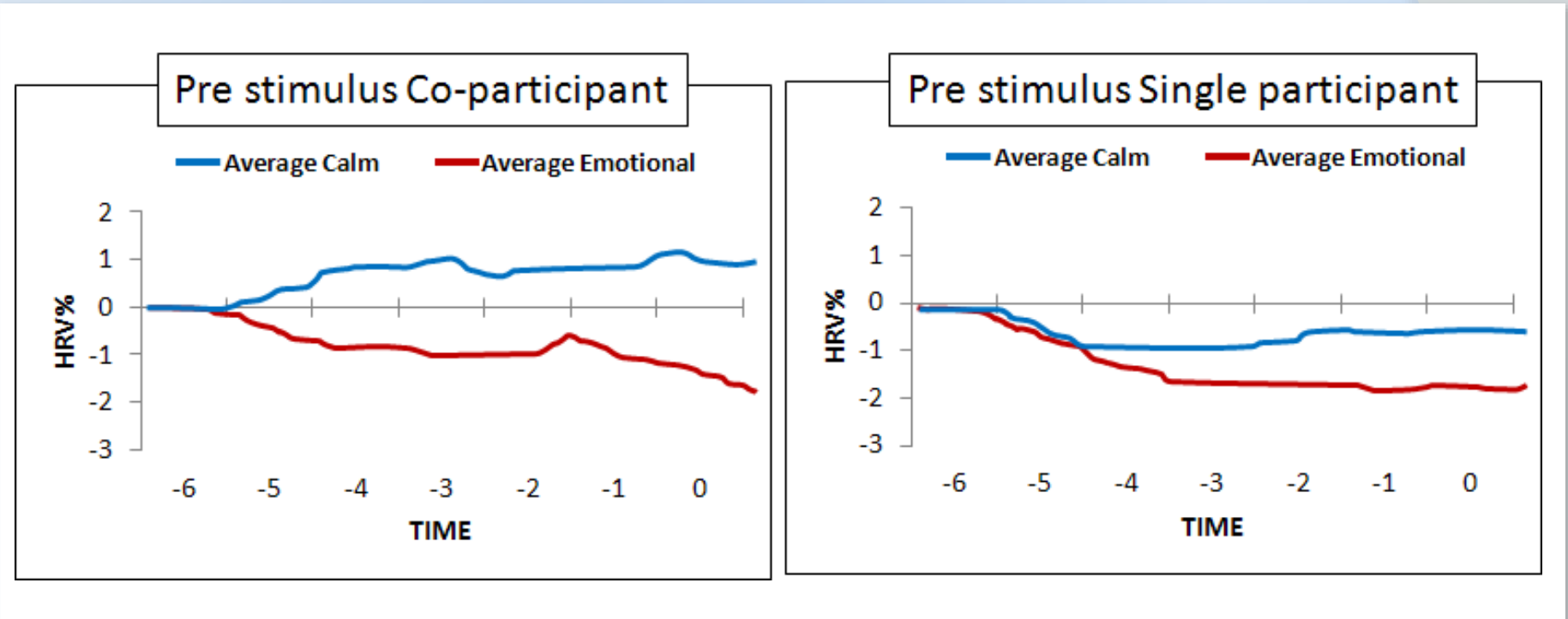


Nonlocal Intuition: A Replication and Parried Participants Effects Using Electrophysiological Measures



*Saeed Rezaei Toroghi, Maryam Mirzaei, Mohammad Reza Zali,
Faculty of Entrepreneurship, University of Tehran*

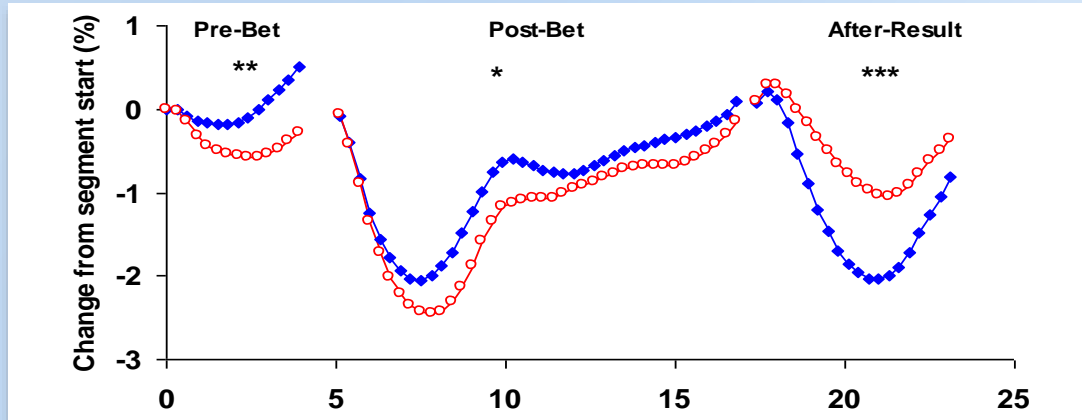
Nonlocal Intuition: A Replication and Parried Participants Effects Using Electrophysiological Measures



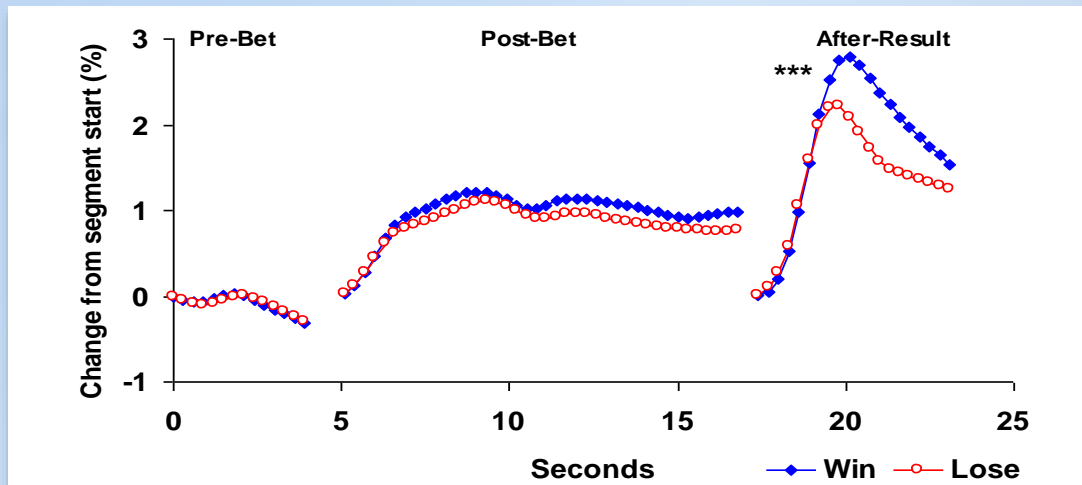
*Saeed Rezaei Toroghi, Maryam Mirzaei, Mohammad Reza Zali,
Faculty of Entrepreneurship, University of Tehran*

Multi-Session Gambling Paradigm Study: Grand Averages (13 participants. Across 8 sessions over 8 weeks)

