

A Timeline of Science and the Bible History

by
Max B. Frederick
AnOldScientist

First Published 2008
Updated 2018

Significant Events in the History of Science and the Bible.

Year (CE)	Event
Pre Mosaic Era:	
Much Much Longer Ago:	Presentation of God's 1 st Account, <i>The Cosmos</i>
Much longer Ago:	Presentation of God's 2 nd Account, <i>The Geologic Column</i>
Longer Ago	Garden of Eden: Sub-Tropical Ecology in Far Past
Longer Ago	Mass Extinction: Driven from Garden of Eden
Pre-Flood	Enoch Published, <i>The Book of Enoch</i> (First Chapter Only of Current Version) Prophecy of Noah's flood, Lithologic Cycle Turnover Phase Event. "mountains subside," "earth rent."
Pre-Flood	<i>The Book of Job</i> Job Published His Creation Account 1, <i>The God Alone Creation Account</i> Job Published God's 3 rd Creation Account, <i>Introduction To Creation I</i> Job Published God's 4 th Creation Account, <i>The Pinnacle of Ecology</i> Descriptions of God's Magnificent Megafauna, the Dinosaurs
Long ago	Mass Extinction: Noah's Flood Library carried on Noah's Ark Survivors carried on Noah's Ark
Post Flood	Re-population of earth.
Mosaic Era:	
c.-1446	Exodus From Egypt Moses ca. 80 years old. At the Mt. Sinai Encampment Where He Wrote a Compilation of Pre-Moses History, Including Several Creation Accounts
c.-1446	Moses published his 1 st Creation Account, <i>Everlasting-to-Everlasting</i> , An Old Earth Creation Account Quoted by Peter c. 68 AD, to correct misinterpretation of <i>Seven Day Creation Account</i>
c.-1445	Moses published his 2 nd Creation Account, <i>Introduction to Creation II</i> . Edited from God 3 rd Creation Account, <i>Introduction to Creation I</i> .
c.-1445	Moses published his 3 rd Creation Account, <i>Seven-Day Creation Account</i> ,
c.-1445	Moses published his 4 th Creation Account, <i>One-Day Creation Account</i> .
c.-1445	Moses published his 5 th Creation Account, <i>The Ecology of Paradise</i> .
c.-1445	Moses published his 6 th Creation Account, <i>The Human Race</i> .
c.-1406	Moses published his 7 th Creation Account, <i>The Creation of Man</i> .

Post Mosaic Era:

- c.-1400/-0400 Writing Remainder of Old Testament Scripture in the Hebrew Language.
- c.-1400/-0250 Hebrew Scripture protected and preserved by theologians.
- c.-1015 David published his 1st Creation Account, *God Made His People*
- c.-1015 David published his 2nd Creation Account, *Ages Past and Future*
- c.-1015 David published his 3rd Creation Account, *Chronological Order of Creation*
- c.-1015 David published his 4th Creation Account, *Before and After Account*
- c.<-1000 **Origin of “Chaotic Mass” Philosophy**
 Egyptian Pre-Science Ideas: From Egyptian Mythology
 In the beginning, the universe was filled with the dark waters of chaos.
 One day, a hill rose up out of the waters.
- c.-970 –930 Publication of Creation Account by Wisdom, *Eyewitness to Creation*
- c.-0930 Solomon Published, *Plan and Design*
- c.-0930 Solomon Published, *Insignificance of Time*
- 930 Division of Kingdom
- c.-760-750 Amos Published, *Amos’ Details of Creation*
- 722 Exile of Israel
- c.-700-680 Isaiah Published, *Early Planning and Detail*
- c.-700-680 Isaiah Published, *The Expanding universe*
- c.-700-680 Isaiah Published, *Created For God’s Glory*
- c.-700-680 Isaiah Published, *God Created Everything*
- c.-700-680 Isaiah Published, *Isaiah’s Details of Creation*
- c.-700-680 Isaiah Published, *New Heaven and Earth*
- c.-0606-586 Begin Jewish Babylonian Exile
- 586 Fall of Jerusalem
- c.-0585-580 Jeremiah Published, *The Triune Creator*,
- c.-0585 **Degradation of Continental Rise Philosophy** by Thales of Miletus (c.-624 to -546)
 Regarded as first Greek Philosopher, father of science.
 Learned from Egyptian Astronomers.
 Believed Earth was floating in water (not in mantle/molten rock).
- c.-0580 **Origin of “Firmament” Philosophy** by Anaximander of Miletus (c.-610 to -546)
 Regarded as second Greek Philosopher.
 Companion or pupil of Thales.
 Teacher of Anaximenes of Miletus
 Taught the earth at center of universe and
 universe composed of hollow concentric spheres.
 One of those spheres was a “Firmament”
 holding back “dark waters of chaos”
 from which earth came.
- c.-0580 **Early Spontaneous Generation Theory** -Anaximander of Miletus (c.-610 to -546)
 Taught everything arose spontaneously from the elemental nature of the universe
- c.-0550 **Refinement of “Firmament/Canopy” Philosophy** by

