

Coming to Grips with Time Scales for Cosmic and Earth History

Dr. Scott Chambers
Physical and Computational Sciences Directorate
Pacific Northwest National Laboratory
Richland, WA

The ages of the universe and planet earth have been determined by physically based measurements to be ~15 billion years and ~4.5 billion years, respectively. However, the idea that the universe and earth could be this old is dismissed by some in the Christian church based on their understanding of what the Bible teaches. In some Christian circles, belief in a young earth is considered to be a “doctrine to die for”, on the same level as the deity of Christ and the inerrancy of Scripture. These convictions took root following the Scopes Monkey Trial in 1925 as a reaction against Darwinian evolution, and have been fueled in recent decades by the Institute for Creation Research. How reliable are the methods used to establish the age of the universe and earth? If these ages are correct, is the apparent conflict with Scripture as stark as the Institute for Creation Research makes it out to be? In this lecture, we will: (i) discuss Biblical revelation and scientific research as “ways of knowing”, (ii) present an overview of physical dating methods, (iii) discuss ways to interpret Scriptures relevant to the history of the universe, and, (iv) present some important basics of general relativity which may solve this apparent conflict.

Dr. Scott Chambers is a Laboratory Fellow and Technical Group Leader of the Oxide Epitaxy Group at Pacific Northwest National Laboratory. His training is in chemical physics and physical chemistry, but his research over the bulk of his professional career has been in materials chemistry and physics. His research focuses on the making, modeling and understanding of complex metal oxide crystalline films and heterostructures. These materials are of significant interest in a variety of scientific and technological arenas, including next-generation electronics, photovoltaics and photocatalysis and quantum computation. Dr. Chambers was trained at the University of California at San Diego and Oregon State University. Before joining Pacific Northwest National Laboratory, he was a staff scientist at the Boeing High Technology Center in Seattle. He is a Fellow of the American Physical Society, the American Association for the Advancement of Science, and the American Vacuum Society. He was the recipient of E.W. Mueller Award for outstanding achievements in surface science from the Laboratory for Surface Studies at the University of Wisconsin in 2004, as well as a Federal Laboratory Consortium Excellence in Technology Transfer Award in 2002. He has published ~310 peer reviewed scientific papers, review articles, and book chapters, and has given ~230 invited lectures at universities, research laboratories and conferences worldwide. He holds three U.S. patents. Dr. Chambers and his family have lived in the Tri Cities since 1992. He and his family have been members of Bethel church for 25 years, and he has served as an elder at Bethel since 2002.