Beat-to-Beat
Heart Rate

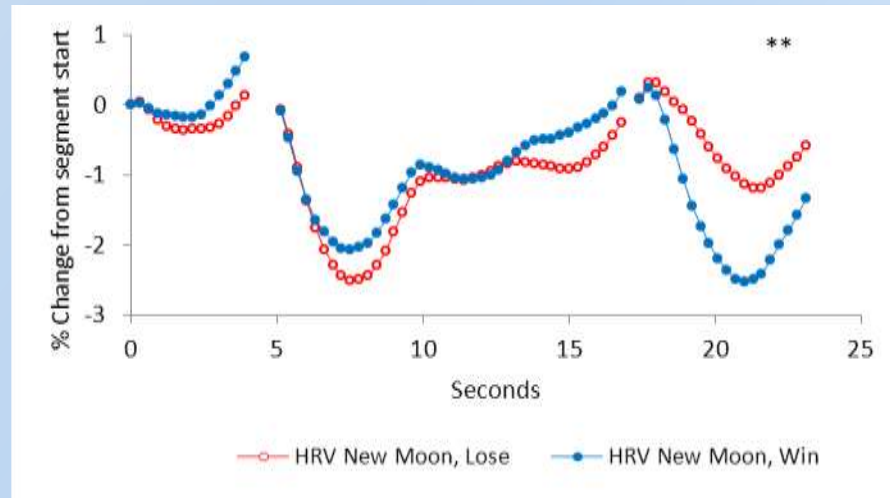


Skin
Conductance
Level

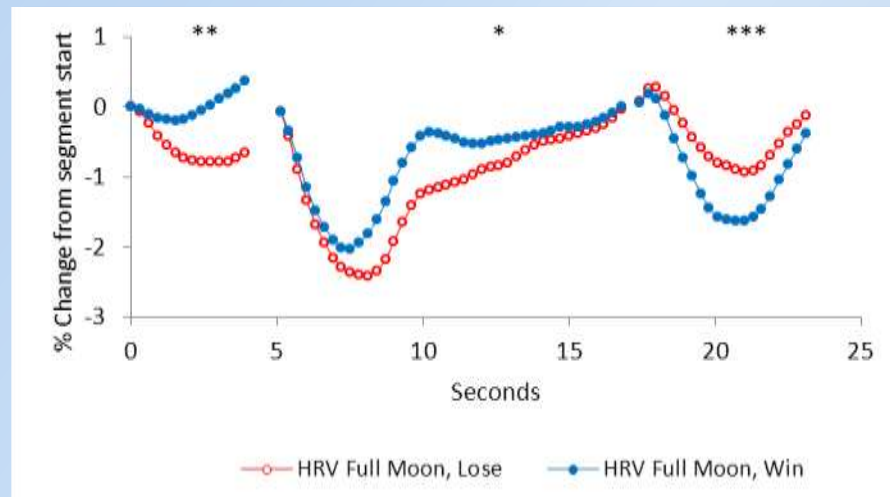


Grand Averages by Moon Phase — Heart Rhythm RR Intervals

New Moon

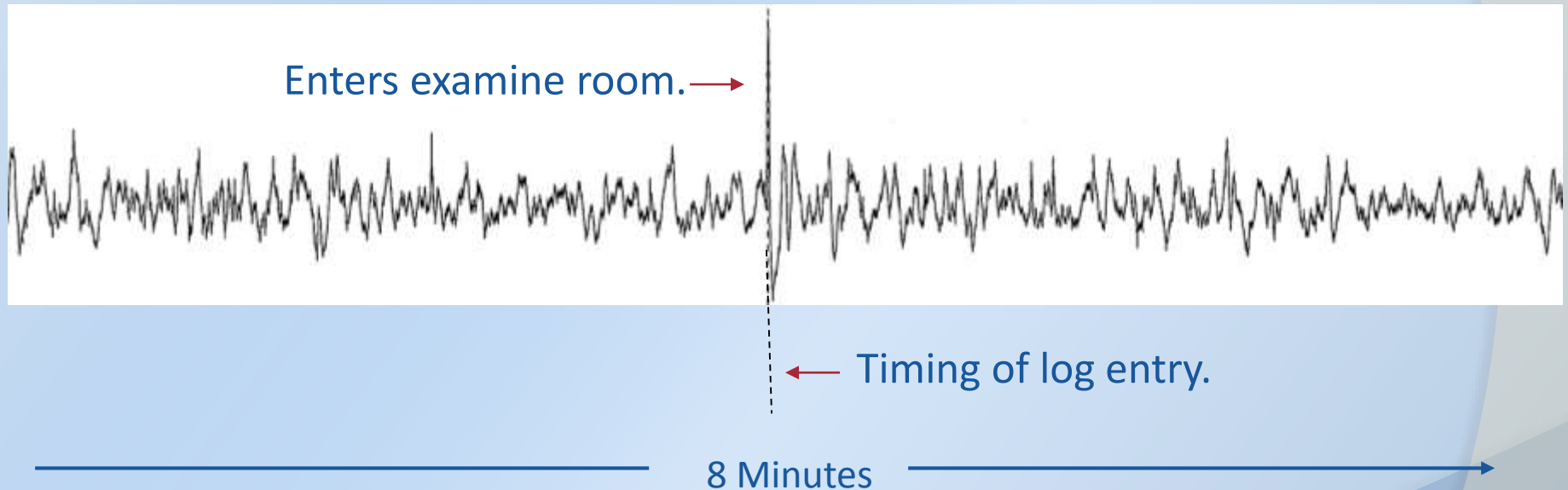


Full Moon



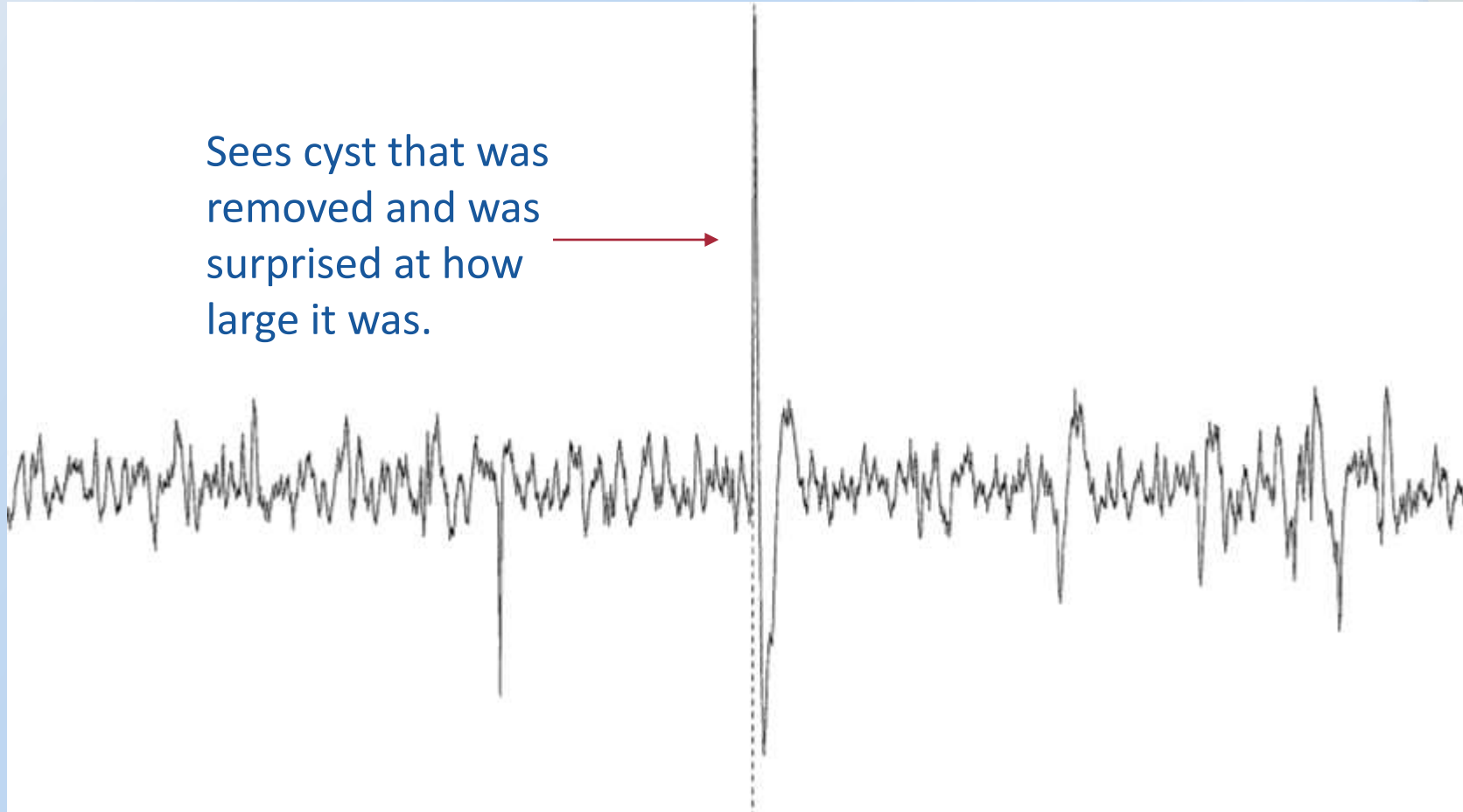
Non-local Communication: Cells Response to Donor's Emotional Activity 10 Miles Away

(Oral Leukocyte Cells)



Cell Recordings and Response to Donor's Emotional Activity 10 Miles Away

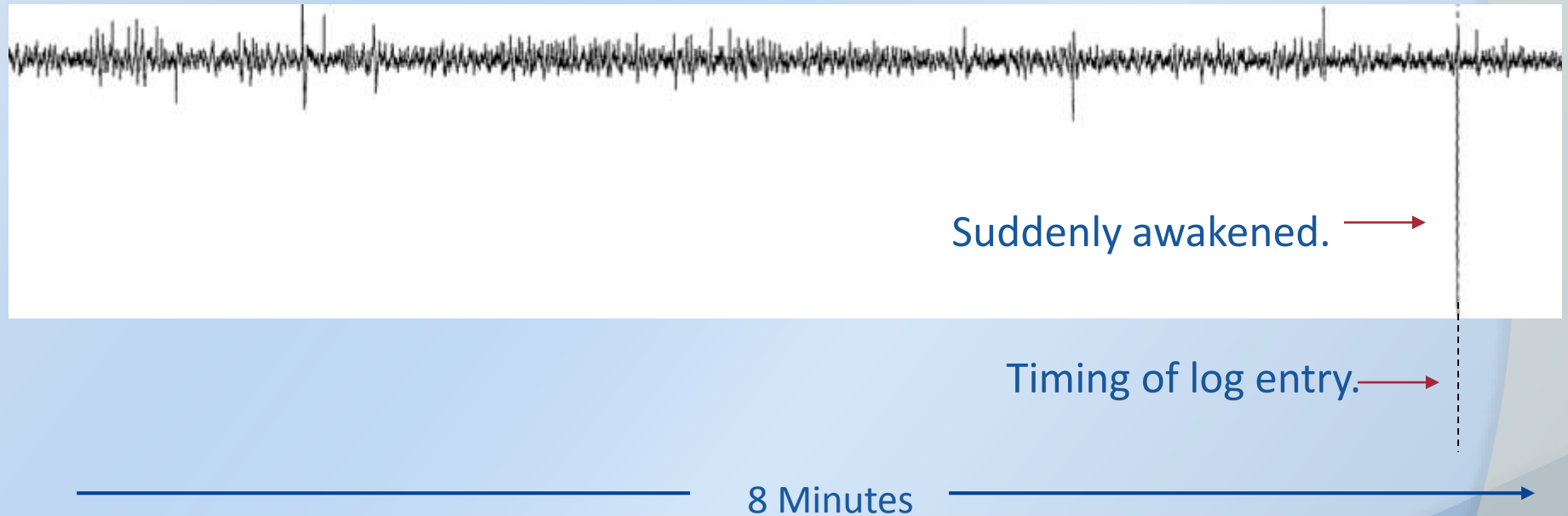
Sees cyst that was removed and was surprised at how large it was.



8 Minutes

Cell Recordings and Response to Donor's Emotional Activity 10 Miles Away

Taking a nap after trip to doctors office.



Conclusions of Intuition Research

- These effects suggest that intuitive processes have access to a field of information that is not limited by the boundaries of time and space – the energetic or spiritual heart.
- Such intuitive experiences suggest that some aspect of our perceptual apparatus is continuously scanning the future.

The Intuitive Heart

Given the findings of the heart's role in intuitive processes, it is not surprising that one of the strongest common threads uniting the views of diverse cultures and spiritual traditions throughout history is the universal regard for the human heart as the source of love, intuition and wisdom.

Keys to Accessing Practical Intuition

We can learn to more frequently access our intuitive intelligence, that inner sense of knowing, so we can make more intelligent choices, moment by moment.

- Shifting into a coherent state to quiet mental chatter and emotional unrest
- Paying attention to intuitive feelings and perceptions

THE GLOBAL COHERENCE INITIATIVE

Measuring Human-Earth Interactions


global coherence INITIATIVE



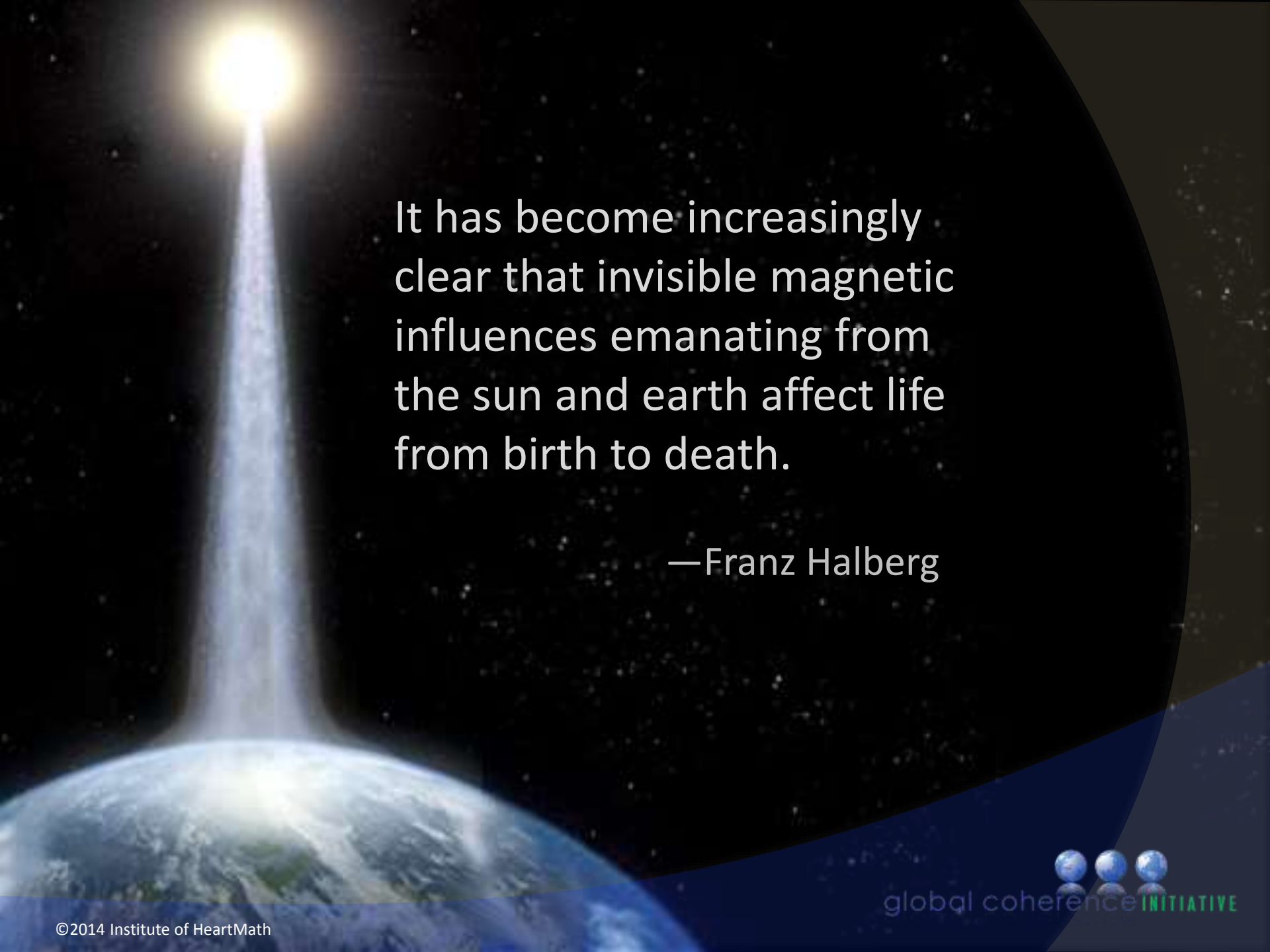


A SCIENCE-BASED, CO-CREATIVE PROJECT TO UNITE PEOPLE IN HEART-FOCUSED CARE AND INTENTION, TO FACILITATE THE SHIFT IN GLOBAL CONSCIOUSNESS FROM INSTABILITY AND DISCORD TO BALANCE, COOPERATION AND ENDURING PEACE.

