

THE MASTER'S SEMINARY

A CRITIQUE OF THE OLD EARTH CREATIONIST VIEW

BY  
KEITH FONG

SUN VALLEY, CALIFORNIA

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## Introduction

“How old are you?” It’s one of the first questions a child learns how to answer. With time and practice, most children learn the answer (even though the pesky number changes every year). But when modern evangelicals ask the Earth, “How old are *you*?” they report two dramatically *different* answers: ~4-5 billion years (“old Earth” view)<sup>1</sup> or ~6000 years (“young Earth” view).<sup>2</sup> Old Earth Creationists (OECs) say that Genesis 1-2 must be interpreted in light of natural science,<sup>3</sup> or that Genesis 1-2 was never intended to tell us how long it took God to create the universe at all.<sup>4</sup> Young Earth Creationists (YECs) argue that the scientific data can be fit to the biblical timeline of ~6000 years of human history.<sup>5</sup> But who is right? How old is the Earth? When did God create the universe? This paper will summarize the various biblical and scientific arguments of the OEC view and give critique and valid alternative understandings from a YEC perspective.

To narrow the scope, this study will interact only with the evangelicals sharing the following convictions:

1. Scripture is the infallible, inerrant Word of God, the only supreme authority for life and doctrine (2 Tim 3:16). Although some YECs have accused all OECs of abandoning the authority of Scripture, this is not true of all OECs.<sup>6</sup>

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<sup>1</sup> Wayne Grudem, *Systematic Theology: An Introduction to Biblical Doctrine*, Second. (Grand Rapids: Zondervan Academic, 2020), 402. Newman, 105.

<sup>2</sup> Paul Garner, *The New Creationism* (Welwyn Garden City, UK: EP Books, 2009), 73.

<sup>3</sup> Grudem, *Systematic Theology: An Introduction to Biblical Doctrine*, 338–419.

<sup>4</sup> Richard E. Averbeck, “Chapter One: A Literary, Inter-Textual, and Contextual Reading of Genesis 1-2,” in *Reading Genesis 1-2*, ed. J. Daryl Charles (Peabody, MA: Hendrickson, 2013), 31.

<sup>5</sup> James J.S. Johnson, “Genesis Data Add Up to a Young Earth,” in *Creation Basics & Beyond* (Dallas: Institute of Creation Research, 2013), 47–53.

<sup>6</sup> Noted theologians open to an old Earth interpretation of Genesis 1-2 include men as Charles Hodge, William G. T. Shedd, E. J. Young, and Francis Schaeffer. (C. John Collins, “How Old Is the Earth? Anthropomorphic Days in Genesis 1:1-2:3,” *Presbyterion* 20, no. 2 (Fall 1994): 111.) Howe, a YEC himself, also defends the inerrantist position of noted OECs. (Frederic R. Howe, “The Age of the Earth: An Appraisal of Some

2. “Science”, the searching out of God’s created order to accurately describe and understand His created works, is a godly endeavor when done *under* the authority of God.<sup>7</sup> Thus, when submitted to the supreme authority of Scripture, scientific inquiry is a valid tool for understanding natural revelation. Although some YECs have an almost fideistic devotion to the Bible that *ignores* the scientific data, most take scientific argument seriously.<sup>8</sup>
3. God is the God of truth. Thus, a truly scientific understanding of the world will only accord with, and never contradict, God’s Word,<sup>9</sup> for God is God over all reality.
4. God created everything that exists *ex nihilo* by the power of His word (Gen 1:3ff).
5. The “gap theory”—that there are millions or billions of years between Genesis 1:1 and Genesis 1:2—is exegetically fallacious and unsatisfying scientifically.<sup>10</sup> For this reason, it has fallen out of favor amount modern OECs.
6. Theistic macroevolution, in which all known life arose through processes such as natural selection and genetic mutation, is incompatible with the Bible and an unscientific myth.<sup>11</sup>
7. Adam and Eve were the first two human beings that God created directly from the dust and are thus the first progenitors of the human race.

Other positions that fall outside of these bounds are worthy of biblical responses (and refutation), but such arguments are outside the scope of this paper.

### **The Old Earth View’s Exegesis of Scripture**

OEC positions typically focus on the interpretation of “day” (יֹמִים) in Genesis 1 and 2 and the scientific evidence for an old Earth.

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Current Evangelical Positions, Part 1,” *Bibliotheca Sacra* 142, no. 565 (March 1985): 32.)

