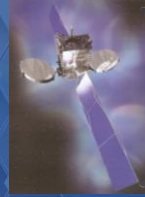


Astronomical evidence for recent creation

Mark Harwood
B.Sc., B.E (Hons), Ph.D.

**CREATION
SUPERCONFERENCE**

END - 5TH OCT 2018, SUNSHINE COAST, AUSTRALIA



Optus D Series Satellites

- 17m across
- 2,300kg at launch
- 6kW solar panel power

Ariane 5 Launcher

Optus D Series launches
2006, 2007 and 2009



CREATION
MINISTRIES
INTERNATIONAL

EXPERIMENTAL (operational) Science



CREATION
MINISTRIES
INTERNATIONAL

HISTORICAL (forensic) Science



CREATION
MINISTRIES
INTERNATIONAL

HISTORICAL (forensic) Science



CREATION
MINISTRIES
INTERNATIONAL

HISTORICAL (forensic) Science



CREATION
MINISTRIES
INTERNATIONAL

Pakicetus7 years on*



Illustration: Carl Buell—<http://www.neoucom.edu/Depts/Anat/Pakicetid.html>.

*Thewissen, Williams, Roe, and Hussain, *Nature* 412, Sep. 20, 2001

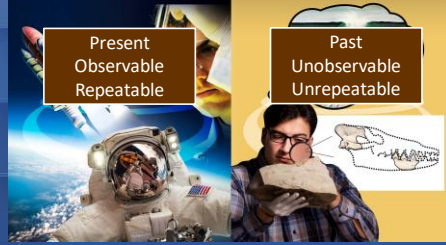


EXPERIMENTAL (operational) Science

Present
Observable
Repeatable

HISTORICAL (forensic) Science

Past
Unobservable
Unrepeatable



“The cosmos is all that is,
or ever was,
or ever will be”



Carl Sagan
PBS TV Documentary Series
Cosmos 1980



Parable of two fleas



The processes of operation
are not the same as
the processes of creation



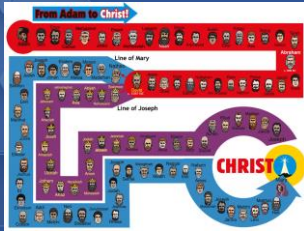
The History Book of the Universe



SIX DAYS OF CREATION



Biblical timeline of history



CREATION MINISTRIES INTERNATIONAL

Astronomical Evidence for Recent Creation

o Earth-Moon system

CREATION MINISTRIES INTERNATIONAL

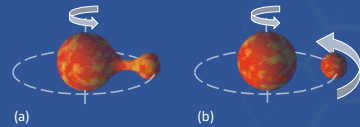


Earth and Moon from Galileo spacecraft
6.2 million kms from Earth – December 1992
Source NASA

Origin of the moon

Fission Theory

- Early molten Earth spun so quickly that the moon was flung off into orbit



CREATION MINISTRIES INTERNATIONAL

Origin of the moon

Fission Theory

- Early molten Earth spun so quickly that the moon was flung off into orbit

X

CREATION MINISTRIES INTERNATIONAL

Origin of the moon

Capture Theory

- Moon was 'wandering' in the solar system and was captured by the earth



CREATION MINISTRIES INTERNATIONAL

Origin of the moon

Fission Theory

- Early molten Earth spun so quickly that the moon was flung off into orbit

X

Capture Theory

- Moon was 'wandering' in the solar system and was captured by the earth

X



Origin of the moon

Accretion (co-creation) Theory

- Earth and Moon formed simultaneously from the same swarm of planetesimals



Origin of the moon

Fission Theory

- Early molten Earth spun so quickly that the moon was flung off into orbit

X

Capture Theory

- Moon was 'wandering' in the solar system and was captured by the Earth

X

Accretion (co-creation) Theory

- Earth and Moon formed simultaneously from the same swarm of planetesimals

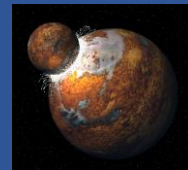
X



Origin of the moon

Giant Impact Hypothesis

- The proto-Earth impacted by a Mars-sized proto planet and the ejecta formed the moon