- Anaximenes of Miletus (585 BC – 525 BC)
 Greek philosopher from the latter half of the 6th century,
 younger contemporary, pupil, or friend of Anaximander,
 Taught sun and moon were flat disks traveling around a heavenly canopy,
 on which the stars were fixed.
- 0536 Media – Persians Take Over Babylon
- 0538 First Return of Jewish Exiles to Israel
- c.-0520 Zechariah published, *Zechariah's Details of Creation*
- c.<-0520 Anonymous bible author published, *Wonders by Wisdom*
- c.-0450 **Refinement of Chaotic Mass Philosophy** by Anaxagoras (c.500 BC–428 BC)
 Pre-Socratic Greek philosopher.
 Member of what is now often called the Ionian School of philosophy.
 Defined stages in the process from original chaos to present arrangements.
 Taught all things have existed from the beginning.
 Originally they existed in infinitesimally small fragments of
 themselves,
 endless in number and inextricably combined.
 All things existed in a chaotic mass, confused and indistinguishable.
- c.-0450 **Introduction of four element Philosophy of Science** by
 Empedocles (c. 490 BCE – c. 430 BCE) Pre-Socratic Greek philosopher.
 Maintained that all matter is made up of four elements
 (which he called roots): water, earth, air and fire.
- c.-0430 **Foundations for Western Philosophy laid** by Socrates; (470 - 399 BC)
 An ancient Greek philosopher
 Credited for laying the foundation for Western Philosophy.
- c.-0397 Last Book of Old Testament Written
- c.-0400 The Academy [of Greek Philosophy] in Athens Founded by
 Plato (c. 427–c. 347 BC), An ancient Greek philosopher, a student of
 Socrates.
- c.-0350 **Geocentric Philosophy Formalized** by Aristotle (384 BC – March 7, 322
 BC)
 An ancient Greek philosopher, student of Plato, teacher of Alexander
 the Great.
 Published *On The Heavens* (c.350 BC) formalizing geocentric
 philosophy
- c.-0350/1532 Era of Aristotle/Ptolemaic philosophy influence over science.
- c.-333 to-323 Known World Conquered by Alexander the Great (July 356 BC–June 11, 323
 BC),
 Established cities as Centers for Art, Science, and Philosophy
 Cultivated Pro-Greek Sympathies among Jews
 Affected Jewish Interpretation of Scripture
- 323 to –204 Egyptian Period
- <-0300/1500 Era of false religious writings
 Overzealous theologians wrote under the names of biblical characters.
 Writings contain mixture of pseudo science and pseudo doctrine
- c.-0300 Hebrew had become dead language and meanings of many words lost.

Lost meanings of many Hebrew words replaced with Fanciful Theobabble
Brass (Hiss,) Firmament, Cherub