<sup>7</sup> The term “science” should not be confused with “scientism,” which is secular, atheistic, materialism.

<sup>8</sup> Notable examples include organizations like The Institute of Creation Research (ICR), Answer in Genesis (AIG), and Is Genesis History?

<sup>9</sup> Grudem, *Systematic Theology: An Introduction to Biblical Doctrine*, 352.

<sup>10</sup> *Ibid.*, 383. See also James J.S. Johnson and Jason Lisle, “Gap Theory: A Formless and Void Error,” in *Creation Basics & Beyond* (Dallas: Institute of Creation Research, 2013), 35–46.

<sup>11</sup> For a summary critique, see Grudem, *Systematic Theology: An Introduction to Biblical Doctrine*, 352–383. For an in depth critique, see J.P. Moreland et al., eds., *Theistic Evolution: A Scientific, Philosophical, and Theological Critique* (Wheaton: Crossway, 2017).

## Day Age

Some OECs argue that “day” (יָוֵם) in Genesis 1 could be understood to be an age, a long epoch.<sup>12</sup> “Day” in Genesis 2:4 (and in Psalm 90:4, 2 Peter 3:8) obviously mean “age” or “epoch”, and not a literal Earth day.<sup>13</sup> Therefore, in Genesis 1, יָוֵם could also be understood to be “epoch,” thus allowing for the ~13.8 billion years to fit within the first six “days” of creation.

YECs respond by pointing to the ordinal numbers with יָוֵם, the pattern of “evening” and “morning” after days 1-6, and the 7-day creation week as the basis for the Sabbath (Exod 20:8-11) as strong evidence that Genesis 1 indicates 7 literal Earth days.<sup>14</sup> Even other OECs find “linguistic case for this theory... weak” for there are no “contextual clues” to take this meaning of יָוֵם in the text.<sup>15</sup> In addition, the day-age theory fails to concord modern science’s sequence of creation. To cite one example, in Genesis 1, the fish came on day 5, and the plants on day 3. But modern scientific theory says that life in the oceans came *before* life on Earth.<sup>16</sup> Thus, the day age theory fails to accord with both Scripture and modern science.

## Literary Days (Framework Hypothesis)

Some OECs call the days of Genesis 1 “literary days,” finding many parallels between Genesis 1 and extant Ancient Near East (ANE) cosmology literature. Averbek finds a “three-

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<sup>12</sup> Ken Esau, “What Time Is It? Interpreting Genesis 1-3,” *Direction* 43, no. 1 (Spr 2014): 12.

<sup>13</sup> Young expands this argument to say that the creation on each day is a peak activity and that, for example, “bird creation could have occurred, say, on days four and six as well [as day five].” Davis A. Young, *Creation and the Flood* (Grand Rapids: Baker Book House, 1977), 117. Quoted in Howe, “The Age of the Earth: An Appraisal of Some Current Evangelical Positions, Part 1,” 35.

<sup>14</sup> John MacArthur and Richard Mayhue, eds., *Biblical Doctrine: A Systematic Summary of Bible Truth* (Wheaton, IL: Crossway, 2017), 215–16.

<sup>15</sup> Collins, “How Old Is the Earth? Anthropomorphic Days in Genesis 1:1-2:3,” 112.

<sup>16</sup> Jason Lisle and James J.S. Johnson, “Day-Age Theory: A Day Late and a Scholar Short,” in *Creation Basics & Beyond* (Dallas: Institute of Creation Research, 2013), 33.

level” cosmos (above, below, and on Earth) within Mesopotamian cosmology, a six-stage creation in Ugarit cosmology, and a transcendent deity in the Egyptian cosmology—which have obvious parallels to Genesis 1-2.<sup>17</sup> He argues that the biblical God adopted the literary features of the ANE’s cosmology genre to tell the “[creation] story in a way that would have made sense to the ancient Israelites *as an ANE people*.”<sup>18</sup> He concludes that “the seven days are not to be taken literally and are not intended to tell us how long God took in actually creating the cosmos or how old the Earth is.”<sup>19</sup> Advocates call days 1-3 the days of forming and days 4-6 the days of filling, with each day of forming corresponding to its own day of forming.<sup>20</sup>

Other OECs find this theory lacking. The proposed correspondence of forming and filling doesn’t match the text (i.e., Day 1 should correspond with Day 4, but the text says that the celestial bodies of day 4 fill the expanse of day 2, not day 1).<sup>21</sup> This view is guilty of genre override; even if Genesis has parallels with ANE literature, its nature as literature does not negate the *historicity* of the account.<sup>22</sup>

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<sup>17</sup> Averbeck, “Chapter One: A Literary Day, Inter-Textual, and Contextual Reading of Genesis 1-2,” 12–17.