Hypotheses

1. Human and animal health, cognitive functions, emotions and behavior are affected by planetary magnetic and energetic fields.
2. The earth's magnetic fields are carriers of biologically relevant information that connects all living systems.
3. Thus, we each affect the global information field.
4. Large numbers of people creating heart-centered states of care, love, and compassion will generate a more coherent field environment that can benefit others and help offset the current planetary-wide discord and incoherence.





It has become increasingly clear that invisible magnetic influences emanating from the sun and earth affect life from birth to death.

—Franz Halberg

Rhythms in Earth's Magnetic Field Affect:

- Brain and nervous system activity.
- Performance of tasks.
- Blood pressure, heart rate, hormones.
- Traffic violations and accidents.
- Number of hospital admissions for heart attacks and strokes.
- Societal conflicts and criminal acts.

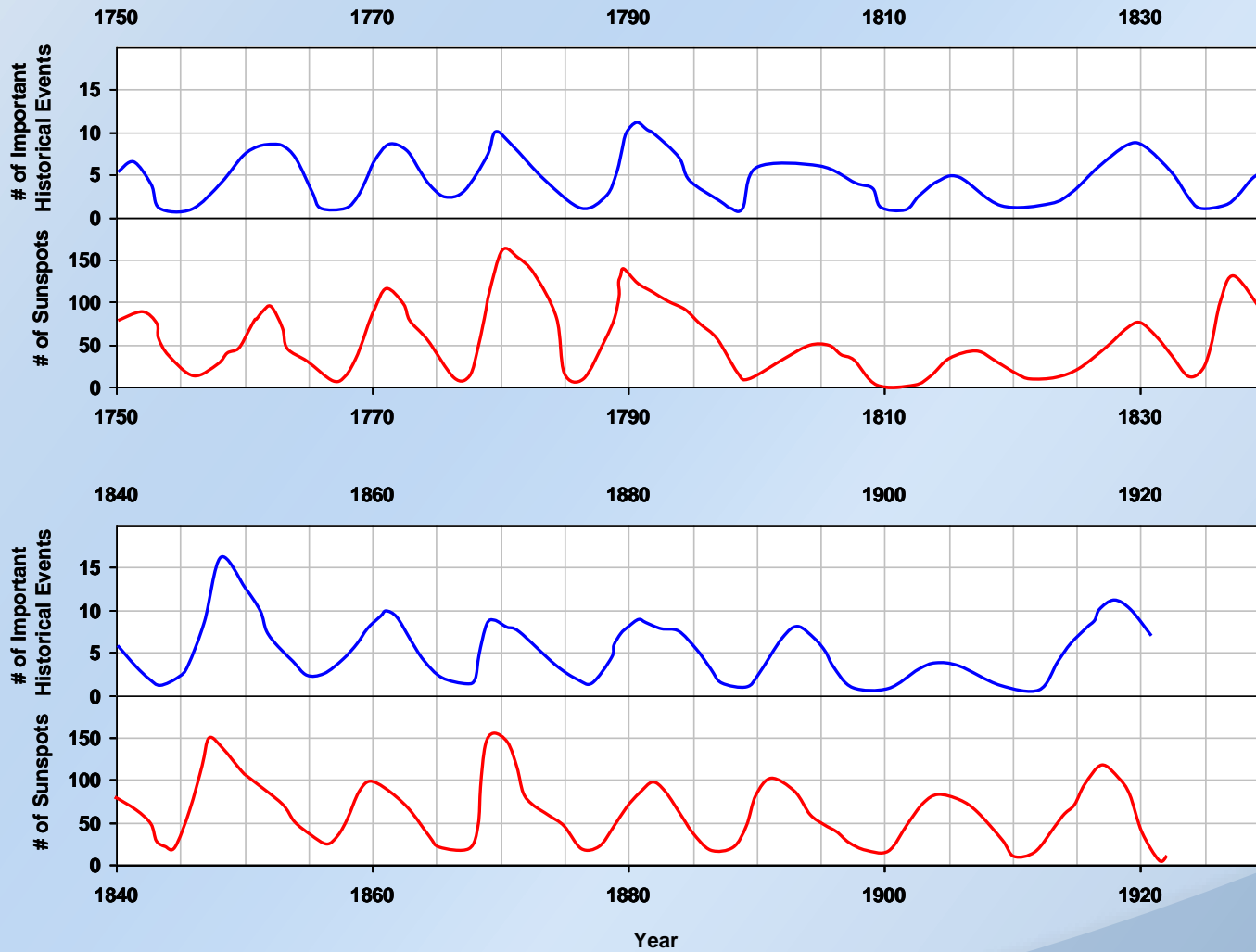
Of all the body systems, changes in geomagnetic Conditions most affect the rhythm of the heart (HRV).

During World War I, Alexander Tchijevsky, a Russian professor of Astronomy noticed that more severe battles occurred during peak sunspot periods.

Intrigued by the connection of human behavior and solar physics, Tchijevsky constructed an “*Index of Mass Human Excitability*”.



Solar Activity and Human Activity Levels



Redrawn from: A L Tchijevsky, Physical Factors of the Historical Process

Geomagnetic Disturbances Can Evoke Emotional Storms

- Mental Confusion
- Frustration
- Impatience
- Irritation
- Fatigue
- Anxiety



Bursts of Human Creativity Correlate with Solar Activity

The periods of greatest levels of Human flourishing creativity in science and the arts were *clearly shown to occur during solar activity peaks.*

Suitbert Ertel -1997



global coherence **INITIATIVE**

Listening in on the Earth's Energetic Systems

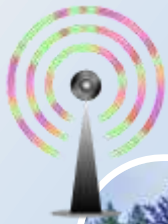


global coherence **INITIATIVE**

What is the Global Coherence Monitoring System?

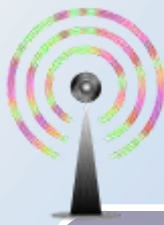


A global network of sensitive magnetic field detectors that monitor fluctuations in the Earth's geomagnetic fields and resonances in the ionosphere.



