Rocks Older Than The Solar System

Examining The Thorium Lead Dating Method

By Paul Nethercott
August 2013

Introduction

How reliable is radiometric dating? We are repeatedly told that it proves the Earth to be billions of years old. If radiometric dating is reliable than it should not contradict the evolutionary model. According to the Big Bang theory the age of the Universe is 10 to 15 billion years.[1] Standard evolutionist publications give the age of the universe as 13.75 Billion years. [2, 3]

Standard evolutionist geology views the Earth as being 4.5 billion years old. Here are some quotes from popular text: "The age of the Earth is 4.54 ± 0.05 billion years." [4] "The Solar System, formed between 4.53 and 4.58 billion years ago." [1] "The age of 4.54 billion years found for the Solar System and Earth." [1] "A valid age for the Earth of 4.55 billion years." [5, 6]

Evolutionists give the age of the galaxy as "11 to 13 billion years for the age of the Milky Way Galaxy." [1, 7] Let us remember this as we look at the following dating as given in secular science journals.

1. Uranium–Thorium–Lead Isotope Data

These rocks from the Marble Bar area of the Pilbara Craton, Western Australia, were dated [8] in 2011 using the Uranium/Lead and Thorium/Lead dating methods. The article claims that the true age is 3.4 billion years old. [8] If we put the ratios from a table [9] in the article into Microsoft Excel and run the values through Isoplot [10] we get ages between 5 and 100 billion years old! How can a rock be 85 billion years older than the Big Bang explosion? Of all the samples, 45 are older than the Earth, 23 are older than the Galaxy and 17 are older than the Universe. There is a 75 billion year spread of dates between the youngest and the oldest ages.

Table 1

Statistics	207 Pb /206Pb	208Pb/232Th	207Pb/235U	206Pb/238U
Average	5,325	56,976	7,319	15,192
Maximum	5,403	100,601	10,054	31,005
Minimum	5,222	24,980	5,795	7,138
Difference	181	75,622	4,259	23,868

Table 2

208Pb/232Th	207Pb/235U	206Pb/238U
100,601	10,054	31,005
84,457	8,230	20,343
73,968	8,143	19,584
67,423	7,763	17,306
58,353	7,658	17,088
57,116	7,027	13,410
55,311	6,977	13,022
51,607	6,682	11,479
44,439	6,661	11,353
39,090	6,521	10,652
26,361	6,313	9,926
24,980	5,795	7,138

2. Uranium, Thorium and Lead Geochronology

These rocks from the Kola Peninsula in Russia were dated [11] in 2011 using the Uranium/Lead and Thorium/Lead dating methods. The article claims that the true age is 350 million years old. [11] If we put the ratios from a table [12] in the article into Microsoft Excel and run the values through Isoplot we get ages between 269

and 5,140 million years old! There is an 1,100 percent difference between some dates. That percentage difference equals almost 5,000 million years!

Table 3

Statistics	207Pb Age/232Th Age	238U Age/232Th Age	238U/206Pb Age	207Pb/206Pb Age
Average	859%	255%	1,054	3,381
Maximum	1275%	1165%	5,140	4,741
Minimum	361%	74%	269	1,318
Difference	914%	1092%	4,871	3,423

3. The Uranium, Thorium and Lead Compositions

These rocks from the Morocco and France were dated [13] in 2007 using the Uranium/Lead and Thorium/Lead dating methods. If we put the ratios from a table [14] in the article into Microsoft Excel and run the values through Isoplot we get ages between 2 and 92 billion years old! How can a rock be 75 billion years older than the Big Bang explosion? Of all the samples, 53 are older than the Earth, 13 are older than the Galaxy and 6 are older than the Universe. There is a 90 billion year spread of dates between the youngest and the oldest ages.

Table 4

Statistics	207Pb/206Pb	208Pb/232Th	206Pb/238U
Average	4,955	15,609	4,873
Maximum	5,090	92,494	18,639
Minimum	4,871	1,939	1,437
Difference	219	90,556	17,202

4. Rubidium/Strontium and Uranium/Lead Systematics

These rocks from the Kola Peninsula in Russia were dated [15] in 2011 using the Uranium/Lead and Thorium/Lead dating methods. The article claims that the true age is 2075–2100 million years old. [15] If we put the ratios from a table [16] in the article into Microsoft Excel and run the values through Isoplot we get ages between 2 and 10 billion years old! Of all the samples, 45 are older than the Earth, 23 are older than the Galaxy and 17 are older than the Universe. There is a 75 billion year spread of dates between the youngest and the oldest ages.