<sup>18</sup> *Ibid.*, 14. Emphasis mine.

<sup>19</sup> *Ibid.*, 31.

<sup>20</sup> Grudem, *Systematic Theology: An Introduction to Biblical Doctrine*, 405.

<sup>21</sup> *Ibid.*, 406–8.

<sup>22</sup> For a thorough treatment, see Robert McCabe, “A Critique of the Framework Interpretation of the Creation Week,” in *Coming to Grips with Genesis*, ed. Terry Mortenson and Thane H. Ury, 6th ed. (Green Forest, AR: Master Books, 2008), 211–249.

### Analogical/Anthropomorphic Days

Some OECs like Collins argue that the six days are “God’s workdays—analogue to human workdays.”<sup>23</sup> Therefore “how long [the days] were, or exactly how their activities might match what we find in the fossils, is not important.”<sup>24</sup> His tentative conclusion is that the days should be viewed “as successive periods of undefined length (with perhaps some overlap).”<sup>25</sup> He says there were no shrubs or plants on day 6 (Gen 2:6) because “in that part of the world it rains in the winter and stops raining around Easter. ...[therefore] it must mean that this climate cycle had been in effect for at least a year, if not longer. So, a week that is a year or longer is not an ordinary week!”<sup>26</sup> In other words, the lack of plants was due to a lack of seasonal rain, implying that day 6 persisted for many months.

Like the literary days view, the analogical days view fails to take Genesis as historical narrative. The abundance of *waw*-consecutive imperfect verb forms establishes Genesis 1-2 as *history*, just like the rest of the book of Genesis.<sup>27</sup> It also inverts the relationship of the sabbath to the creation week. God commanded the weekly sabbath *because* of the creation week (Exod 20:11); creation is the pattern that the sabbath follows. God’s creative acts are not patterned after the Israelite work week! YECs like Beall have also noted that the plants in Genesis 2:5 are *crops*

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<sup>23</sup> C. John Collins, “Reading Genesis 1-2 with the Grain: Analogical Days,” in *Reading Genesis 1-2*, ed. J. Daryl Charles (Peabody, MA: Hendrickson, 2013), 88. In another place, Collins writes, “God is the diligent workman.” (Collins, “How Old Is the Earth? Anthropomorphic Days in Genesis 1:1-2:3,” 118.)

<sup>24</sup> Collins, “Reading Genesis 1-2 with the Grain: Analogical Days,” 88.

<sup>25</sup> Collins, “How Old Is the Earth? Anthropomorphic Days in Genesis 1:1-2:3,” 120.

<sup>26</sup> Collins, “Reading Genesis 1-2 with the Grain: Analogical Days,” 88.

<sup>27</sup> Todd S. Beall, “Responses to Chapter Three,” in *Reading Genesis 1-2*, ed. J. Daryl Charles (Peabody, MA: Hendrickson, 2013), 97. Also, Walter A. Maier, “A Response to Day-Age Creationism,” *Concordia Theological Quarterly* 82, no. 3–4 (October 2018): 284.

that need human cultivation to grow, not all vegetation.<sup>28</sup> This eliminates the need to view day 6 as months long, and the ‘necessity’ of seeing these days as nonliteral evaporates.

### Genealogical Gaps

Adding up the ages in the genealogies of Genesis 5 and 11 comes to around 4000 years from Adam to Abraham.<sup>29</sup> However, some OECs like Green<sup>30</sup> and Steinmann<sup>31</sup> have argued that these chapters (and many other genealogies in the Bible) are selective/open genealogies, not complete/closed ones. Therefore, they conclude that the timespan of these genealogies must be much larger than 4000 years.<sup>32</sup>

While YECs admit that there may be *genealogical* gaps in Genesis 5 and 11 (just as in the genealogies of Ezra 7:3 and Matthew 1:8; cf. 1 Chronicles 3:11-12, 6:7-11), this does not necessitate that there are *chronological* gaps.<sup>33</sup> Even if Genesis 5 and 11 sometimes lists a grandfather begetting his grandson, the grandfather’s stated age spans his son’s life, and therefore there is no *chronological* gap. Sexton’s reply to Steinmann’s is as extensive as it is persuasive.<sup>34</sup> The primary fault of Steinmann’s argument is that changes the meaning of the

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<sup>28</sup> Beall, “Responses to Chapter Three,” 98.