Origin of the moon

Fission Theory

- Early molten Earth spun so quickly that the moon was flung off into orbit

X

Capture Theory

- Moon was 'wandering' in the solar system and was captured by the earth

X

Accretion (co-creation) Theory

- Earth and Moon formed simultaneously from the same swarm of planetesimals

X

Giant Impact Hypothesis

- The proto-Earth impacted a Mars-sized proto planet and the ejecta formed the moon

X



Origin of the moon

Of lunar origin theories, Prof Irwin Shapiro of Harvard University once said, jokingly;



Prof Irwin Shapiro,
Director of the
Harvard
Smithsonian Centre
for Astrophysics
from 1982 to 2004

“Since there are no good explanations, the best explanation is that the moon is an illusion!”



Origin of the moon

God made two great lights—the greater light to govern the day and the lesser light to govern the night...

Genesis 1:16



CREATION MINISTRIES INTERNATIONAL



Why do we see only one face of the moon?

CREATION MINISTRIES INTERNATIONAL

Tidal locking of the moon

One side of the moon always faces the earth because...



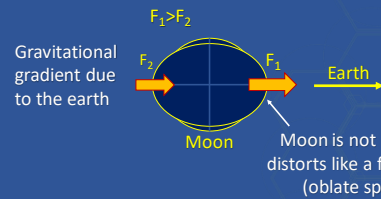
Earth

...the moon is *tidally locked* to the earth

Earth/Moon system

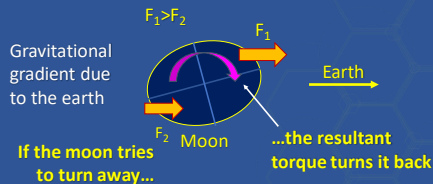
CREATION MINISTRIES INTERNATIONAL

Tidal locking of the moon



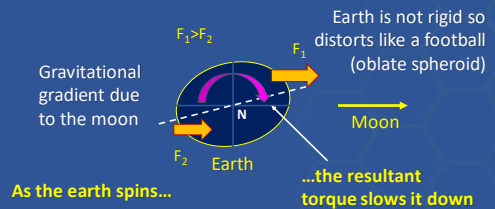
CREATION MINISTRIES INTERNATIONAL

Tidal locking of the moon



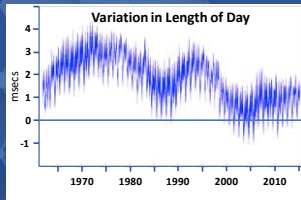
CREATION MINISTRIES INTERNATIONAL

Earth de-spinning due to the moon



CREATION MINISTRIES INTERNATIONAL

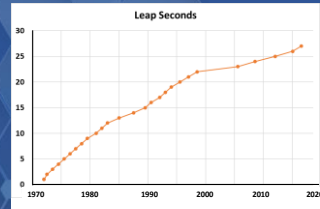
Length of a day is increasing



- Measured data over 55 years shows an average increase in day length of 1.6 milliseconds per day
- Annual cycles are due to the dynamics of the earth's orbit
- The longer period variations are assumed to be predominantly geologic in origin e.g. oceanic resonances, core/mantle interactions

CREATION MINISTRIES INTERNATIONAL

Leap seconds



- Introduced in 1972 to keep mean solar time in step with atomic time
- Expected to be added or subtracted to accommodate random changes in the earth's spin rate
- Total of 27 seconds added to date, none subtracted

CREATION MINISTRIES INTERNATIONAL

Changes to the earth's spin rate

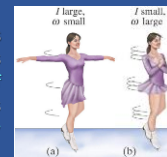
Factors that could slow the earth down

- Gravitational tidal locking from the moon and sun
- Core/mantle interactions
- Atmospheric and oceanic friction
- Increased moment of inertia through seismic activity

CREATION MINISTRIES INTERNATIONAL

Changing moment of inertia

Skater with arms outstretched has high moment of inertia and spins slowly



Skater with arms drawn in has low moment of inertia and spins rapidly

Angular momentum is conserved

CREATION MINISTRIES INTERNATIONAL

Changes to the earth's spin rate

Factors that could slow the earth down

- Gravitational tidal locking from the moon and sun
- Core/mantle interactions
- Atmospheric and oceanic friction
- Increased moment of inertia through seismic activity

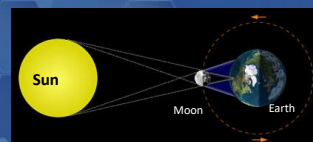
Factors that could speed the earth up

- Reduced moment of inertia through seismic activity

CREATION MINISTRIES INTERNATIONAL

Solar eclipses

Although 400 times larger, the sun is 400 times further away than the moon...



