

**Creation Science Fellowship, Inc  
One Year Creation Program**

**Session 9**

**Cosmogony and Cosmology:  
Creation Style**

Robert E. Walsh  
July 14, 2011

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**Agenda**

- Cosmogony and Cosmology: What's the Difference?
- The Problem of Starlight and Time
- A History of Creation Cosmologies
  - Tired Light
  - C-Decay
  - Non-Riemannian Space
  - Mature Creation and the Appearance of Age
- The Modern Models
  - Humphreys
  - Harnett
- The Nature of Space-Time
  - Relativity
  - Quantum Mechanics
- Where do we go from here?

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**Cosmogony and Cosmology  
What's the Difference?**

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## Cosmology and Cosmogony

- Both words are from two out of three Greek words:
- kosmoj – order, arrangement, an *ordered* arrangement (emphasis is actually on the quality not quantity of the kosmos)
- logoj – dynamic, word, message, “study of ”
- ginomai – become, born, begotten
- **Cosmogony** is a compound word from kosmoj and ginomai and means “How the Universe Originated”
- **Cosmogony** is a compound word from kosmoj and logoj and means “How the Universe Operates”

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## The Problem of Starlight and Time

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## Understanding Cosmic Distances

- To better understand the size of the universe we need a more convenient unit of measure for such large astronomical distances
- A Light Year is the distance light travels in a vacuum (no mass, only space-time) for one year
  - 5.8 Trillion Miles (5,800,000,000,000 miles)
  - 9.5 Trillion Kilometers (9,500,000,000,000 kilometers)

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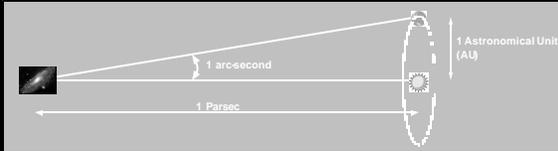
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## Understanding Cosmic Distances

- A Parsec is the distance of an object when it subtends one parallax arc-second
  - An Astronomical Unit is 93 Million Miles (93,000,000)
  - An Arc-Second is 1 Degree/60/60
  - Simple Trigonometry ( $1 \text{ Parsec} = 1 \text{ AU} / \tan(1 \text{ Arc-Second})$ )
  - 3.26 Light-Years
  - 19 Trillion Miles (19,000,000,000,000 Miles)



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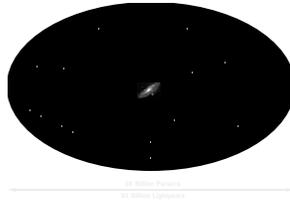
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## It's a Big Universe

- The Hubble Telescope has greatly expanded our "universal" observational view
- Latest figure for the diameter of the universe is:
  - 28 Billion Parsecs
  - 93 Billion Light Years
- Thus, if the universe is only 6000 years old, no object greater in distance than 6000 Light Years could be observed today!



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## A History of Creation Cosmologies

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## The Tired Light Model

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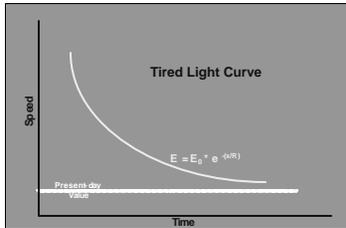
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## The Tired Light Model

- Light (photons) slows down due to cosmic "friction"
- Follows a traditional exponential decay law
- $E = E_0 * e^{-\alpha R}$



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## The Tired Light Model

- Addresses mainly the red shift problem
- If true then stellar objects would be "blurred" ... they are not
- Related to 2 above no known mechanism
- Does not predict observed time dilation
- Can not explain the 3 degree background radiation
- No longer in vogue!

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## The C-Decay Model

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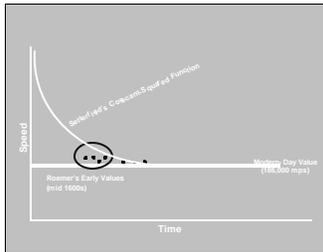
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## The C-Decay Model

- Popularized by Barry Setterfield in Creation Ex-Nihilo Magazine (late 70s)
- Based on "curve fitting" the data
- Using data between mid 1600s (Roemer) and present




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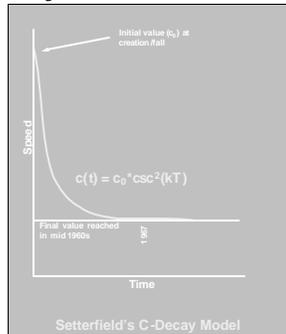
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## The C-Decay Model

- Cosecant-Squared Decay Curve
  - Sharp drop from initial value ( $c_0$ )
  - Levels out about 1967
  - Decay proposed as a function of time ( $kT$ )
- Proposed other physical constants are dependent on the value of C




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### The C-Decay Model

- **Electron Rest Mass**
  - $E = mc^2 \Rightarrow m \sim 1/c^2$
- **Planck's Constant**
  - $E = hn = h c/\lambda \Rightarrow h \sim 1/c$
- **Gravitational Constant**
  - $F = G m^*M/r^2 \Rightarrow G \sim (1/c^2) * (1/c^2) = (1/c^4)$
- **Radioactive Decay Constant**
  - $\lambda \sim c$

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### The C-Decay Model

- According to some lacks a rigorous data analysis
- Could lead to a "local" violation of the Conservation of Energy
- Lacks a rigorous mechanism
- *Implications* agree with other researchers from other fields
- Addresses both Starlight and Time problem and potentially the red shifting of stellar objects

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### The Riemannian Space Model (Moon and Spence Rebutted by G. Russell Akridge 1984)

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## The Appearance of Age Model

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## The Appearance of Age

- God created the universe to “look old” or “mature”

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## The Appearance of Age

- How old did Adam appear on Day 10?
  - “Well, I look about 25 Years Old”



- Day 11. How old is that 100 foot oak tree?
  - After counting the rings, it looks about 60 years old.