<sup>29</sup> Garner, *The New Creationism*, 66–73.

<sup>30</sup> W.H. Green, “Primitive Chronology,” *Bibliotheca Sacra* 47 (April 1890): 285–303.

<sup>31</sup> Andrew E. Steinmann, “Gaps in the Genealogies in Genesis 5 and 11?,” *Bibliotheca Sacra* 174, no. 694 (June 2017): 141–158.

<sup>32</sup> For a history of the development of the genealogical gap theory, see Jeremy Sexton, “Evangelicalism’s Search for Chronological Gaps in Genesis 5 and 11: A Historical, Hermeneutical, and Linguistic Critique,” *Journal of the Evangelical Theological Society* 61, no. 1 (March 2018): 5–19.

<sup>33</sup> Johnson, “Genesis Data Add Up to a Young Earth,” 49–53. See also Sexton, “Evangelicalism’s Search for Chronological Gaps in Genesis 5 and 11: A Historical, Hermeneutical, and Linguistic Critique.”

<sup>34</sup> “...chronological gaps are lexically and grammatically untenable.” Sexton, “Evangelicalism’s Search for Chronological Gaps in Genesis 5 and 11: A Historical, Hermeneutical, and Linguistic Critique,” 12.



Hiphal stem, transforming it from a direct-causative sense to a causative action that leads to the act.<sup>35</sup> This is a linguistic contortion of a basic Hebrew form.

### No Exegetical Reason for an Old Earth

In conclusion, every exegetical argument of the OEC perspective has fatal flaws. There is no compelling biblical reason to believe that the “days” of Genesis 1 are anything other than literal Earth days, and therefore that the Earth is indeed young.<sup>36</sup> There is an adage in theology: “what’s true is not new, and what’s new is not true.” However, as Mook deftly shows, the church fathers who took the days as literal Earth days *and* those who took the days as allegorical “resist[ed] the old-earth theories of their day.”<sup>37</sup> “There is no evidence to suggest that... any of the fathers... would entertain the idea that creation took place millions of years ago.”<sup>38</sup> Therefore, modern OECs are postulating an idea completely *foreign* to the early church.

### The Old Earth View’s Scientific Argument

The lack of sound exegetical foundation leads many OECs to center their argument upon scientific reasons for believing an old Earth. Grudem’s list is representative.<sup>39</sup>

- Cosmological reasons: the expansion rate of the universe, starlight from billions of years ago, old age of white dwarfs, old burning stars, the present stability of the sun, and invariant cosmic background radiation temperatures.

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<sup>35</sup> Instead of “Johnny hit the ball”, it purportedly becomes “Johnny *caused the action* that hit the ball.”

<sup>36</sup> Indeed, there are much stronger exegetical reasons to believe that the Bible teaches a young earth, not least of which is Jesus’ own teaching. See Terry Mortenson, “Jesus’ View of the Age of the Earth,” in *Coming to Grips with Genesis* (Green Forest, AR: Master Books, 2008), 315–346.

<sup>37</sup> James R. Mook, “The Church Fathers on Genesis, the Flood, and the Age of the Earth,” in *Coming to Grips with Genesis* (Green Forest, AR: Master Books, 2008), 32.

<sup>38</sup> *Ibid.*, 37.

<sup>39</sup> Grudem, *Systematic Theology: An Introduction to Biblical Doctrine*, 396–402.

- Geological reasons: ice layers, coral reef layers, sediment layers at the bottom of lakes, multiple types of radiometric dating of rocks, and slow continental separation purportedly point to an old Earth (~4.5 billion years).

### Philosophical Assumptions of the Old Earth View

Before giving YEC responses to these scientific claims, it will be profitable to examine some of the philosophical foundations of OEC:<sup>40</sup>

1. Naturalism: Physical phenomena must be explained *apart* from the God of the Bible.<sup>41</sup> While Christians are, by definition, not atheists or deists, the scientific method of the Enlightenment was pioneered by those who denied that God intervened supernaturally in the world.
2. Uniformitarianism: The natural processes of today are the same as they have always been. Therefore, the rate of change in today's physical world (decay of stars, sedimentation, radiometric decay, continental drift, etc.) is the same as it has always been.
3. A "synthesis of Biblical and scientific data lead to a "united field" theory of the origin of the Earth."<sup>42</sup> Put bluntly, the Bible's meaning is constrained by general revelation. OECs point to the "Galileo affair"—where the Roman Catholic Church squelched heliocentricity because it seemed to contradict the Bible<sup>43</sup> as a warning from history of what happens when Christians ignore science.