... so both sun and moon appear to be the same size when viewed from the earth



In a total solar eclipse, the sun is blocked by the moon

The path of totality is only around 200kms wide

CREATION MINISTRIES INTERNATIONAL

Ancient eclipse data



Historically recorded eclipse

- The path of a total solar eclipse is determined by the orbit geometry of the sun, moon and earth
- Ancient records include a total solar eclipse in Babylon around 360 BC
- If the earth's rotation had been constant at today's rate, the line of totality would have missed Babylon...



Ancient eclipse data



Prediction with constant spin rate

- ...so no eclipse would have been recorded there!
- In 360 BC, the cumulative time difference would have been around 16,000 seconds or 4½ hours

Ancient eclipse data indicates the earth's spin rate was higher in the past



Earth's decreasing spin rate - summary

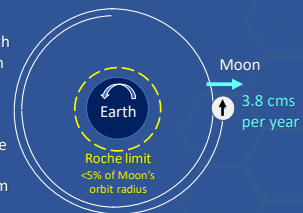
- Leap seconds have been only *added* since 1972, in spite of the expectation they would be randomly added or subtracted
- The average increase in the length of a day over the last 55 years is 1.6 milliseconds per day
- Ancient eclipse records are consistent with a steadily increasing length of day over the last 2,700 years
- The measured rate of increase is too fast if Earth is 4500 My old

Decrease in Earth's spin rate consistent with recent creation



The age of the Earth-Moon system

As the Earth spins down the Moon spirals outwards to conserve angular momentum



Maximum age of Moon 1,500 My



The age of the Earth-Moon system

"Dissipation of tidal energy causes the Moon to recede from the Earth. The currently measured rate of recession implies that the age of the Lunar orbit is 1500 My old, **but the Moon is known to be 4500 My old...** Consequently, it can be argued that prolonged periods of weak tidal dissipation must have existed in the past" (Emphasis mine)

J. Green, M. Huber, D. Waltham, J. Buzan, M. Wells; Explicitly modelled deep-time tidal dissipation and its implication for Lunar history, Earth and Planetary Science Letters 461 (2017) 46-53



The age of the Earth-Moon system

The Earth-Moon system is believed to be 4500 My but lunar recession places an upper limit of 1500 My. Therefore, it is proposed that energy dissipation was lower in the unobserved past.

- Ocean resonance is assumed to be larger today because of the distribution of continents
- A globally open ocean is proposed, with no north-south continental barriers, or only equatorial land masses
- However, plate tectonics models don't support these configurations

Observed lunar recession consistent with recent creation



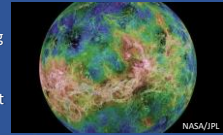
Astronomical Evidence for Recent Creation

- Earth-Moon system
- **Solar system**



Venus' surface is 'young'

- The Magellan probe saw few impact craters, giving an astonishingly young average age for the Venus surface
- "...the observed surface of Venus must have been produced in the past hundreds of millions of years, possibly catastrophically, with very little volcanic or tectonic resurfacing since then!"



Venusian surface from Magellan radar images over 4 years (False colour image)

Consistent with recent creation

<https://pubs.geoscienceworld.org/geology/article-lookup/42/1/95>



Venus' rotation rate slowing

"...surface features seen by Venus Express some 16 years later could only be lined up with those observed by Magellan if the length of the Venus day is on average 6.5 minutes longer than Magellan measured."



Venus Express

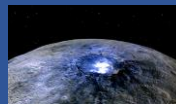
- Venus should be tidally locked by now if solar system is 4.5 Ga
- The current slowing rate implies a maximum age less than 1 Ma

Consistent with recent creation

http://www.esa.int/Our_Activities/Space_Science/Could_Venus_be_shifting_gear



Surface of Ceres – recent activity?