GCMS 1: Boulder Creek, California



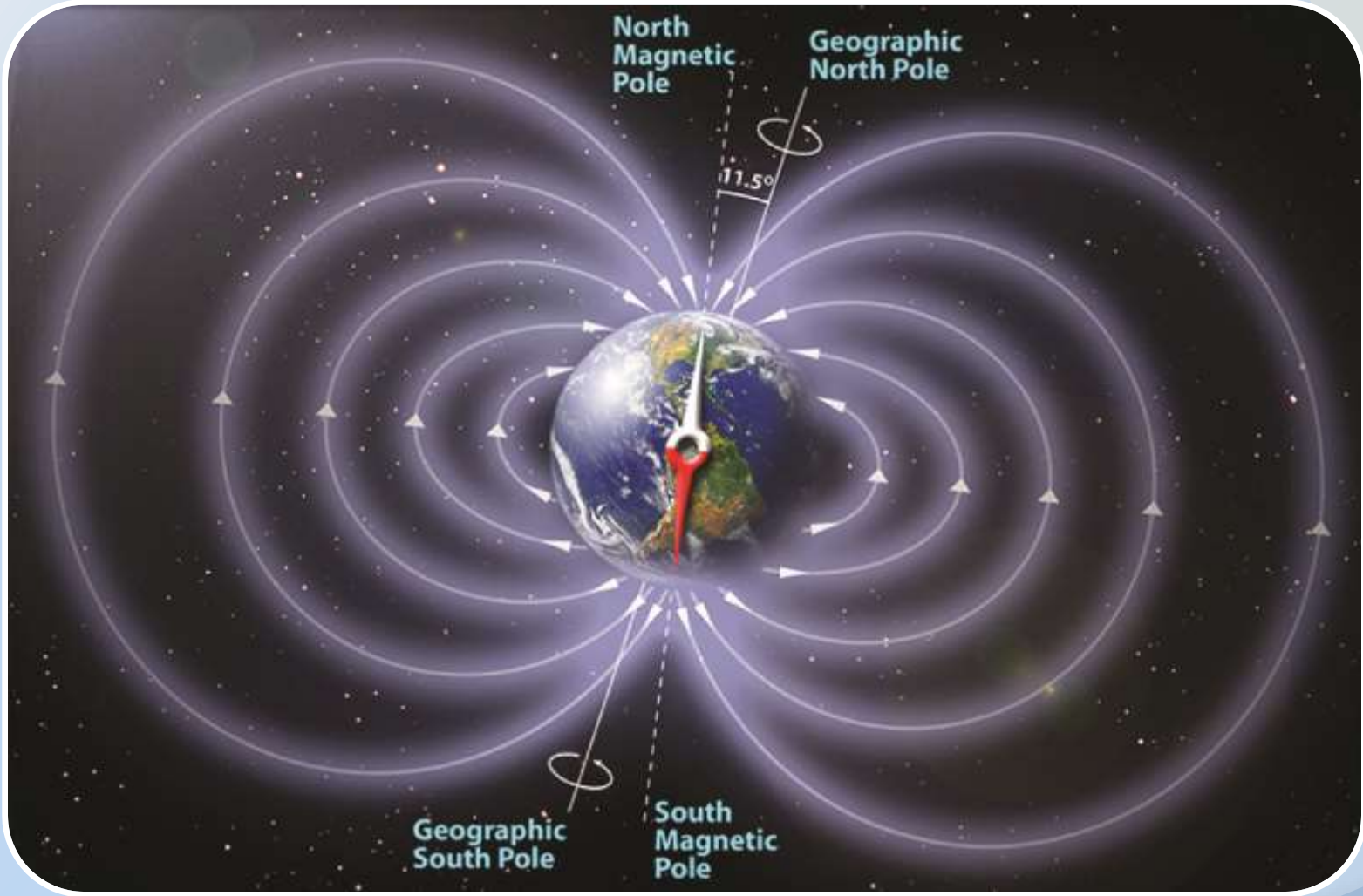


GCMS 2: Saudi Arabia





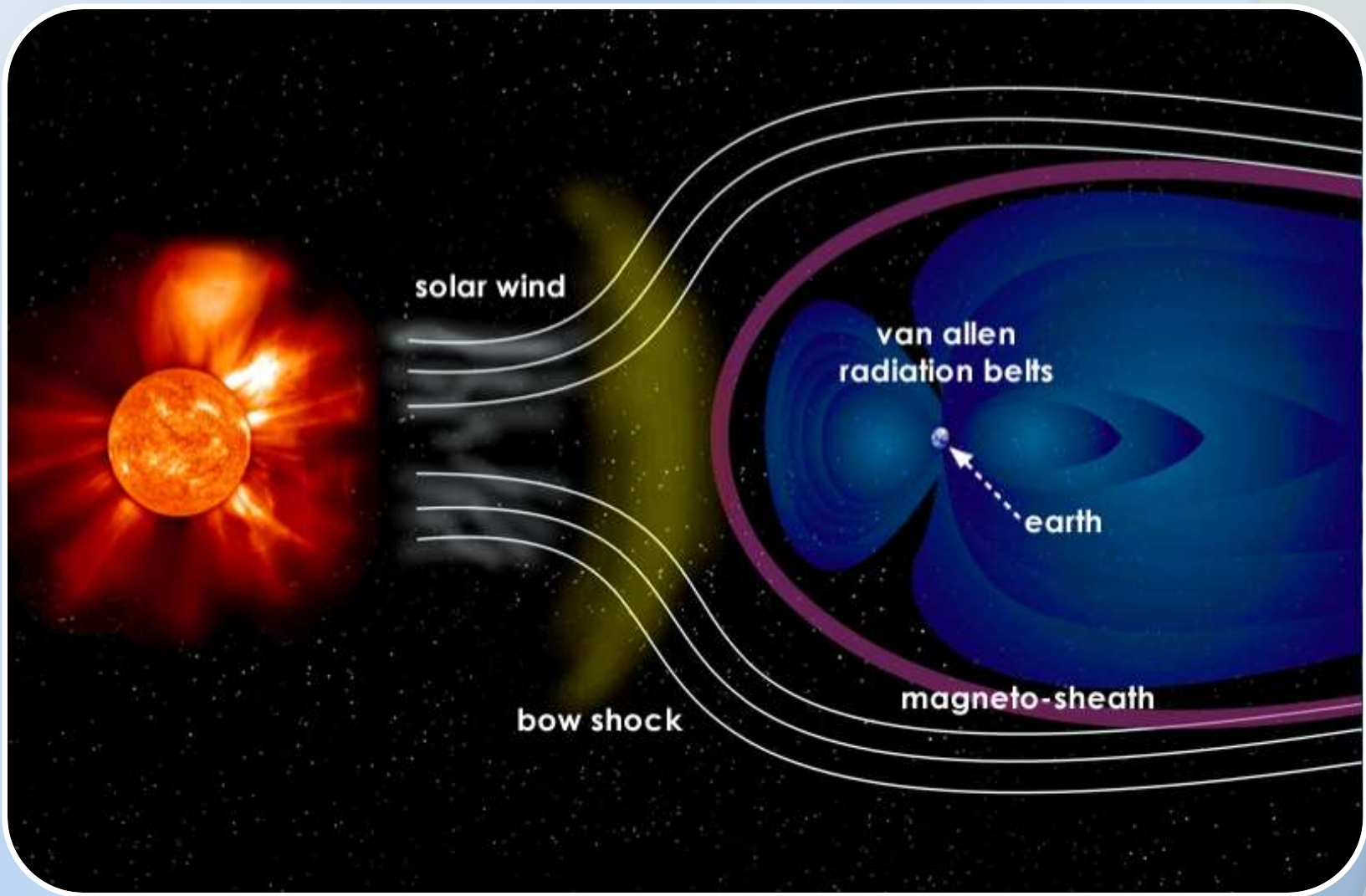
global coherence **INITIATIVE**



2014 Institute of HeartMath

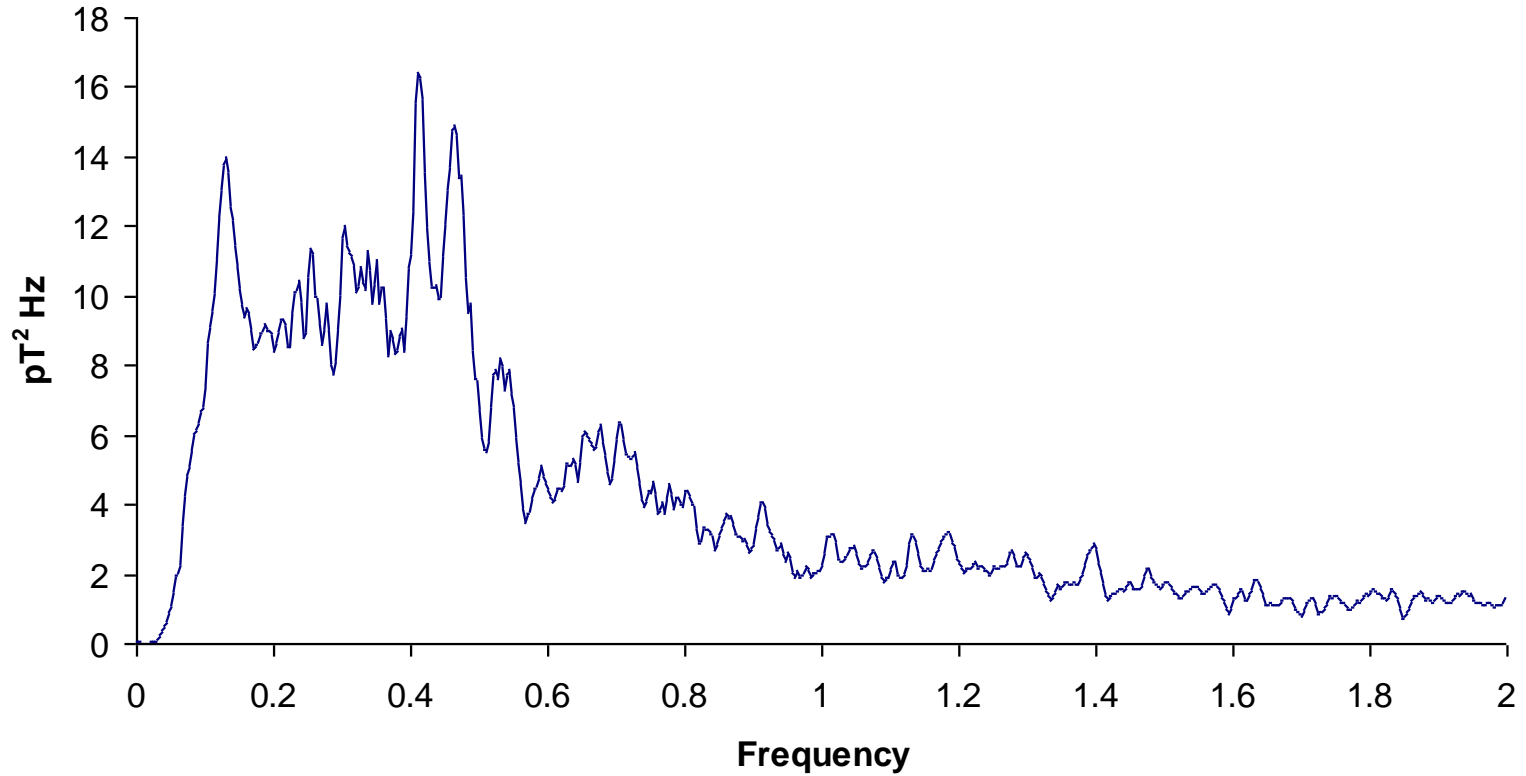


global coherence **INITIATIVE**

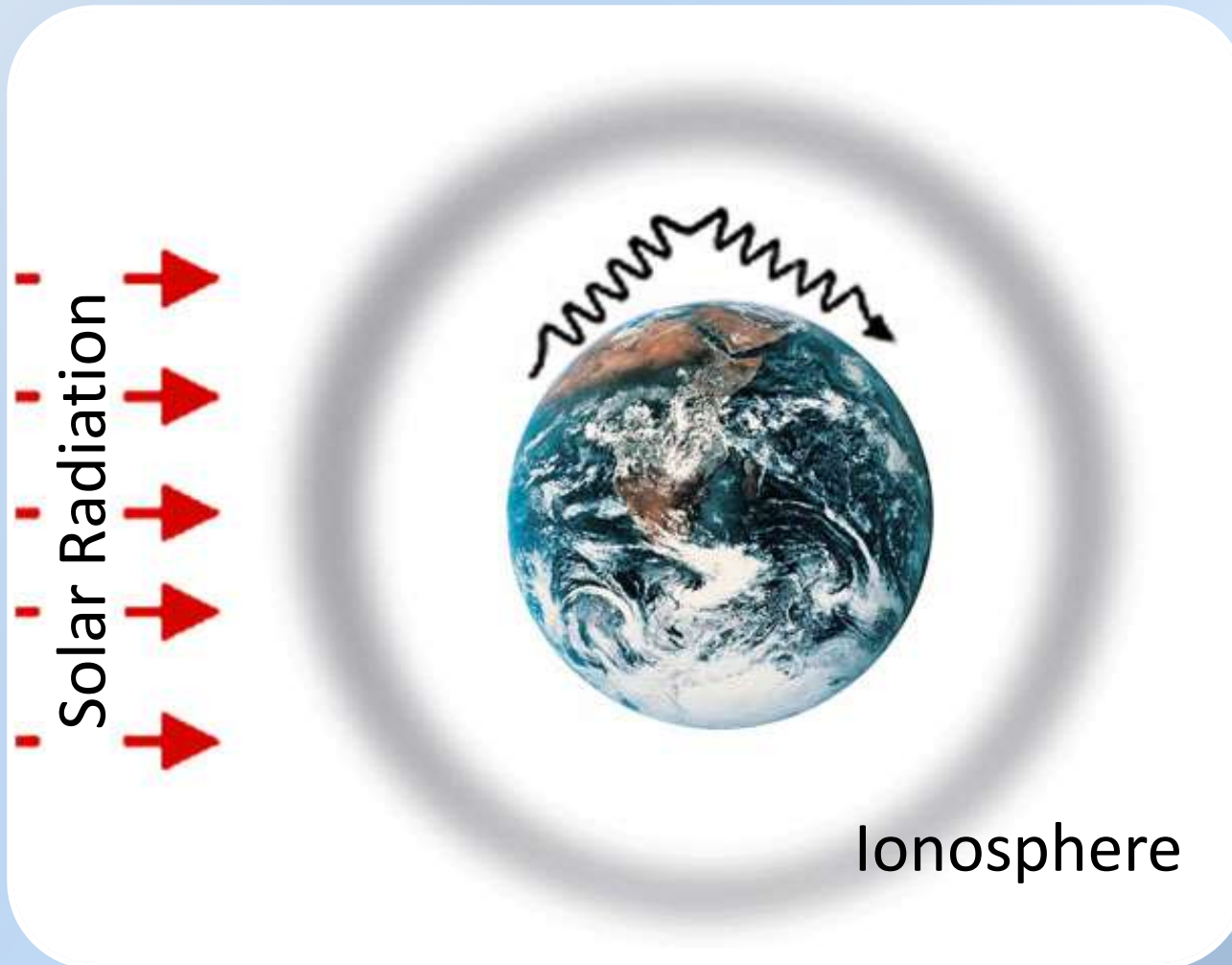


global coherence **INITIATIVE**

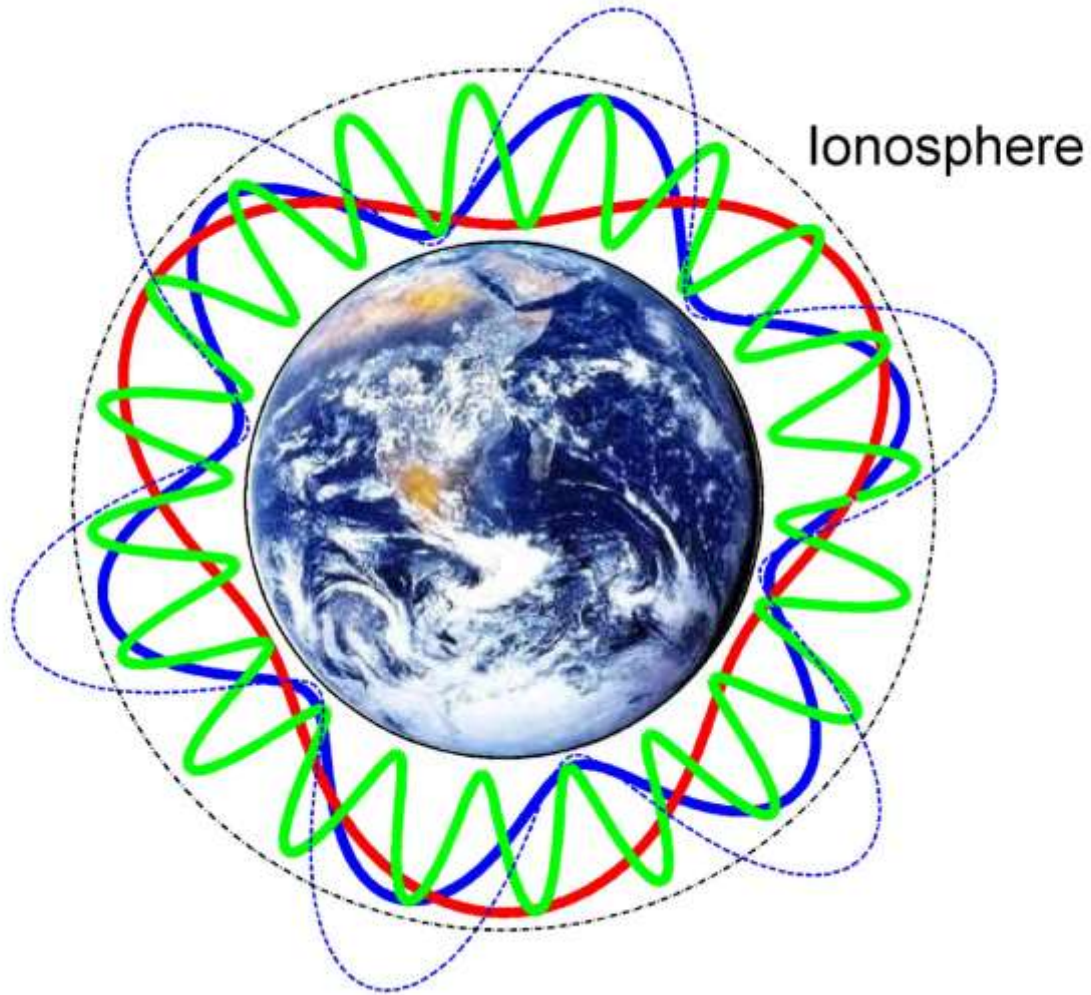
**July 5, 2009 5 AM - 6 AM UTC
(5 minute Average PSD)**