God Returns Scriptures to the People Using Science/Technology

- c.-0300 Ptolemy I established Library of Science at Alexandria
- c.-0250/>2007 Era of Aristotle/Ptolemaic philosophy influence over Old Testament Interpretation.
- c.-0250 God used science/technology to wrest God’s word from the protective custody of the religious leaders of previous centuries.
- c.-0250 Library of Science at Alexandria published *The Septuagint (LXX)*
Under orders of Ptolemy II
The Torah was added to the Great Library of Science at Alexandria
Translated by Library of Science scholars
Interpreted under influence of Aristotle/Ptolemaic Greek Philosophy of Science
Probably only the First Five Books, the Torah became the Pentateuch.
Translation of Remainder of Old Testament Followed Rapidly.
- 204 to –165 Syrian Period – Influence of *The Septuagint (LXX)* Spread
- 165 to +476 Roman Period
- 0027 Jesus *Discourse on Credibility* important because of God's desire for all to come to repentance. (John 3:11-16)
- c. 50 Paul published *Speech on Mars Hill*
- c. 57 Paul published *Discourse on False Theory*
- c. 60-62 Paul published *Paul’s Details of Creation*
- c. 64-68 Peters Published *Eternity-to-Eternity*.
Play on word, “day,” Teaches time longer (both past and future) than tradition.
Predicts Hutton and uniformitarianism, mentions multiple mass extinctions
- c. 80-95 John published *The Logos Creation Account*
- c. 90-96 John published *Time and Eternity Creation Account*
- c.>0093 Flavius Josephus published *Antiquities of the Jews...*
Interpreted Bible according to Aristotelian (Ptolemaic) Greek philosophy.
Influences many theologians to assume Greek science was original view of bible.
- c.0150 Claudius Ptolemy Published *Almagest (Syntaxis of Astronomy)*
- 0350 St. Augustine discourse on credibility.
- 0350-1500 Credibility of Church sank into decline.
Greek became dead Language
Bible translated into Latin
Latin became language dead to the masses
Used by scientists
Used by theologians
Bible became available only to the clergy
Protected from the masses.
Theology of that day much like Pharmacy of today

Attitude was that general public could not be trusted with it.
Practicing Theology without a license then like
Practicing Medicine without a license today.

God Again Returns Scriptures to the People Using Science/Technology

- 1380's Wickliffe published the first complete bibles in English.
Translated from the Latin language translation
Which had been translated from Greek
Which contained LXX interpretations of Old Testament
Which contained Ptolemaic Philosophy
- 1450's Guttenberg invented Printing Press
- 1525/6 Tyndale Printed New Testament in English
Translated directly from original Greek language

The separation of Church and Science.

- The Church rejected the works of Galileo and
Threw out true science with it.
Credibility of Church sank lower.
- 1543 Copernicus published *De Revolutionibus Orbium Coelestium*
("On the Revolutions of the Celestial Orbs")
Contrasting two Models of the Universe:
Copernicus Heliocentric Model vs.
Aristotle/Ptolemaic Geocentric Model.
- 1600's Johannes Kepler, guessed comet tails were driven by the pressure of sunlight
- 1611 Bible translated into English and standardized version published to the masses
Under order of King James
Ptolemaic interpretations retained
- 1612 Johannes Kepler, excommunicated. He was a great scientist remembered for
discovering the three laws of planetary motion that bear his Name.
- 1632 February, Galileo published *Dialogue Concerning the Two Chief Systems of the
World - Ptolemaic and Copernican*. This event, not the publication of
Darwin, was the beginning of the current rift between science and religion.
- 1633 June 22, 1633 Galileo Convicted of Heresy: Sentenced to life imprisonment
(Permanent House Arrest)
- 1654 James Ussher Published *Annals of the World*. Dating Creation: Oct 23, 4004 BC
- 1729 Jean-Jacques d'Ortous de Mairan discovered¹ Chronobiology
- 1730 Jan Ingenhousz published *Experiments upon Vegetables - Discovering Their
Great Power of Purifying the Common Air in the Sunshine and of Injuring It in
the Shade and at Night*, paving the way to discovery of photosynthesis.
- 1785 James Hutton published *Theory of the Earth*
James Hutton was the founder of modern geology:
Promoted Uniformitarianism Philosophy.
The introduction of the Geologic Column system of relative dating.
- 1788 James Hutton published *Theory of Rain*²

¹ De Mairan, JJ.d.O (1729) Observation botanique. Histoire de l'Academie Royale des Sciences, 35-36

² Hutton, James, 1788, *Theory of Rain*, in Transactions of the Royal Society of Edinburgh, 1788, vol. 1, pp. 53-56.