Ahuna Mons
— a cryovolcano on Ceres

- NASA's Dawn spacecraft has been orbiting the largest asteroid, Ceres, since 2015
- Ahuna Mons is an icy mud cryovolcano that appears to have erupted relatively recently
- If Ceres was formed with the solar system 4.5 Ga, how could there be any residual heat in the core to drive the volcano?

"Our main question is where is the heat coming from that can mobilize these materials," Sizemore says. "Frankly we don't know the answer..."

Consistent with recent creation

<http://www.astronomy.com/news/2018/09/volcanoes-of-mud-erupt-from-dwarf-planet-ceres>



Io – Jupiter's fiery moon

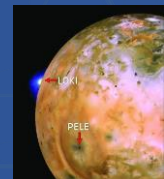


Io transiting Jupiter
Hubble Space Telescope
image July 1997



Io – Jupiter's fiery moon

- Massive volcanic eruptions observed on Io
- If Io had been erupting over 4.5 billion years at even 10% of its current rate, it would have erupted its entire mass 40 times
- Although ¼ of its diameter, Io releases far more heat energy than Earth
- Tidal dissipation accounts for only one tenth of the heat loss



Courtesy NASA - JPL

Io can only be thousands of years old

Consistent with recent creation

creation.com/young-solar-system





Cassini-Huygens mission to Saturn

Launched - 1997
Reached Saturn - 2004
Huygens probe to Titan - 2005

David Coppedge

"Young Saturn", *Creation* 33(3):44-46, 2011.

CREATION MINISTRIES INTERNATIONAL



Saturn's Rings

After 4.5 billion years Saturn's rings should have accumulated lots of 'dust'...

"Yet the ice [in the rings] is remarkably clean compared to the predicted contamination from billions of years of micrometeorite pollution."

"Young Saturn", *Creation* 33(3):44-46, 2011.

CREATION MINISTRIES INTERNATIONAL



Saturn's Rings

Saturn's rings are rapidly growing dimmer... They can't have lasted 4.5 billion years... The faint rings are being perturbed by the nearby moons

"None of these delicate rings seem likely to persist for even a tiny fraction of the lifetime of the main rings—and the main rings already look young."

"Young Saturn", *Creation* 33(3):44-46, 2011.

CREATION MINISTRIES INTERNATIONAL

Asteroid found with rings!
Discovery stuns astronomers



Orbiting beyond Saturn, this minor planet (250km dia) was found to have rings. But such small rings would disappear after just a few million years!

Chariklo with its two rings

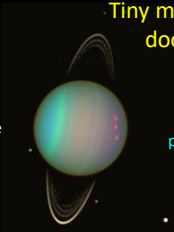
Joseph Burns, Cornell University said
"Something is missing in our understanding..."

March 2014 www.livescience.com/44408-asteroid-rings-discovery-video-images.html

CREATION MINISTRIES INTERNATIONAL

Tiny moons of Uranus doomed to collide

"In only about a million years, Cressida will probably strike Desdemona. A similar fate awaits the moons Cupid and Belinda, which will hit each other."



Uranus's inner moons are a tight and mysterious group... packing 13 moons into the space of just 10,000 kilometres.

Consistent with recent creation

New Scientist 4 September 2017

CREATION MINISTRIES INTERNATIONAL

Pluto's surprising atmosphere



"Ever since the 1988 discovery that Pluto has a thin atmosphere, researchers have pondered how it's managed to stick around. The surface is so cold... that what little gas exists should freeze and fall to the icy surface."

Pluto's atmosphere revealed by sunlight from behind the 'planet'

November 2015 www.skyandtelescope.com/astronomy-news/pluto-stuns-scientists

CREATION MINISTRIES INTERNATIONAL

Pluto's surprising atmosphere



Pluto's atmosphere revealed by sunlight from behind the 'planet'

"Calculations also show the ultraviolet part of sunlight, though weak, should be energizing atoms of gas to escape velocity."

"...the atmospheric loss must be thousands of times less rapid than predicted."

Consistent with recent creation

November 2015 www.skyandtelescope.com/astronomy-news/pluto-stuns-scientists



Pluto's chaotic moons

"Typically small moons end up, thanks to strong tidal interactions, locked in spin rates that match their orbital periods. That's the norm in the satellite systems of Jupiter, Saturn, Uranus, and Neptune."