Table 5

Statistics	207Pb/206Pb	206Pb/238U	206Pb/238U	87Sr/86Sr
Average	5,020	7,253	8,177	2,185
Maximum	5,102	10,539	10,283	3,436
Minimum	4,834	2,814	5,303	1,739
Difference	267	7,725	4,980	1,697

5. Cu–Pb–Zn–Ag Mineralisation

These rocks from the Democratic Republic of Congo were dated [17] in 2009 using the Uranium/Lead and Thorium/Lead dating methods. The article claims that the true age is 520 million years old. [18] If we put the ratios from a table [19] in the article into Microsoft Excel and run the values through Isoplot we get ages between 0.1 and 200 billion years old! How can a rock be 185 billion years older than the Big Bang explosion? Of all the samples, 96 are older than the Earth, 42 are older than the Galaxy and 35 are older than the Universe. There is a 198 billion year spread of dates between the youngest and the oldest ages.

Table 6

Statistics	208Pb/232Th	207Pb/206Pb	206Pb/238U	207Pb/235U
Average	52,321	4,856	11,884	5,775
Maximum	199,319	6,275	48,496	12,150
Minimum	882	3,056	174	848
Difference	198,437	3,219	48,322	11,302

6. Uranium-Lead Age Of Baddeleyite

This meteorite was dated [20] in 2011 using the Uranium/Lead and Thorium/Lead dating methods. The article claims that the true age is 4.1 billion years old. [21] If we put the ratios from a table [22] in the article into Microsoft Excel and run the values through Isoplot we get ages between 0.1 and 165 billion years old! How can a rock be 150 billion years older than the Big Bang explosion? Of all the samples 11 are older than the Universe. There is a 125 billion year spread of dates between the youngest and the oldest ages.

Table 7

Statistics	Pb 207/206	207Pb/235U	206Pb/238U	207Pb/235U	Pb206/U238	Pb208/232Th
Average	4,042	2,209	1,047	833	222	101,231
Maximum	5,112	4,517	3,306	2,515	297	165,469
Minimum	2,689	681	238	161	183	40,297
Difference	2,423	3,836	3,068	2,353	114	125,172

Table 8

Pb208/232Th	Pb208/232Th
165,469	102,437
150,399	82,898
143,322	74,124
137,057	47,131
127,166	43,247

7. Mesozoic Lithosphere Destruction

These rocks from the North China Craton were dated [23] in 2001 using the Uranium/Lead and Thorium/Lead dating methods. The article claims [24] that the true age is 125 million years old. If we put the ratios from a table [25] in the article into Microsoft Excel and run the values through Isoplot we get ages between 5 and 44 billion years old! How can a rock be 30 billion years older than the Big Bang explosion? Of all the samples, 40 are older than the Earth, 15 are older than the Galaxy and 12 are older than the Universe. There is a 40 billion year spread of dates between the youngest and the oldest ages.

Table 9

Statistics	Pb 207/206	206Pb/238U	207Pb/235U	Pb208/232Th
Average	5,056	7,431	35,683	11,303
Maximum	5,098	14,282	44,683	27,208
Minimum	5,047	5,871	33,524	8,258
Difference	51	8,411	11,159	18,950

If we use isotopic formulas [26-29] given in standard geology text we can arrive at ages from the Rb/Sr and Nd/Sm ratios listed in the article. The formula for Rb/Sr age is given as:

$$t = \frac{2.303}{\lambda}\log\left(\frac{(87Sr/86Sr) - (87Sr/86Sr)_0}{(87Rb/86Sr)} + 1\right) \quad [1]$$

Where t equals the age in years. λ equals the decay constant. (87Sr/86Sr) = the current isotopic ratio. $(87Sr/86Sr)_0$ = the initial isotopic ratio. (87Rb/86Sr) = the current isotopic ratio. The same is true for the formula below.

$$t = \frac{2.303}{\lambda}\log\left(\frac{(143Nd/144Nd) - (143Nd/144Nd)_0}{(147Sm/144Nd)} + 1\right) \quad \textbf{[2]}$$

If we put the ratios from this table [30] in the article into Microsoft Excel and use these formulas we get ages between 116 and 125 million years old! The Uranium/Lead ratios give ages between 5 billion and 44 billion years old!

Table 10

Method/Sample	FC1-1	FC1-2	FC5-1	FC6-1	FC6-2	FC7	FC4
Pb207/206	5,047	5,047	5,051	5,051	5,049	5,051	5,098
206Pb/238U	6,050	6,658	5,871	6,407	6,539	6,212	14,282
207Pb/235U	33,767	34,765	33,524	34,380	34,588	34,071	44,683
Pb208/232Th	8,402	8,396	8,725	8,774	9,358	8,258	27,208
Rb/Sr	124	126	124	126	126	124	116
Nd/Sm	125	126	126	125	125	125	116

8. SHRIMP Uranium/Lead Geochronology

These rocks from Western Australia were dated [31] in 2001 using the Uranium/Lead and Thorium/Lead dating methods. The article claims that the true age is 3 billion years old. [31] If we put the ratios from a table [32] in the article into Microsoft Excel and run the values through Isoplot we get ages between 2 million and 24 billion years old! How can a rock be 10 billion years older than the Big Bang explosion? Of all the samples, 18 are older than the Earth, 3 are older than the Galaxy and 2 are older than the Universe. There is a 24 billion year spread of dates between the youngest and the oldest ages.