However, if these three philosophical assumptions are rejected, answers to the OECs scientific arguments are readily available.

### Scientific Rebuttals to the Old Earth View

YECs' arguments are too numerous to repeat here. But a general solution to cosmological time, and a representative argument for geological time, may prove helpful.

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<sup>40</sup> Those who hold to an old Earth view do not necessarily adopt these presuppositions wholeheartedly or in every sphere. In fact, many explicitly reject them. However, the old Earth view of science still necessarily implies these assumptions.

<sup>41</sup> Terry Mortensen, "Jesus, Evangelical Scholars, and the Age of the Earth," *The Master's Seminary Journal* 18, no. 1 (Spr 2007): 78–84.

<sup>42</sup> Robert C. Newman and Herman J. Eckelmann, Jr., *Genesis One and the Origin of the Earth*, reprint. (Grand Rapids: Baker, 1977), 36.

<sup>43</sup> Mortensen, "Jesus, Evangelical Scholars, and the Age of the Earth," 73.

## *Cosmology*

In science, cosmology is used to date the age of the universe. There is evidence both an old universe (listed above) as well as evidence for a young universe (existent planetary magnetic fields, comets, internal heat of giant planets, spiral galaxies).<sup>44</sup> How can this be reconciled? Some have proposed that Einstein’s theories of special and general relativity may be the key.<sup>45</sup> The basic idea is variant time, namely that different parts of the universe have aged “more quickly” (or “less quickly”) than other parts. Time is a property of the frame of reference. There is no absolute time (from a creature’s perspective) because time can be affected by multiple physical phenomena.

First, motion affects time. As a frame of reference approaches the speed of light, time *slows* in that frame when compared to the original frame of reference.<sup>46</sup> This implies that for a frame moving at the speed of light, time would seem to *stop* to an observer in the original frame of reference. What if then, when God “created the heavens and stretched them out” (Isaiah 42:5) He stretched out parts of the cosmos near the speed of light and therefore caused time to slow, even stop, for some parts of the universe? This would create different ages for different frames of reference.

Second, gravity affects time. The more gravitational force on an object, the less quickly time passes. This implies that at the centers of intense gravity (i.e., black holes), time *stops* when

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<sup>44</sup> Jason Lisle, “The Age of the Cosmos—What You Have Not Been Told,” in *Creation Basics & Beyond* (Dallas: Institute of Creation Research, 2013), 307–312.

<sup>45</sup> See the three part series from *Acts & Facts*. L. Vardiman and D.R. Humphreys, “A New Creationist Cosmology: In No Time at All Part 1,” *Acts & Facts* 39, no. 11 (2011): 12–15. L. Vardiman and D.R. Humphreys, “A New Creationist Cosmology: In No Time at All Part 2,” *Acts & Facts* 40, no. 1 (2011): 12–14.

<sup>46</sup> In special relativity, this is called time-dilation.

compared to an unaffected frame of reference.<sup>47</sup> What if, in the first week of creation, God used the immense gravitational forces of cosmological bodies (i.e., stars, planets) to create different ages throughout the universe? This would allow black holes, white dwarfs, and other old cosmological features, to form. If the Earth's solar system is towards the center of the universe, it would be in a gravitational 'well' of higher gravitational force, and thus its age within its own frame of reference would be younger than the age of the outer reaches of the universe in their own frame of reference.

Time is God's creation, and therefore it is subject to His will. Experimentally verified scientific theories can explain the mechanisms God might have used to time to be differential across the universe. Within this model, it is coherent to say, "God created the heavens and the Earth in six Earth days. At the end of those six Earth days, some parts of the cosmos were billions of years old *in their frame of reference* while the Earth's solar system was six days old *in its frame of reference*."<sup>48</sup> This presentation of the theory is not robust.<sup>49</sup> But it demonstrates how one can legitimately fit the scientific data to Scripture rather than fitting Scripture to uniformitarian scientific theory.