- The introduction of the hydrologic cycle.
- 1800 Jean Senebier published *Physiologie vegetal*, Completing Photosynthesis discovery.
- Proliferation of bible translations into English**
- Under the influence of various denominational differences.
 The separation of church and state.
 The abandonment of church and the divine mandate.
 The relinquishment of control over ecology
 The rise of political correctness in the field of science and the bible.
 The natural instinct of man to desire control over environment diverted to control of man over man.
- c.1850 Beginning of translation of bible under the influence of modern science. Two theories of time versus eternity.
- 1859 Louis Pasteur scientifically refuted the older theory of spontaneous generation, making way for Darwin's replacement theory of spontaneous generation.
- 1859 Darwin Published *On the Origin of the Species* ...
 new theory of spontaneous generation replaces old theory of spontaneous generation
 interpreted biology according to Hutton's uniformitarianism philosophy
- 1904 Clarence Edward Dutton³ published the modern science principle of isostasy.
- Lessening of uniformitarianism influence on science interpretations.**
- 1915 Alfred Wegener published *The Origins of Continents and Oceans*
 Proposed his Continental Drift hypothesis.
- 1915 Albert Einstein published his General Theory of Relativity, with cosmological constant
- 1925-1926 Lotka published *Elements of Mathematical Biology* in 1924, Volterra published *Variazioni e fluttuazioni del numero d'individui in specie animali conviventi* in 1926, resulting in the Lotka-Volterra equations recognizing the dependence of the food chain on photosynthesis and sunlight
- 1929 Edwin Hubble showed that the universe is expanding from a beginning
- 1929 Realizing the physical universe had a beginning—Einstein's discovered his "greatest blunder"—the cosmological constant he had added to show no beginning.
- 1947 Discovery of the Dead Sea Scrolls (DSS)
- 1950 The term, "Big Bang" was coined by astrophysicist Fred Hoyle as a term of derision because he was championing the competing theory of a Steady State Universe. It was not until after 1964, after the discovery of cosmic background radiation, that the competing theory of a Steady State Universe was overwhelmed by the theory that the universe actually had a beginning.
- 1953 Cuneo Hoffmeister in Germany, and later, Ludwig Biermann, proposed that the sun emitted a stream of particles causing the solar wind.
- 1958 Eugene Parker of the University of Chicago explained the solar wind.

³ Dutton, Clarence Edward." *Earthquakes in the Light of the New Seismology*," 1904.

- 1960's Scientists began to realize that catastrophism had been too quickly dismissed. The universe had begun with a "Big Bang"; the continents had sprung into existence by emerging above sea level in a major catastrophic event called a mantle overturn event. Life became abundant in what is called the Cambrian explosion. Life on the planet earth has been destroyed many times in major mass extinctions. After each major mass extinction life arose anew in another similar population explosion, each time with different species than before. At first, scientists could not believe the major events took less than millions of years. With the discovery of such events as the comet impact at the end of the age of the dinosaurs which caused the major mass extinction, the rise of the theory of catastrophic rapid *Surface Renewal*⁴ events in the early history of the earth, and the discovery of some pre-historic catastrophic past event within the time of human reign on the earth, which left the ocean seaport near Lake Titicaca in Chili two miles above sea level, the realization of major catastrophic events could no longer be ignored.
- 1963 Arno Penzias and Robert Wilson discovered the cosmic microwave background radiation of the Big Bang Theory. This was accepted by modern science as proof that the universe was born at a definite moment. For this discovery, they were awarded the Nobel Prize in Physics in 1978
- 1968 Plate Tectonics was formally Proposed.
- 1969 First Astronaut walked on moon.
- 1970 The Institute for Creation Research is established near San Diego, California to perpetuate and propagate the Young Earth Creation Science doctrine. ICR's main thrust is the discrediting of the Theory of Evolution as proposed by Darwin and popularized in modern science. However, a major thrust of their effort is the promoting of certain elements of the archaic science of Aristotle and the archaic Ptolemaic Philosophy that had found its way into all popular translations of the Bible. This thrust has widened the chasm between science and the Bible.
- 1970's In the 1970's, a common question in college geology classes was concerning possible mechanisms which keep the continents above sea level. No one asked the question how did they get above sea level in the first place.
- 1972 Eldridge and Gould Publish, *Punctuated Equilibria: An Alternative to Phyletic Gradualism*⁵ Caused a shift away from strict uniformitarianism.
- 1980 Alvarez Published *Extraterrestrial causes for Cretaceous-Tertiary Extinctions* Giant Asteroid Theory for Catastrophic mass extinction.

