

**Review: Dr Donald B. DeYoung, *Astronomy and the Bible*,  
BMH Books, Winona Lake, IN, 2010**

Pages: 183

**God's Astronomy**

The author approaches this topic beginning with the earth and moon, then expands out to the solar system, and ends with stars and galaxies. Historical background is given along the way which gives the reader a deeper appreciation and understanding of each area.

While his primary purpose is not to falsify the foolish idea of cosmic evolution, where relevant its weaknesses are exposed, e.g., the Big Bang's inability to account for initial star formation.

At the end there are also good chapters on general science, a glossary, and star charts for those with an interest.

A must read for every person to appreciate God's creation on display in the heavens:

**“The heavens declare the glory of God; and the firmament  
sheweth his handywork” Psalm 19.1, AV**

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**I) The Earth and the Moon (pp. 3-25)**

Space is a region of radiation, high-speed particles and large rock fragments. These are repelled by the earth's magnetic field, ozone layer, and atmosphere.

The earth's surface rotational speed is 1,000mi/hr at the equator and 66,000mi/hr around the sun (thirty times faster than a bullet).

In 150BC, Eratosthenes measured the earth's circumference using shadows to within a few percent of its correct value of 40,041km.

Each earth year consists of 365 days, 5hrs, 48min, and 46s, which necessitates an extra day be added to our solar calendar roughly every four years to catch up (i.e., since  $5.8\text{rs} \times 4 \sim 24\text{hrs}$ ). However, as it is an approximation a leap year has to be deleted on occasion. In 1582, Pope Gregory gave a formula to only add the day for years divisible by 400; this will keep the Gregorian Calendar aligned to the seasons for many thousands of years.

Every few years one second is added to the clock, usually at New Year's celebration to keep the earth's rotation in synchronism with atomic clocks.

The braking effect of lunar tides on the earth decreases rotation time by 0.002s per century.

Seasons are determined by earth's  $23.5^\circ$  axial tilt towards the sun.

On or close to March 21 and September 21 the sun appears directly over the equator giving twelve hours each of daylight and night.

Uranus has an axial tilt of  $98^\circ$  and rolls around like a barrel. If it were closer to the sun this would cause severe seasonal changes, but so far from the sun it is permanently cold.

If earth's rotation was turned over ice would melt and re-freeze causing constant worldwide flooding.

Most space fragments are vaporised in the atmosphere by friction 50mi upwards. Larger rocks can survive, about a dozen a day made of Fe and Ni.

Wormwood in Revelation 8 may be a blazing meteorite.

In 1957 the USSR placed a 2-foot sphere Sputnik (“fellow traveller”) in orbit. Over 90% of the thousands of space objects today are space trash.

The International Space Station rotates every 100m 200mi up.

Geostationary satellites rotate the same as earth and are 22,300mi up.

GPS uses a 24-satellite network 12,550mi above the surface.

The angle of the North Star Polaris above the horizon can give latitude above the equator, but there is no complementary South Star. Finding east-west longitude was a very difficult problem to solve.

The moon’s orbit varies  $18^{\circ}$  to  $28^{\circ}$  to the earth’s equator which accounts for it appearing higher and lower. Lunar rocks are chemically different to earths debunking the fission formation theory.

Present-day nebulae are rarely dense with most of them spreading outwards.

The moon has many purposes for the earth:

- Plant germination.

- Regular circuit provides a clock, calendar, and compass.

- Its gravity stabilises the earth’s tilt.

-Lunar tides are essential to life in earth's oceans such that they would stagnate otherwise. Half the atmospheric oxygen is produced by sea vegetation.

-Gravity may be the 'glue' holding the universe together. When overhead the moon bulges the land by several inches.

Only one side of the moon is seen since it is slightly heavier than the other.

One moon cycle is 29.5 days.

New moons are invisible the nearside then receives no light.

Darkness during the crucifixion couldn't be a solar eclipse since they cannot last three hours.