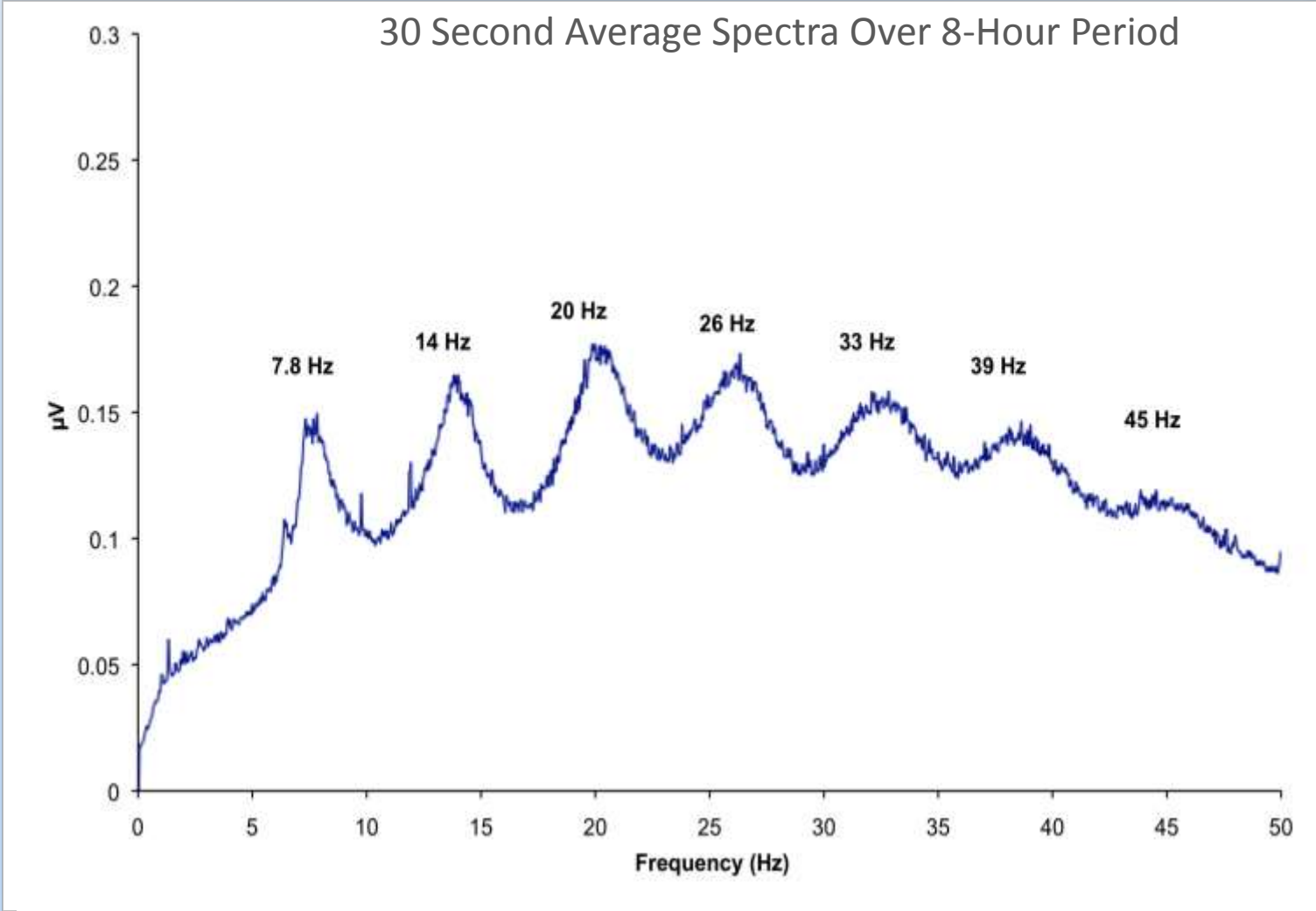
Ionospheric Magnetic Wave Propagation



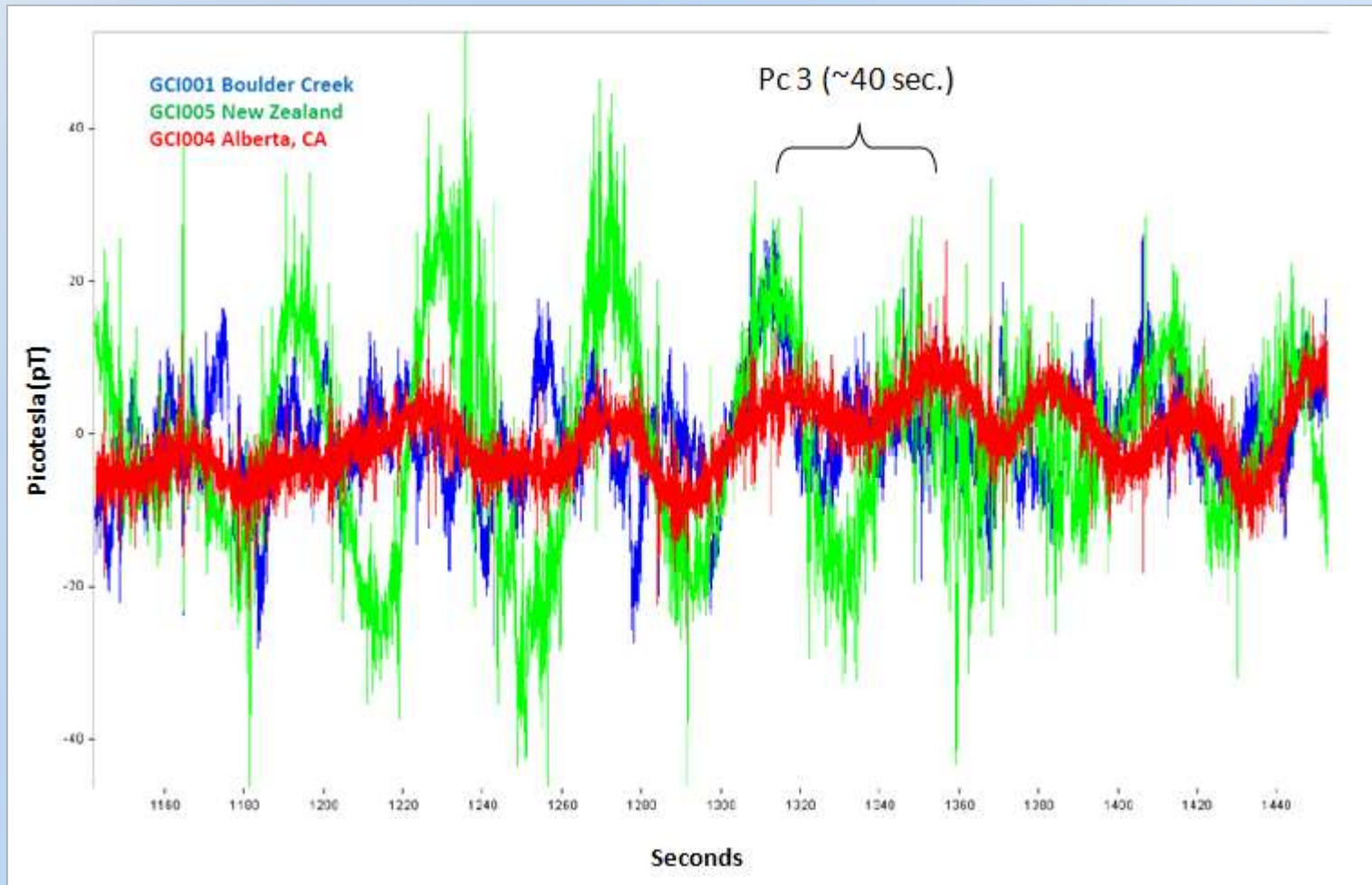
Schuman Resonances



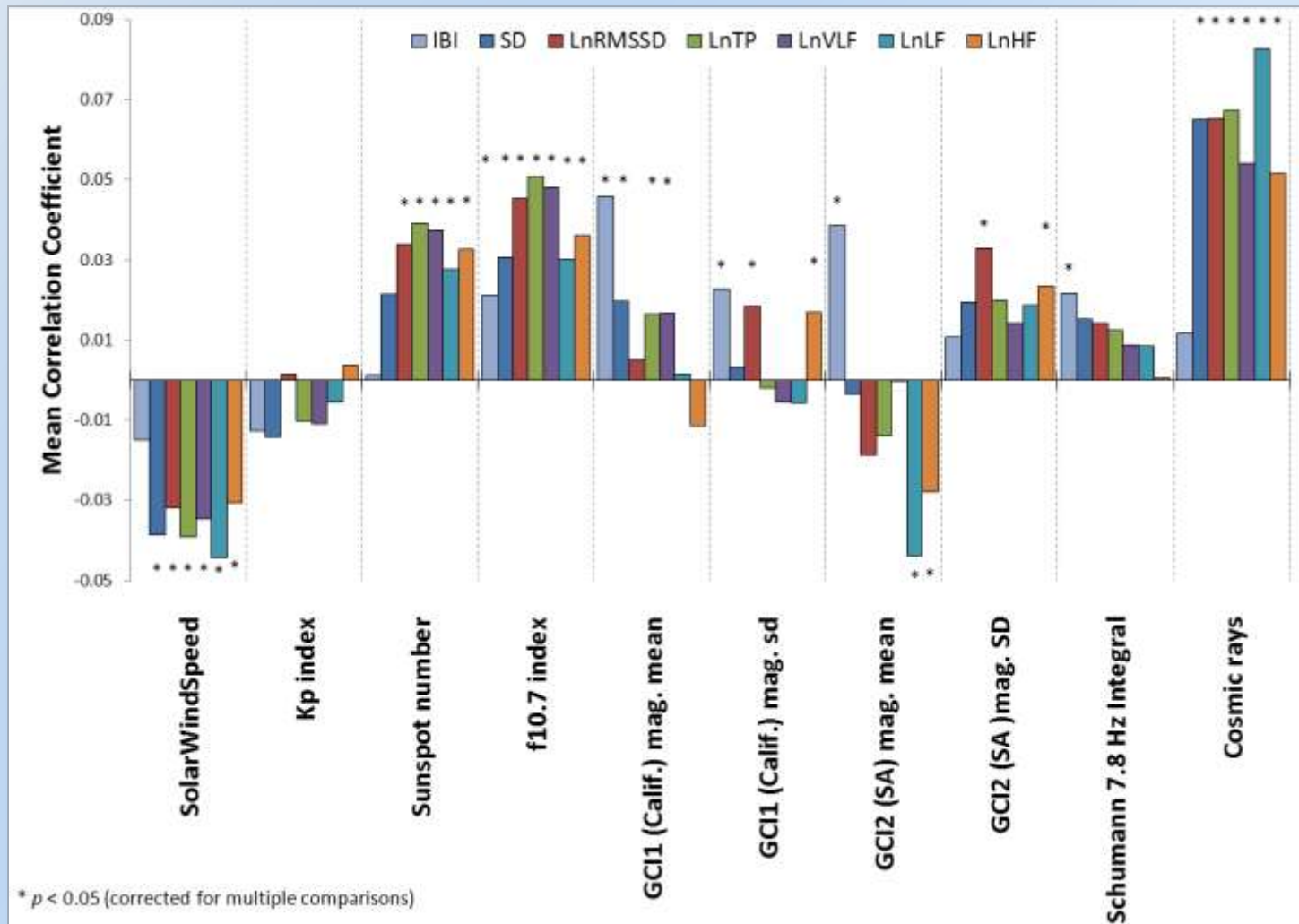
Schuman Resonances



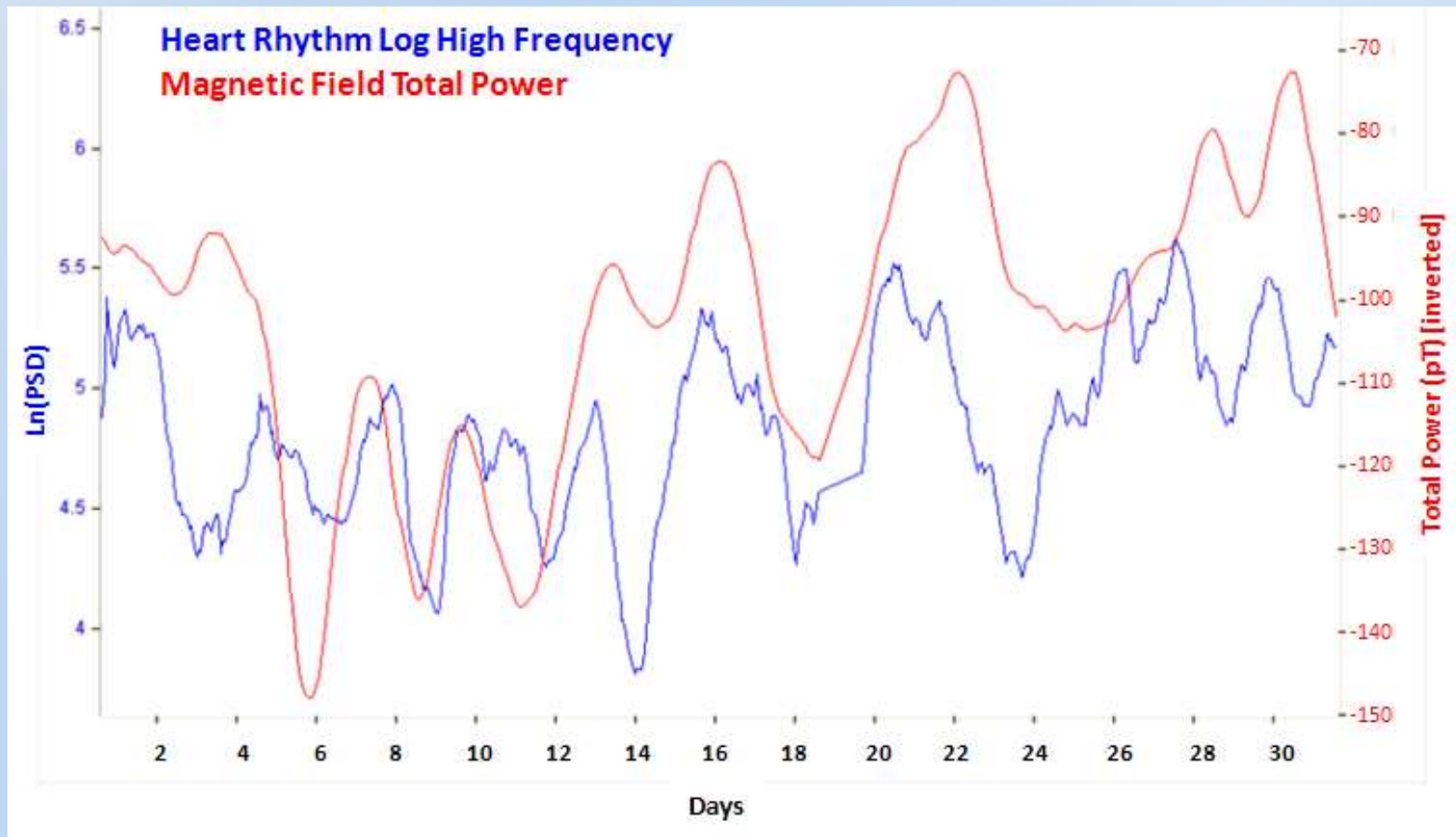
The Global Magnetic Field Environment



Solar/Geomagnetic and HRV Correlations



Relationship Between HRV and Earth's Magnetic Field Activity



Hypothesis:

The earth's magnetic fields are carriers of biologically relevant information that connects all living systems.

We each affect the global information field.