⁴ Starting sometime in the 1970's many technical articles began to appear concerning the resurfacing of the planet Venus. At first, in the 1970's it was analysis of the radar images of the surface of that planet. It is unclear who first published it, but eventually the discussion of a catastrophic surface renewal event became common. <http://www2.jpl.nasa.gov/magellan/tech.html> Currently, at least as far back as 2001 there are appearing articles discussing the possibility of catastrophic mantle overturn events being a common occurrence in the early history of the planet earth. http://gsa.confex.com/gsa/2001ESP/finalprogram/abstract_7777.htm and http://gsa.confex.com/gsa/2001ESP/finalprogram/session_185.htm

⁵ "Punctuated Equilibria: An Alternative to Phyletic Gradualism" (1972) pp 82-115 in "Models in Paleobiology", edited by Schopf, TJM Freeman, Cooper & Co, San Francisco, Eldredge, N. & Gould, S.J. Retrieved 10:00, March 22, 2007, from <http://www.blackwellpublishing.com/ridley/classictexts/eldredge.pdf>

- Luis Alvarez and his son Walter
The discovery of the impact of a giant meteorite at the Yucatan Peninsula gave a catastrophic explanation of the end of the age of the Dinosaurs.
- 1982 Raup, D. M., and J. J. Sepkoski Jr. published, *Mass extinctions in the marine fossil record*. *Science* 215:1501–1503,
The discovery that the geologic column contains the record of many mass extinctions gave rise to cyclical catastrophism theories.
- 1983 Dr. Lewis Frank, John Sigwarth, and John Craven, of the University of Iowa, announce the discovery that the ecology of the earth is not a closed system. That in addition to the water cycle on earth known as the hydrologic cycle, there is water in the outer space of our solar system and those water cycles interact.
- 1986 Hugh Ross Founded Reasons to Believe to:
Remove Doubts of Skeptics
Strengthen the faith of believers
Demonstrate that science and the Bible complement one another.
- 1987 Frank Published *On the Influx of Small Comets...*⁶, awakening the scientific community to the idea that the water of our oceans came from extra terrestrial source or sources, and that the atmosphere is actively separating water below from water above.
- 1992 October 31, 1992 Formal vindication of Galileo by Catholic Church.
- 1995 Lithologic Cycle first introduced to Hamilton, Montana Grade School Seventh and Eighth Grade Math and science class.
- 1996 Frederick Published *Origin of the Continents...*
Introducing the Lithologic Cycle
Introduction of mechanism producing periodic mass extinctions
Also proposes theory of origin of comets to eliminate postulated Oort cloud.
- 2000 Hawking, Stephen, (Date approximate) Public Lectures: Life in the Universe, Professor Stephen Hawking's website,
<http://www.hawking.org.uk/text/public/life.html> (Accessed Nov, 2006)
Stephen Hawking speaks of the search for a new theory of how life spontaneously arose
- 2004 Presentation of *The Simple Truth: the Musings of an Old Scientist upon Reading the Bible* (Earlier version of *Eyewitness to the Origins*.)
- 2006 In June of 2006⁷, Dr. Ralph von Frese announced the discovery of the Wilkes Land Crater in the Wilkes Land region of East Antarctica, which may mark the site of the impact that caused the Permian-Triassic extinction.
- 2007 July, 2007 Frederick, AnOldScientist⁸ published *Eyewitness To the Origins, First Edition, All Biblical Origin Accounts Combined, The Chronicle of Existence From Eternity Past to Eternity Future, Scientific Evidence of the Supernatural Authorship of the Bible*.

⁶ Frank, L.A., Sigwarth, J.B., Craven, J.D. (1986). On the influx of small comets into the Earth's upper atmosphere. *Geoph.Res.Lett.*,13 :303-310.

⁷See: <https://www.centauri-dreams.org/2006/06/02/an-ancient-crater-bigger-than-chicxulub>