But not so with Pluto's small moons!



<http://cdn.phys.org/newman/gfx/news/hires/2015/1-plutosmoonss.jpg>



Pluto's chaotic moons

Pluto and Charon – **tan**
– tidally locked and orbiting each other every 6.4 days

Rotation rates

Styx – **red** – 3.24 days
Nix – **yellow** – 1.8 days but *retrograde*
Kerberos – **green** – 5.3 days
Hydra – **blue** – 10.3 hours



The moons can't be billions of years old because tidal locking would have slowed them down by now

Consistent with recent creation

Courtesy NASA/JPL-Caltech

Astronomical Evidence for Recent Creation

- o Earth-Moon system
- o Solar system
- o Milky Way galaxy



The search for earth-like planets — Kepler Space Telescope (KST)



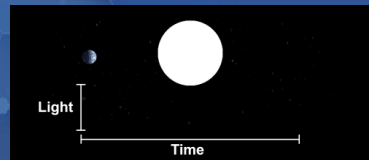
Kepler Space Telescope - Launched March 2009

To determine how common Earth-size and larger planets are in the habitable zone of Sun-like stars



Detecting exo-planets – transit method

Transit yields planet's radius and orbit period

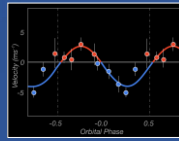


<http://kepler.nasa.gov/education>



Detecting exo-planets – radial velocity method

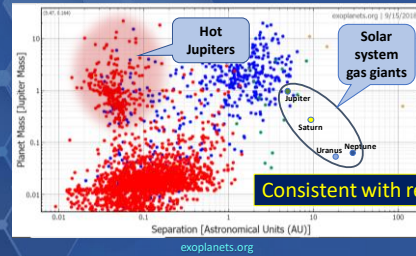
Doppler measurements detect movement of the host star



<http://kepler.nasa.gov/education>



Confirmed exoplanets – September 2018



Hot Jupiters

- Very close to host star
- Some orbit in days or hours
- Being rapidly consumed

Consistent with recent creation



New theory needed

“The discovery of thousands of star systems wildly different from our own has demolished ideas about how planets form. Astronomers are searching for a whole new theory.”

Finkbeiner, A. 2014 Astronomy: Planets in Chaos. *Nature*, 511 (7507): 22-24



Lifetime of blue stars



Blue stars in Orion's belt

- Blue stars are far more massive and luminous than our sun
- Alnilam—the centre star in Orion's belt—is a blue supergiant with a luminosity that is 275,000 times greater than the sun

Based on their observed luminosity, the most massive blue stars cannot last even one million years before running out of fuel

Consistent with recent creation

Lisle, J. Blue Stars Confirm Recent Creation, *Acts & Facts*, Aug 31, 2012



Globular cluster rotation



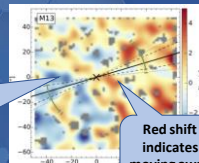
M13
25,000 light years away
145 light years across

“Theory and numerical simulations of globular clusters indicate that any central rotation should be erased on relatively short timescales. Because these globular clusters were formed billions of years ago, we would expect that any rotation signature would have been eradicated by now.”

<http://phys.org/news/2014-05-globular-clusters-rotate-heart.html>



Globular cluster rotation



Blue shift indicates moving towards us

Red shift indicates moving away from us

In all clusters studied, the centres are rotating!

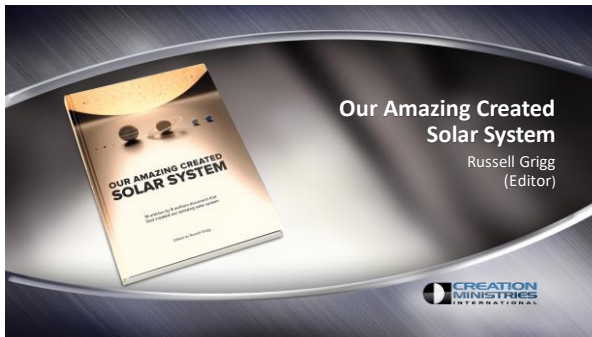
“This result is “astonishing,” [team leader] Fabricius says. “We did not expect this...”