### *Geology*

Geology is used to date the age of the Earth. If the Earth truly is only 5 Earth days older than humanity as a literal understanding of Genesis 1-2 indicates, YECs must explain why

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<sup>47</sup> In general relativity, this is called gravitational time-dilation.

<sup>48</sup> Conceivably other parts of the universe could be at intermediate ages.

<sup>49</sup> This reasoning comes out of the author's undergraduate training in physics. Much more could be said about time, gravity, and the speed of light. This is not intended to be a scientific proof, but merely a lay-level introduction to how age across the universe could vary within current scientific models. For a much more technical argument from Einstein's theories for the same, see L. Vardiman and D.R. Humphreys, "A New Creationist Cosmology: In No Time at All Part 3," *Acts & Facts* 40, no. 2 (2011): 12-14.

multiple avenues of scientific evidence seem to show that the Earth is ~4.5 billion years old, not ~6000 years old. Replacing naturalism and uniformitarianism for divine catastrophism, YECs point to the Noahic flood as “the key”<sup>50</sup> to explaining much of the geological data rightly. YECs find a young earth explanation for ice layers, seabed sediment layers,<sup>51</sup> and continental separation.<sup>52</sup> The basic premise is that God used the catastrophic event of the flood to *quickly* (catastrophically) change the Earth.

Radiometric dating is the strongest argument for an OEC. For such a physical clock to be accurate, three things must be correctly assumed: (1) the single source of decay material, (2) the initial amount of decayed material, (3) the constant rate of radioactive decay.<sup>53</sup> Isochron dating ensures that (1) and (3) are true,<sup>54</sup> so YECs have focused on (2). While uniformitarian views assume that the decay rates of today are the same rates of the past, there are hints that this may not be the case.<sup>55</sup> The present author find the argument from helium diffusion in zircon, often-cited by YECs, less than convincing,<sup>56</sup> but it does seem likely that radioactive decay can be influenced by outside factors such as solar radiation.<sup>57</sup> More research needs to be done, but

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<sup>50</sup> John D. Morris, “The Flood Is the Key,” in *Creation Basics & Beyond* (Dallas: Institute of Creation Research, 2013), 198.

<sup>51</sup> Jake Hebert, “Do Seafloor Sediment and Ice Core Data Prove Long Ages?,” in *Creation Basics & Beyond* (Dallas: Institute of Creation Research, 2013), 243–248.

<sup>52</sup> John D. Morris, “Catastrophic Plate Tectonics,” in *Creation Basics & Beyond* (Dallas: Institute of Creation Research, 2013), 249–252.

<sup>53</sup> Garner, *The New Creationism*, 92–93.

<sup>54</sup> *Ibid.*, 93–96.

<sup>55</sup> *Ibid.*, 99–104.

<sup>56</sup> For the argument, see D. R. Young Humphreys, “Helium Diffusion Age of Zircons Supports Accelerated Nuclear Decay,” in *Radioisotopes and the Age of the Earth*, ed. L. Vardiman, A. A. Snelling, and E. F. Chaffin, vol. II (El Cajon, CA: Institute of Creation Research, 2000).

<sup>57</sup> Dan Stober, “The Strange Case of Solar Flares and Radioactive Elements,” *Stanford News*, August 23,

YECs believe that in time, the science will support the biblical model of a ~6000 year old earth.

### Conclusion

Although this essay has focused on critiqued the OEC view, not on explicitly defending the YEC view, the verdict is evident: if the OEC view has weak biblical foundations, and if there are plausible, alternative scientific explanations that allow, or even favor, for a young Earth, modern evangelicals ought to follow the biblical and scientific data to believe that the earth is indeed young. While some seek to dissuade from being dogmatic on this issue,<sup>58</sup> Christians should be properly concerned to teach and defend what Scripture teaches (Jude 3). The integrity of the Christian worldview, the glory of God revealed in creation (Psa 8:3–4, 19:1–6), and the confidence of Christ’s people in His infallible Word depends upon it.

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2010, accessed May 11, 2020, <https://news.stanford.edu/news/2010/august/sun-082310.html>. For a scientific rebuttal, see S. Pommé et al., “On the Claim of Modulations in Radon Decay and Their Association with Solar Rotation,” *Astroparticle Physics* 97 (January 2018): 38–45.

<sup>58</sup> John L. W. James, “The Age of the Earth: A Plea for Geo-Chronological Non-Dogmatism,” *Foundations (Affinity)* 71 (Fall 2016): 39–51.

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