⁸See: <https://www.amazon.com/author/anoldscientist>

- 2008 March, 2008 Carr, John S. and Najita, Joan R. Announce Discovery indicating that water is abundant in region of outer space where planetary systems are developing.⁹ (Same principle in Psalm 104:3)
- 2014 October, 2014 Scientists¹⁰ at Woods Hole Research Center announce new discovery about water abundance in areas of outer space where planets develop. (Approaching same conclusion published in Psalm 104:3 that water was present when planets developed.)
- 2018 May 24, 2018, I. N. Bindeman et. al. published, *Rapid emergence of subaerial landmasses and onset of a modern hydrologic cycle 2.5 billion years ago*, announcing the discovery that the emergence of the earth from the ocean was a sudden event. This publication includes five significant technical details about the beginning of the continents that were previously published thousands of years ago in the Ancient Hebrew and Ancient Egyptian religious literature¹¹. Detail 1 was discovered in the last century, 2-5 this year (2018)
Detail 1: Before the continents emerged, an ocean of water covered our planet.
Detail 2: In a sudden event the continents were formed.
Detail 3: The continents rose, emerging from below sea level to be above sea level.
Detail 4: It was a permanent change; the continents now permanently above water.
Detail 5: The onset of the modern hydrologic cycle is associated with the emergence of the continents.

⁹ Science, March 14, 2008, Carr, John S. and Najita, Joan R., *Organic Molecules and Water in the Planet Formation Region of Young Circumstellar Disks*

¹⁰ (1) Scientists at Woods Hole Research Center announce, *Earth's Water Existed 135 Million Years Earlier than Thought*, *LiveScience*, 30 October 30,
<http://www.livescience.com/48549-solar-system-water-evidence-for-earth.html>

(2) *Science* 31 October 2014: Vol. 346 no. 6209 pp. 623-626 DOI: 10.1126/science.125671, *Early accretion of water in the inner solar system from a carbonaceous chondrite-like source*

¹¹ http://www.scienceandthebible.net/20180817_Modern_Science_Discovery_Predicted_by_Ancient_Religious_Literature.pdf

About the Author:

For thirty years Frederick, The Old Scientist, as a young man, disappeared into the Military–Industrial complex where no publication is released to the public. During those years, three in the U. S. Army Security Agency and his first 27 at ESL (Electromagnetic Systems Laboratories, Sunnyvale, California) his skills were put to work in the effort to win the cold war. In the process, he made several significant advances in the technology of information recognition and information extraction. He became known as “one who could see information where others see only data.” After the cold war was won, during the next three years at ESL, three United States Patents demonstrated to the public the fact that the information Frederick could see was real.

In his parting communication to the people he had worked with for thirty years Frederick said,¹² “As the reality of the opportunity for early retirement furnished to me by TRW begins to penetrate into my being, I dream of the future. A future where I will be enabled by my retirement to increase the quality of life for many more people through the application of my skills in the field of information recognition and information extraction. Those same skills which led to the radio fingerprinting of cellular phones can be applied to many of today’s pressing problems far removed from the field of electronics. And, in this way, the Spirit of ESL will live on.”

In the years since, Frederick has continued that challenge. In 1996, Frederick published¹³ a proposed answer to a long standing mystery of geology. *Origin of the Continents, an Introduction to the Theory of The Lithologic Cycle*, furnished a mechanism explaining the origin of the continents and the continued maintenance of their standing over three miles above the sea floor, allowing them to remain above sea level, surrounded by an ocean that is an average of three miles deep. In the two following years two more inventions were added to the list of patents by Frederick. For the next ten years, over fifteen thousand hours¹⁴ of intense bible study and scientific research day and night has resulted in the recognition and extraction of the information contained in this book

Frederick has been a scientist and theologian all his life. One of his first memories is investigating why he could seemingly see through the door latch when he was barely three feet tall. (At first he thought it was a miracle, then he realized that one eye was behind the latch while the other one was seeing around the latch.) In the third grade, his teacher recognized this drive in Frederick and allowed him to perform scientific experiments unsupervised and alone in the science room. In college, Frederick graduated with a major in geology and the equivalent of a minor in theology. (The school did not offer a minor in religion, but waived the requirement for a minor because the requirement was met by theological studies at other institutions.) It is from there that he disappeared into the Military–Industrial complex.

¹² 1994, December 9, 1994 Frederick, Max, “ESL... From Start to Finish” Article published in the company newsletter *ESL in Brief, Published Weekly by ESL, a TRW Company*, DEC. 9, 1994

¹³ Of course, *Origin of the Continents, an Introduction to the Theory of The Lithologic Cycle*, was never published in a peer reviewed journal because it came too close to furnishing a mechanism that explained where the water for Noah’s flood came from and where that water went. No peer reviewer could possibly comment positively on such a writing without jeopardizing his standing in the scientific community.

¹⁴ Equivalent to over seven and a half years of full time employment.