Developments in Implicit Computational Complexity

5th International Workshop DICE2010

IOP Publishing

Journal of Physics: Conference Series **306** (2011) 012007

doi:10.1088/1742-6596/306/1/012007

DNA waves and water

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INFN, Gruppo Collegato Salerno, I-84100 Salerno, Italy

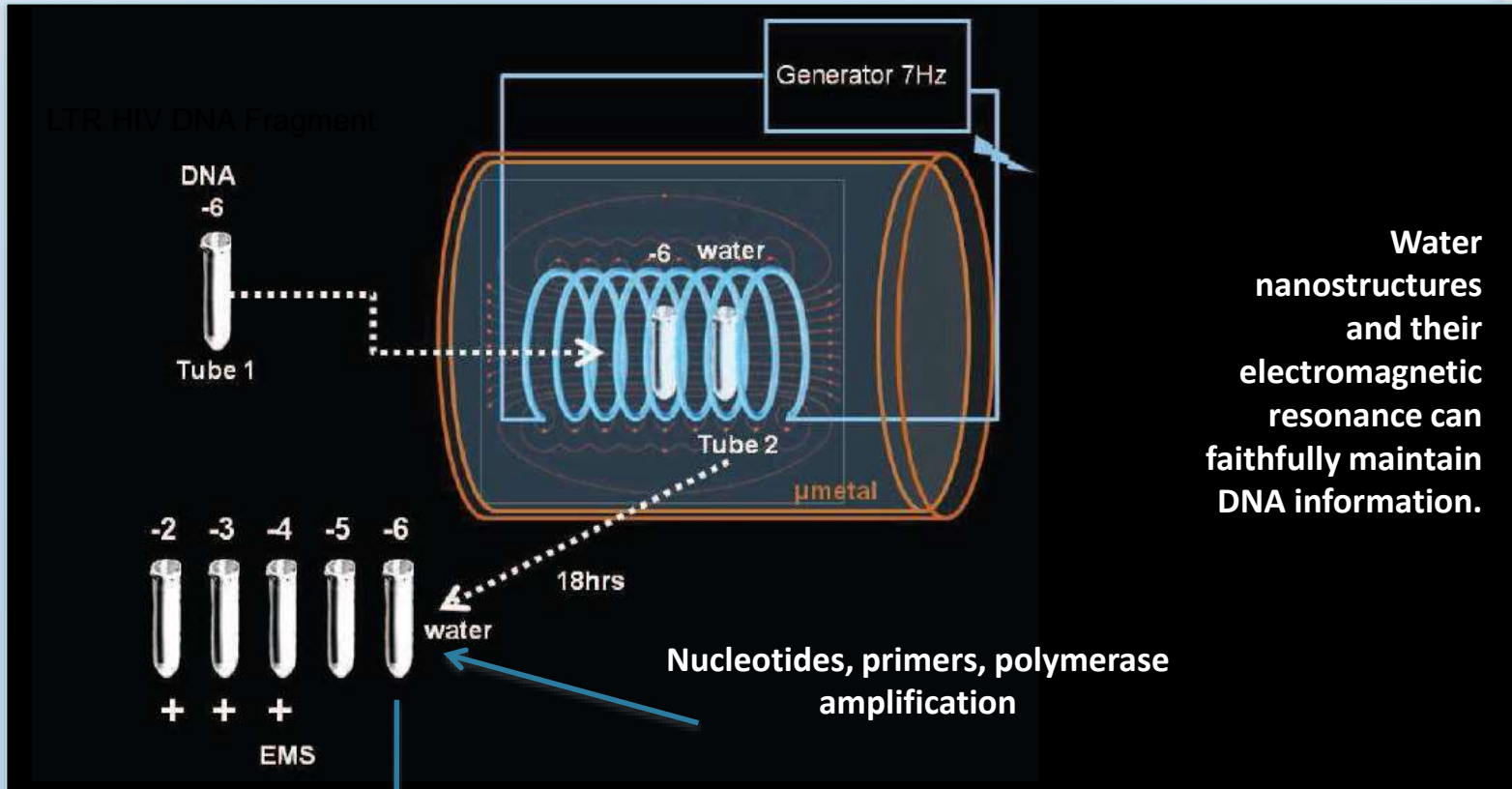
E-mail: vitiello@sa.infn.it

Water can be “Signalized” Non-Locally with Biological Information to Generate Coherent Domains Capable of Quantum Signaling and Information Transfer