Globular clusters cannot be billions of years old

Consistent with recent creation

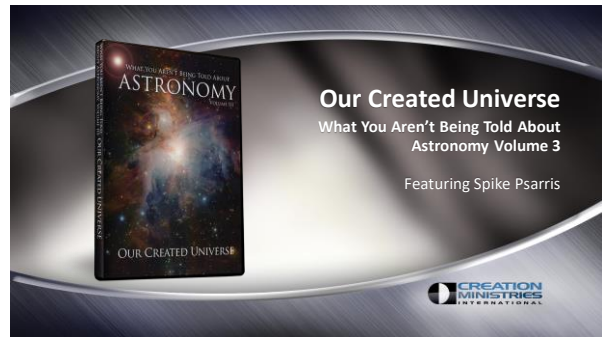
<http://phys.org/news/2014-05-globular-clusters-rotate-heart.html>





Our Amazing Created Solar System

Russell Grigg
(Editor)



Our Created Universe

What You Aren't Being Told About
Astronomy Volume 3

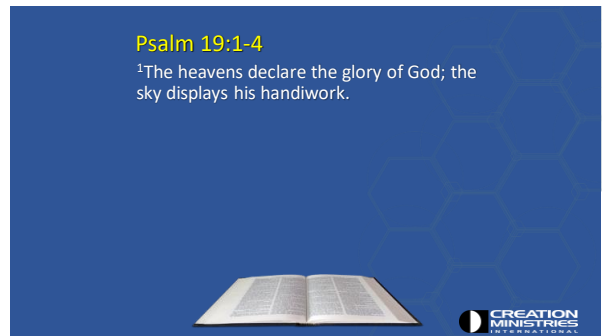
Featuring Spike Psarris



BOOK

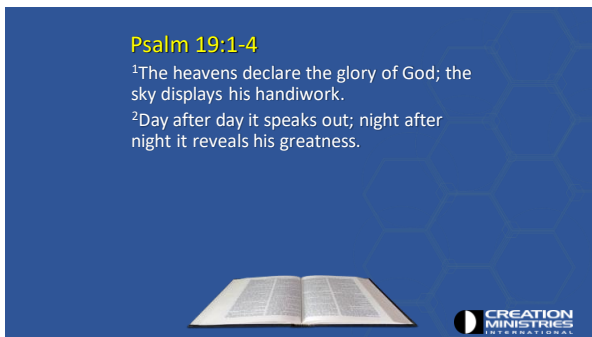
Spacecraft Earth

Dr Henry Richter
with David Coppedge



Psalm 19:1-4

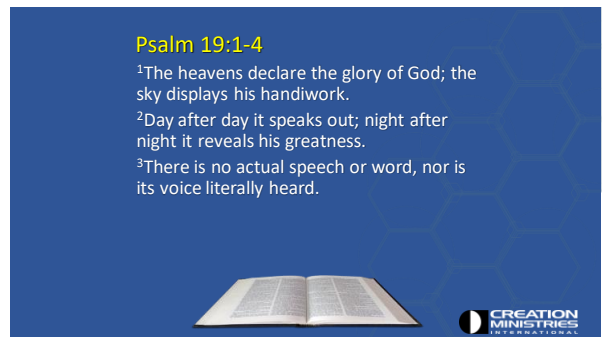
¹The heavens declare the glory of God; the sky displays his handiwork.



Psalm 19:1-4

¹The heavens declare the glory of God; the sky displays his handiwork.

²Day after day it speaks out; night after night it reveals his greatness.



Psalm 19:1-4

¹The heavens declare the glory of God; the sky displays his handiwork.

²Day after day it speaks out; night after night it reveals his greatness.

³There is no actual speech or word, nor is its voice literally heard.

Psalm 19:1-4

¹The heavens declare the glory of God; the sky displays his handiwork.

²Day after day it speaks out; night after night it reveals his greatness.

³There is no actual speech or word, nor is its voice literally heard.

⁴Yet its voice echoes throughout the earth; its words carry to the distant horizon.

**Psalm 8:3-4**

When I consider your heavens,
the work of your fingers,
the moon and the stars,
which you have set in place,
what is man that you are mindful of him,
the son of man that you care for him?



The astronomical evidence for
recent creation confirms the
Bible's record of history

