

## Science and the Bible: Design in the Universe Next Step

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### **Big Bang Confirmed**

- NASA's Cosmic Background Explorer (COBE) confirmed the Big Bang
- Time, space, matter and energy all came into existence at once
- Time is a created dimension
- The universe continues to expand

### **35 different characteristics of the universe and its physical laws are fined tuned to support life**

#### **Examples of parameters if different on our universe:**

Ratio of Electrons/Protons: electromagnetism would dominate gravity, no galaxies, stars, nor planets

Ratio of Electromagnetic Force/Gravity: no stars (our sun) would be stable to support life

Expansion Rate of Universe: either no galaxies would form (too fast) or it would collapse (too slow)

Mass of Universe: needed elements for life could not be created

Cosmological Constant: Controls the space-energy density of the universe to support life

### **Fine Tuning of Our Galaxy:**

- Supernovae must occur during the early evolution of our galaxy but not now
- Shape of the galaxy needs to be spiral to support life
- Not too large a galaxy: Any larger and there would be too much radiation and gravitational disturbances to allow life forms

### **Fine Tuning of Our Solar System:**

- Right distance from the sun so water can exist in all three of its forms
  - 1% closer and oceans would vaporize, 2% farther and the oceans would freeze
- Right size of the sun so as to not burn too quickly but at a steady rate

### **Our Special Moon:**

- Created through the collision of a Mars-sized planet with the Earth
- Ejected Earth's primordial atmosphere, preventing runaway greenhouse effect like that seen on Venus
- Established the Earth's current axial tilt of 23.5°, which is ideal for maintaining optimal temperatures on the Earth
- Slowed the Earth's rotation rate from 8 hours to 24 hours

### **"Lucky" Observers:**

- Our placement in time and space allows us to discover the universe
- Location in the galaxy
- Dispersion of the universe

**Bottom Line: Universe randomly being suitable for life has been calculated to be 1 in 10<sup>124</sup>**

An incomprehensibly small number which requires far more faith than belief in a creator God

### **References:**

- [www.Godandscience.org](http://www.Godandscience.org) (Evidence for God from Science)
- [www.reasons.org](http://www.reasons.org) (Reasons to Believe website)
- *Creator and the Cosmos*, Hugh Ross, NavPress, 2001
- *Back to the Beginning, Y-Origins*, Vol 1