global coherence INITIATIVE

Transmission of DNA Information through Electromagnetic Waves

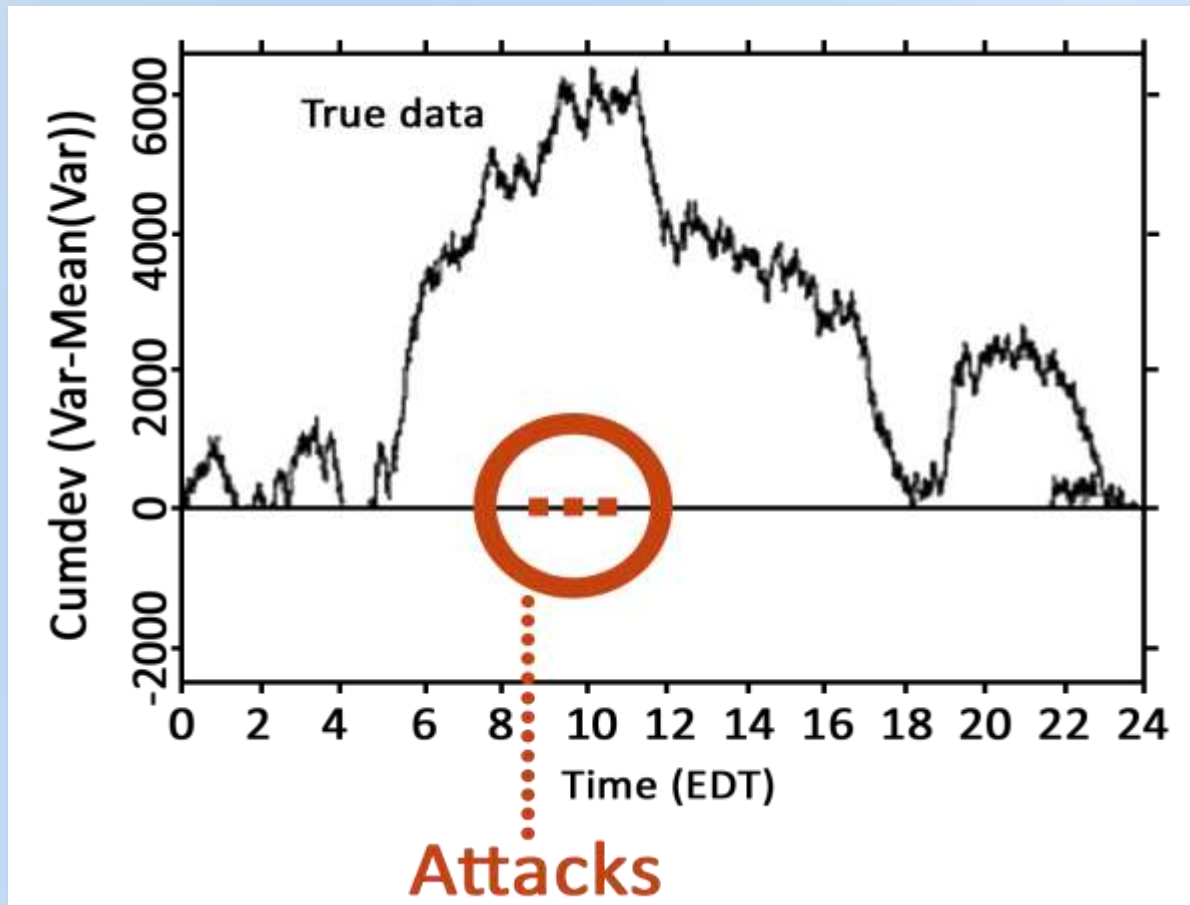


Water nanostructures and their electromagnetic resonance can faithfully maintain DNA information.

DNA with 98% sequence identical to the original DNA sequence.

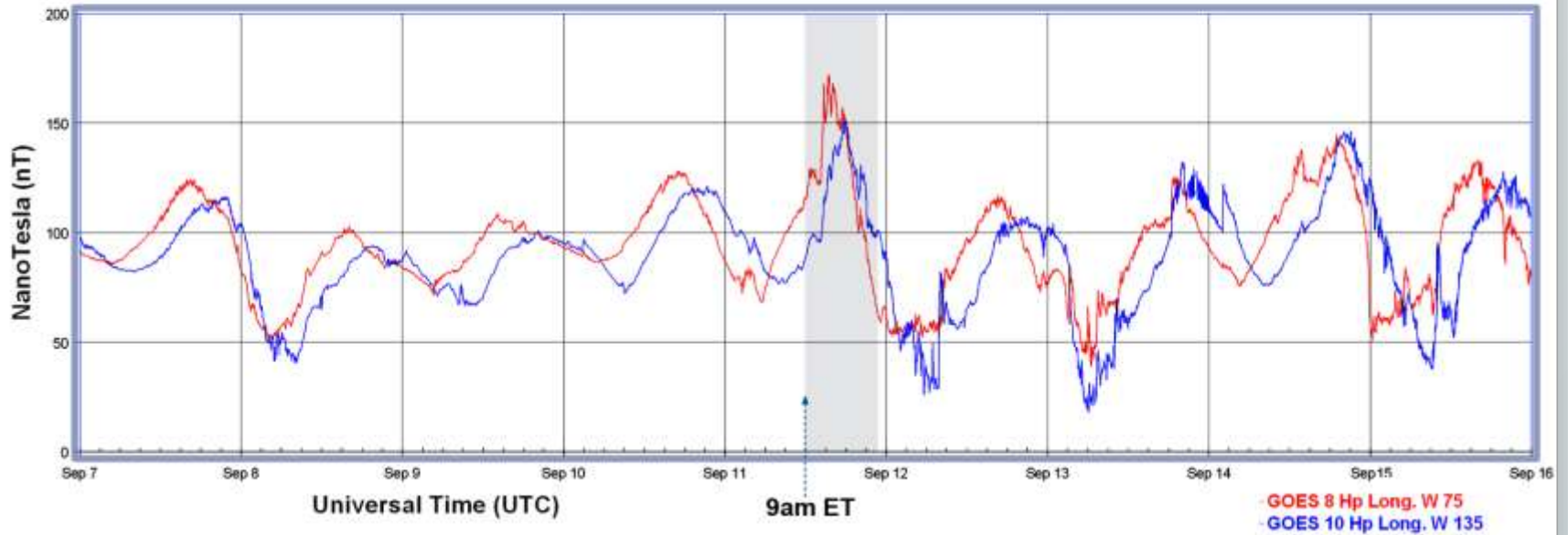
Evidence of Collective Intuition: RNG Data from GCP Sites Around the World per 9/11/01 Terrorist Attacks

(Nelson,2002)