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## The Appearance of Age

- How old is the Andromeda Galaxy?
  - Well it is 2.5 Million Light Years away, so it must be 2.5 Million Years Old.

- The “Appearance of Age” model breaks down after 6000 years.



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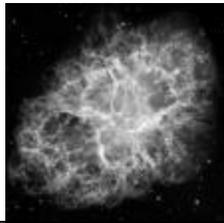
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## The Appearance of Age

- After 6000 years, it creates “fantasy” events!
- Enter the Crab Nebula
  - Created by a supernovae observed in 1054 (~5000AC)
  - Distance of 6500 LY
  - 1500 Years of “mythical light”
  - The event never really happened – which is a contradiction!



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## The Humphreys Model

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## The Nature of Space-Time

- Too often we think of space and time as *separate* entities
- Modern physics views them as parts of a unified whole called..
- Space-Time
- To illustrate this concept consider the trampoline ...



- Thus, the existence of mass (matter) “*bends*” space-time

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## Initial Humphreys Model

- Published in 1994, Master Books
- Presupposed that God created the universe through the means of a “white hole” model
- Weaknesses – wrong time coordinates used, missed sign changes from time to space and visa versa
- Strengths – used General Relativity and a strong commitment to a normative reading of the Biblical text

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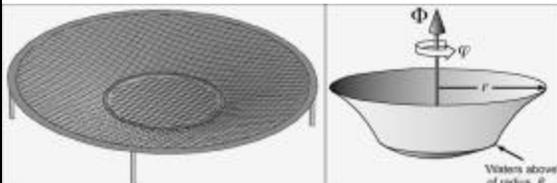
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## Current Humphreys Model:

### *Graphically Speaking*

- Based on Gen 1:1-3 the entire mass of the universe was in the form of sphere of water of radius “R” “within” space-time (First through Third Day)
- God began to separate the waters
  - For the earth (waters below)
  - For the universal ring (waters above)



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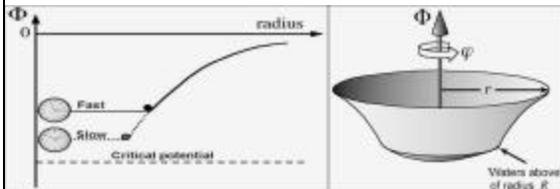
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## Current Humphreys Model: *Graphically Speaking*

- Let's discuss some high-level details
  - Radii of waters and space-time
  - Gravity affecting clock speed
  - Critical gravity potential limit




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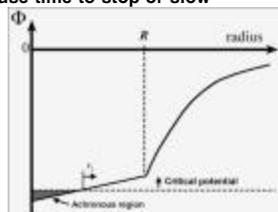
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## Current Humphreys Model: *Graphically Speaking*

- The Fourth Day – the cosmic stars were created (Gen 1:14-19)
- Russ seems to imply that this is a separate creation of “stuff” distinct from the universal watery matter
- This “extra” mass would cause time to stop or slow down at the earth...




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## Current Humphreys Model

- Much published in the Journal of Creation (2007 and 2008)
- Strength in using General Relativity
- Is the mass from the day 4 stars separate from the universal waters?
- Is “achronicity” valid from a Biblical viewpoint?
- Is the mathematical physics correct?

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**The Harnett Model  
(At a later date)**

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**The Nature of Space and Time**

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**Criteria for the Biblical  
Astroscience Sub-Model**

- On the macroscopic scale SPACE is viewed as a scroll
  - Space can be stretched like a curtain
  - Space can be folded and bent like a sheet
  - Space expanded from a central area
  - Space is bounded [has an edge]
- On the microscopic scale SPACE is viewed as a scroll
  - A scroll is made up of individual fibers
- Space is finite
- Space is created and therefore not "absolute"

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**Criteria for the Biblical Astroscience Sub-Model**

- Time has an absolute beginning
- Time has duration
- Time is quantized
  - There exists a unit of time below which man can not measure
- Time is created and therefore not "absolute"
- Light seems to simply "appear"
- Matter is created and therefore not "absolute"

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**Abstractions from the Biblical Criteria**

- On the macroscopic scale space and time seem to be viewed as a continuum, thus **General Relativity** can be used to model the OPERATION of the space-time continuum
- On the microscopic scale space and time seem to be viewed as quantized elements, thus **Quantum Mechanics** can be used to model the OPERATION of the spacetime continuum

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**Where do we go from here?**

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## Where do we go from here?

- Rigorously define the Biblical Cosmological Model
- Encourage young Creation geeks to go into physics (Relativity, Cosmology)
- Form a Creation Astro-Science/Cosmology Society
- Create a Journal devoted to the development of the Creation Model of Cosmology/Cosmogony
- ICC 2013

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??? QUESTIONS ???

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