During the day the moon reaches 120°C and at night it drops to -157°C. Since it has no atmosphere the daytime sky is black as night.

Biosphere 2 was a \$200m project in Tucson, Arizona consisting of an enclosed million-gallon ocean, small rain forest, and farmland seeded with 3,000 plant and animal species ("Biosphere 1" is the earth). After a few months it ran-out oxygen, the ocean became acidic, freshwater salty, wild animals died, but ants and cockroaches thrived. This experiment makes space colonisation infeasible.

## **II) The Solar System (pp. 29-43)**

Nicolaus Copernicus (1473-1543) and Johannes Kepler (1571-1630) were fathers of modern astronomy. Kepler's three laws of planetary motion were:

I. Planetary orbits are elliptical.

II. Planets sweep out equal areas in equal times, meaning that they speed up toward the perihelion (nearest to the sun), and slow down at the aphelion.

III. Orbital time (T) and average distance from the sun (R) are related by  $T^2=R^3$ .

There are over 100 moons in the solar system and millions of asteroids and comets.

Planets are said to have come from the sun (fission hypothesis), independently as wandering bodies (capture hypothesis), or alongside it (nebular hypothesis).

The sun possesses only two percent of the solar system's circular angular momentum.

A debunked "Jupiter Effect" says all planets aligned in their orbit around the sun would cause great earthquakes.

Eris is farther from the sun than Pluto and larger than it.

Comets either vaporise after forty circuits around the sun, or are forever ejected from the solar system. After billions of years none should therefore exist. Halley's Comet was first seen in 240BC and has made at least twenty-eight passes already.

A million earths could fit in the sun's volume.

An aurora is visualised radiation when the magnetic shield interacts with electrons, protons, and ions that have boiled off the sun's surface.

Sunspots are  $\sim 4,000^{\circ}\text{C}$  or thirty percent cooler than the sun's surface.

The Little Ice Age occurred from 1645 to 1710 when there was an absence of sunspots.

The long days of Joshua could have been caused by God refracting sunlight, slowing earth's rotation, or stopping the entire universe.

### **III) The Stars (pp. 47-72)**

Each square inch of the sun shines with an intensity of 300,000 candles, yet only two billionths of energy hit the earth.

The earth has four safety shields: molecules in the atmosphere absorb x-ray and gamma-ray radiation; the ozone layer stops ultraviolet light 12 to 29km up; the magnetic field deflects high-speed sun particles (the solar wind); distance of 149m km.

If space conducted sound we would be deafened by the sun's explosive sound and pressure waves.

Space probes and radar cannot reach distant stars.

Parallax measurements are used to triangulate distances to stars: two observations each six months apart.

Another technique is the Cepheid variable when distances are too great which relies on light intensity.

Some yellow stars are a few thousand degrees on the surface while blue or white ones are up to 50,000°C. Internal temperatures are millions of degrees.

Birds use the stars to navigate.

Sirius is a blue-white star 8.6 light years away. It is double the sun's size, and despite being visible in the day time during late summer in the northern hemisphere, it is too far away to supply any heat and thus not responsible for the "dog days".

Pleiades is gravitationally bound together as the Bible says.

Orion is directly above the equator.

Castor and Pollux are part of the Gemini constellation.

Black holes are invisible, smaller than a kernel and may weight billions of tons. Anything entering the “twilight zone” region (including light) is pulled into the hole.

Super giant stars begin at 200 times the size of the sun.

The Crab Nebula is the remnant of an 1054AD supernova.

Stellar cores fuse He into C, O, etc., stopping at Fe.

Stars age from main sequence to red giant then white dwarf. Each stage may last billions of years.

Gas clouds are light-years in size which is hundreds of times larger than required under the Jeans Limit due to outward gas pressure. New stars are said to form via a travelling pressure wave from a close-by supernova.

Theories of visible distant starlight:

-Space is geometrically curved allowing light waves to take “short-cuts”.

-c-decay theory.

-Relativistic cosmologies: time passes at different rates in different locations.