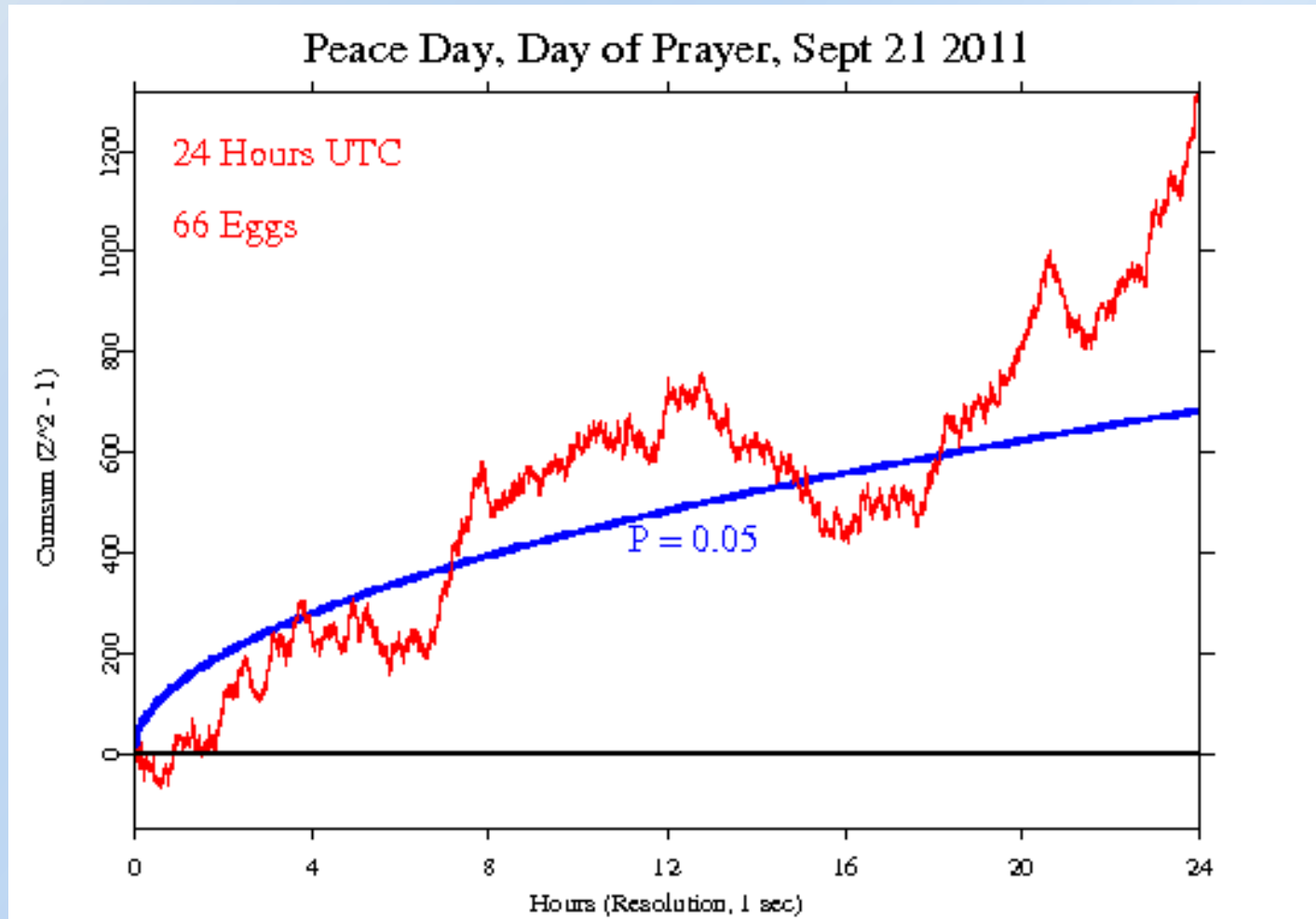


global coherence INITIATIVE

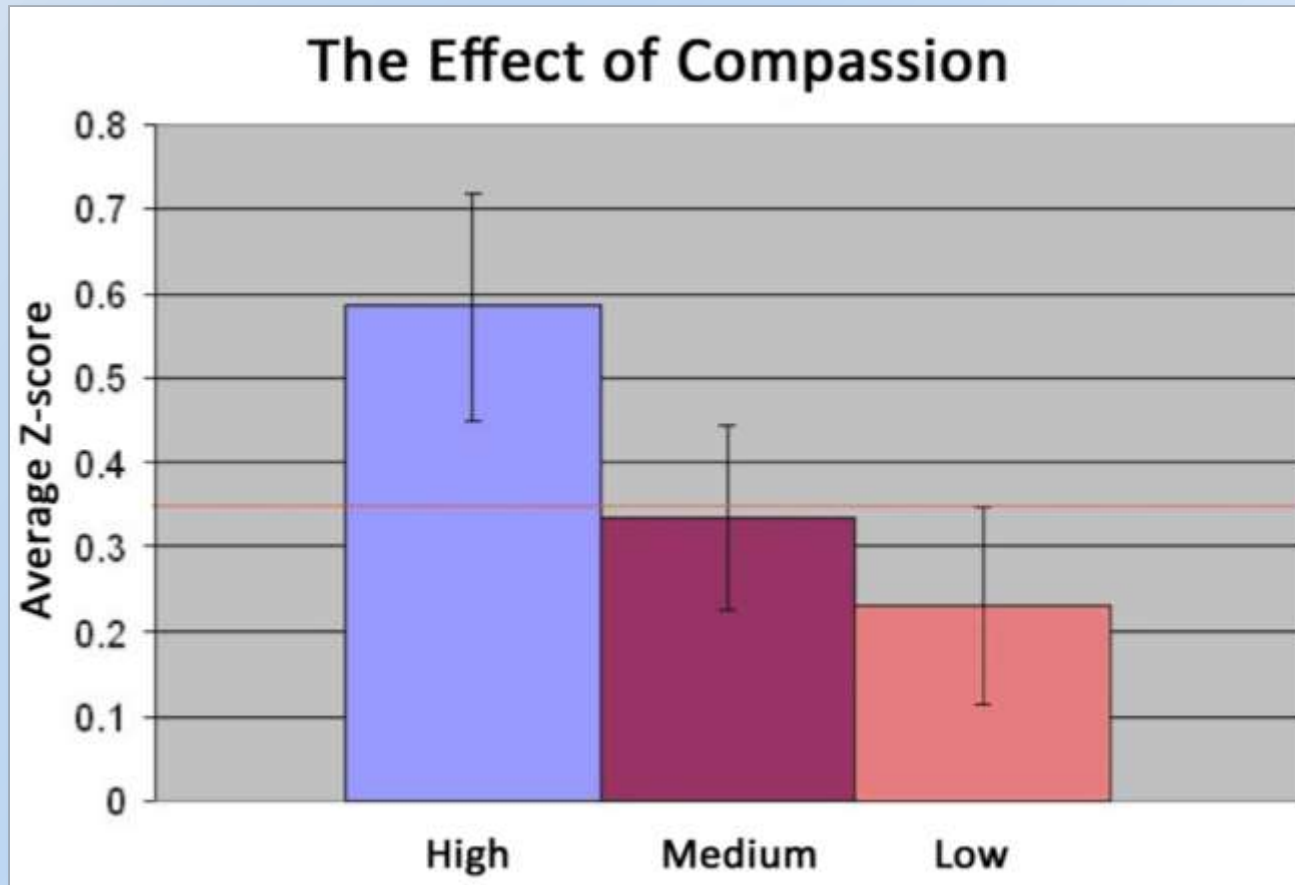
NOAA Geosynchronous Operational Environmental Satellites (GOES) Measuring the Earth's Geomagnetic Field



Global Peace Day



Compassion and Love Have Larger Effects



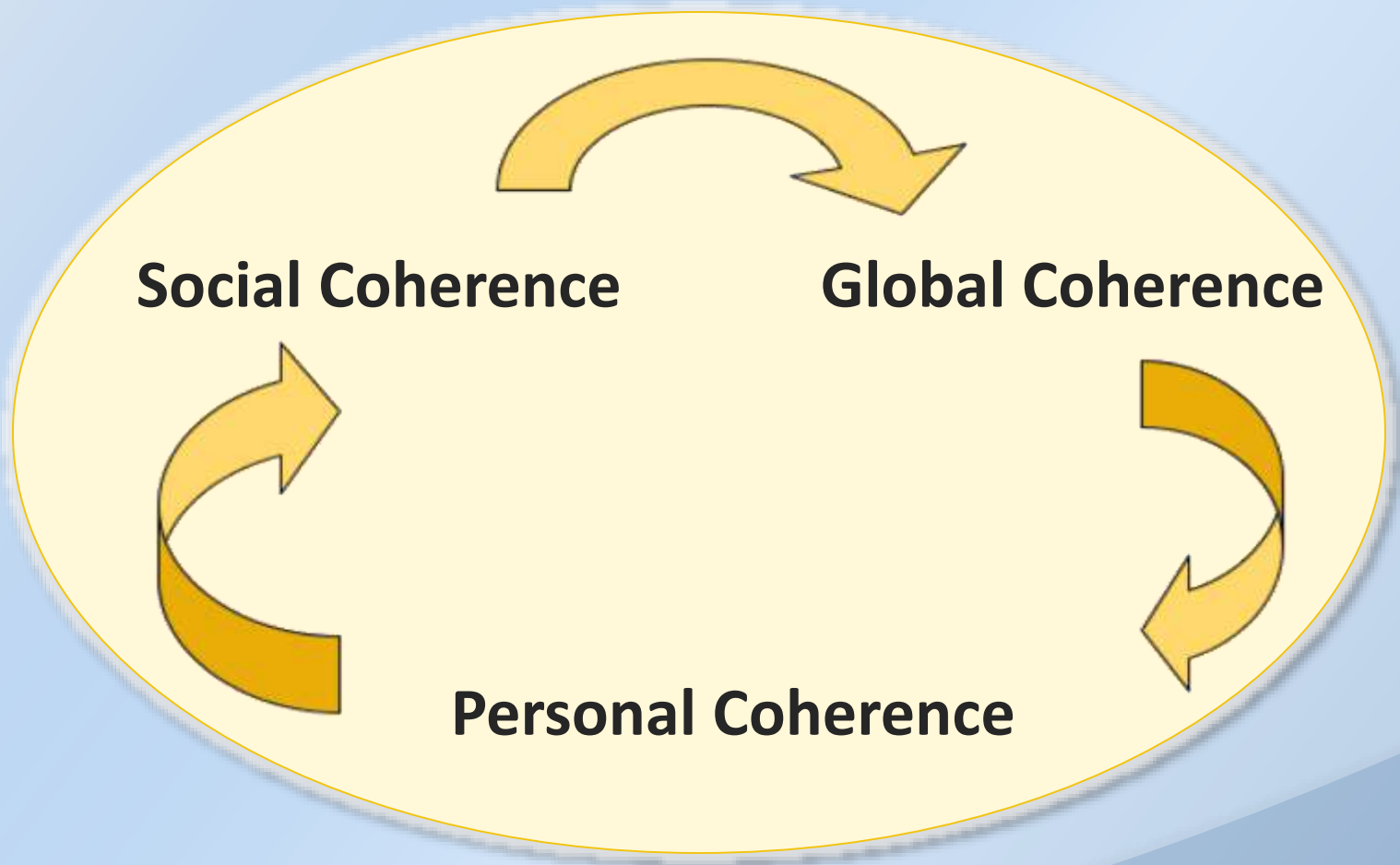
Collective Amplification of Focused Heart Coherence

- ✓ Occurs in groups with social and emotional resonance.

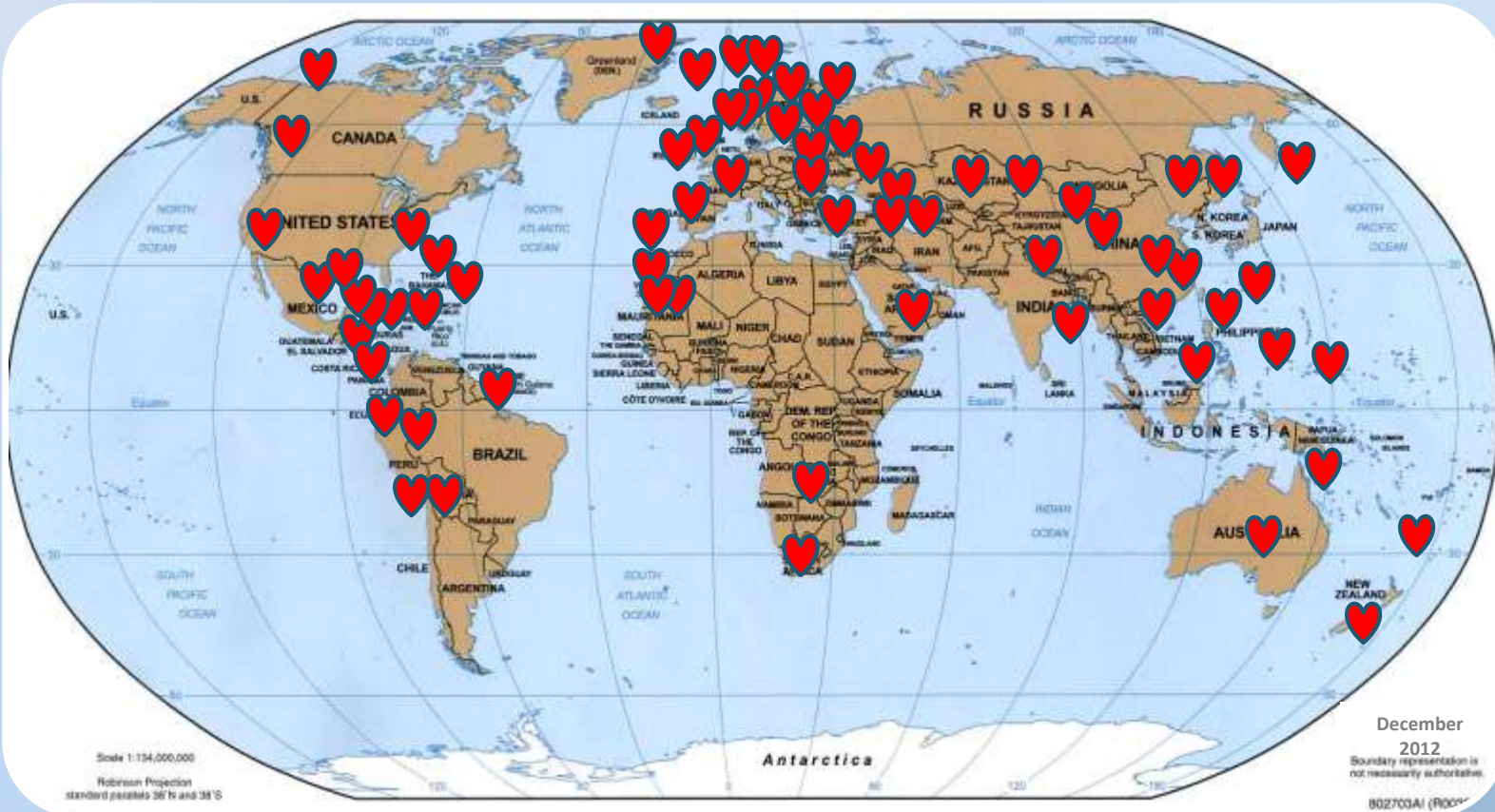


- ✓ Creates a self-reinforcing field of emotional energy which amplifies and increases beneficial effects.

Personal, Social and Global Coherence



There are Over 58,000 GCI Members in 104 Countries



CLICK FOR MUSIC TO ACCOMPANY YOUR SESSION



CARE FOCUS: SYRIA

The U.S. and other nations are reacting to information that on August 21 chemical weapons were used in Syria, killing or disabling thousands of people including children. The U.S. and U.K. say the Syrian government is responsible, while other nations say the opposition rebels orchestrated the attacks. Whoever or whatever is behind this situation, the U.S. is preparing for military intervention in Syria with the stated intention of preventing further use of chemical weapons and to prevent chemical weapons from falling into the hands of Al Qaeda. There is deep concern that a U.S. attack on Syria could provoke a broader conflict in the Middle East and another long war similar to Iraq and Afghanistan. Sending heart doesn't promise to make all this go away, but it can facilitate outcomes to be better than they could have been.

CARE FOCUS: SYRIA



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