-Mature creation: this would mean God created false information of events like star supernovae eye-witnessed in modern times.

#### **IV) Galaxies and the Universe (pp. 75-88)**

In 1925 it was thought the Milky Way was the only galaxy. A rotation of it would take 250Ma.

The most distant galaxies seen to be expanding outwards at close to the speed of light.

The chief purpose of circular rotation is providing stability; a static universe would collapse inwards under gravity.

Pulsars rotate once every 0.001-1s!

The Oscillating Universe theory has Big Bangs leading to Big Crunches every 40Ga *ad infinitum*.

The Big Bang is missing:

-An original concentration of energy.

-Fuse: the proposed initial mass should have remained forever bound as a black hole).

-Star formation: an initial explosion would have radiated gas and energy *outwards* in all directions.

-Antimatter: 50% of the universe should be antimatter (positrons and antiprotons) yet there are only minute traces.

-Matter.

Cosmic background microwave radiation was first discovered in 1965 by Bell Laboratories and is 2.7<sup>0</sup>K.

The earth will become inhabitable in 2.3Ga and in  $\sim 10^{100}$  years all stars will exhaust their energy supplies and disintegrate into clouds of gas and dust or a state of “heat death”.

Quasars are bright sources of very distant light which indicates an receding velocity of  $\sim 0.9c$ .

*Olber's Paradox* is that the night sky should be luminous given the vast number of stars in the universe. It may be that light from most stars is shifted beyond the visible range due to great



distance. Under the Big Bang it is solved by assuming stars too far out yet to see.

## **V) General Science (pp. 91-110)**

Gravity is the only force to extend over vast distances.

Photons can be deflected like marbles.

Astrology is based on the former positions of stars 2,000 years ago as they were in Babylonian times so is entirely inaccurate today regarding the constellations and months.

## **VI) Technical Astronomy Topics (pp. 113-129)**

Astrophysics, celestial mechanics, and cosmology are each mathematical ways to speak of astronomy.

The sun loses 8B tons of matter per second.

c2000BC, in March a straight line could be draw from earth to the sun and out towards Aries. Thus, March became the month for Aries.

Apparent magnitude (m) is used as a measure of star brightness.

The moon is receding 3.8cm p.a. from the earth.

In 1960, Frank Drake founded SETI and created the Drake Equation:

$N = n f_p f_e f_l$ , where:

\*N is the number of galaxies in the Milky Way with advanced evolved life forms.

\*n is the number of stars in the Milky Way ( $\sim 10^{10}$ )

\* $f_p$  is the fraction of stars which have planets ( $\sim 0.1$ ).

\* $f_e$  is the fraction of planets which are earth-like ( $\sim 0.1$ ).

\* $f_l$  is the fraction of earth-like planets with evolved life (which evolutionists presume is close to 1).

There are  $10^{80}$  electrons in the universe.

The mass, size, and speed of particles close to light speed behave in strange ways.

A quantum is an indivisible unit of energy.

People at high speed age slower than those stationary.

Time slows in the vicinity of a large mass.

Antineutrinos ( $\nu^*$ ) have a half-life of twelve minutes:  $n \rightarrow p + e + \nu^*$

If the proton was 0.2% heavier the entire universe would disintegrate.

Galactic velocity ( $v$ ) is inversely proportional to distance ( $r$ ) by the Hubble Law:

$v = Hr$  where  $H$  is a constant  $\sim 74 \text{ km/s/megaparsec}$  (one megaparsec is 3.26 million light years).

Or

$d/t = Hr$  therefore,

$t = d/Hr$  to get the evolutionary age of the universe between 13.5 Ga and 14 Ga.

A Hertzsprung-Russell diagram plots star brightness and surface temperature (Red  $\rightarrow$  Yellow  $\rightarrow$  White  $\rightarrow$  Blue).

**Conclusion** (pp. 131-132)

### Glossary (133-137)

A comet is a **mountain**-sized chunk of frozen matter that orbits the sun.

### Star Charts (139-144)

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