Table 11

Statistics	208Pb/232Th	207Pb/206Pb	206Pb/238U	207Pb/235U
Average	5,075	3,027	1,303	1,294
Maximum	24,344	6,495	2,941	2,940
Minimum	8	869	5	2
Difference	24,336	5,627	2,935	2,938

Table 12

Statistics	208Pb/232Th	207Pb/206Pb	206Pb/238U	207Pb/235U
Average	1,989	2,688	2,793	2,729
Maximum	23,355	2,688	2,793	2,729
Minimum	56	2,651	2,558	2,618
Difference	23,300	37	236	111

Table 13

Statistics	208Pb/232Th	207Pb/206Pb	207Pb/235U
Average	1,834	2,716	2,098
Maximum	11,964	3,347	3,351
Minimum	0.1	2,490	59
Difference	11,964	857	3,291

9. The Beverley Uranium Deposit

These rocks from the North Flinders Ranges, South Australia., were dated [33] in 2010 using the Uranium/Lead and Thorium/Lead dating methods. The article claims that the true age is 400 million years old. [34] If we put the ratios from a table [35] in the article into Microsoft Excel and run the values through Isoplot we get ages between 1 million and 20 billion years old! How can a rock be 5 billion years older than the Big Bang explosion? Of all the samples, 6 are older than the Earth, 3 are older than the Galaxy and 2 are older than the Universe. There is a 20 billion year spread of dates between the youngest and the oldest ages. In table 15 we can see the percentage difference between the Thorium dates and the other three dating ratios used. The difference is almost 600,000 percent!

Table 14

Statistical Summary	Age 207/206	Age 206Pb/238U	Age 207Pb/235U	Age 208Pb/232Th
Average	737	3	3	3,758
Maximum	2,429	7	7	20,583
Minimum	9	0.1934	1	52
Difference	2,420	7	6	20,531

Table 15

Statistical Summary	Ratio 207Pb/206Pb	Ratio 206Pb/238U	Ratio 207Pb/235U
Average	25,841%	95,107%	91,073%
Maximum	137,220%	580,693%	571,750%
Minimum	654%	1,260%	800%
Difference	136,565%	579,433%	570,950%

10. Isotopic Systematics of the Goalpara Ureilite

This meteorite was dated [36] in 1994 using the Uranium/Lead and Thorium/Lead dating methods. The article claims that the true age is 4.55 billion years old. [36] If we put the ratios from a table [9] in the article into Microsoft Excel and run the values through Isoplot we get ages between 5 and 173 billion years old! How can a rock be 160 billion years older than the Big Bang explosion? Of all the samples, 123 are older than the Earth, 77 are older than the Galaxy and 71 are older than the Universe. There is a 168 billion year spread of dates between the youngest and the oldest ages.

Table 16

Statistics	207Pb/206Pb	206Pb/238U	208Pb/232Th
Average	5,056	27,406	87,825
Maximum	5,279	51,612	173,633
Minimum	4,979	4,929	17,658
Difference	300	46,683	155,976

11. Middle Atlas Peridotite Xenoliths

These rocks from Morooco were dated [38] in 2009 using the Uranium/Lead and Thorium/Lead dating methods. If we put the ratios from a table [39] in the article into Microsoft Excel and run the values through Isoplot we get ages between 3 and 14 billion years old! How can a rock be as old as the Big Bang explosion? Of all the samples, 3 are older than the Earth, 1 are older than the Galaxy and 1 are older than the Universe. There is a 6 billion year spread of dates between the youngest and the oldest ages.

Table 17

Statistics	208Pb/232Th	207Pb/206Pb	206Pb/238U
Average	9,493	4,939	5,056
Maximum	14,557	4,996	6,419
Minimum	4,429	4,882	3,693
Difference	10,127	114	2,727

12. A Precise 232Th/208Pb Chronology

These rocks from Inner Mongolia were dated [40] in 1993 using the Uranium/Lead and Thorium/Lead dating methods. The article claims that the true age is 555 million years old. [40] If we put the ratios from a table [41] in the article into Microsoft Excel and run the values through Isoplot we get ages between 400 million and 55 billion years old! How can a rock be 40 billion years older than the Big Bang explosion? Of all the samples, 170 are older than the Earth, 34 are older than the Galaxy and 19 are older than the Universe. There is a 75 billion year spread of dates between the youngest and the oldest ages.

Table 18

Statistics	207Pb/206Pb	208Pb/232Th	206Pb/238U
Average	5,068	764	9,321
Maximum	8,077	5,699	54,790
Minimum	3,586	402	4
Difference	4,491	5,297	54,787

13. Age of the MET 78008 Ureilite

This meteorite was dated [42] in 1994 using the Uranium/Lead and Thorium/Lead dating methods. The article claims that the true age is 4.56 billion years old. [42] If we put the ratios from a table [43] in the article into Microsoft Excel and run the values through Isoplot we get ages between 5 and 90 billion years old! How can a rock be 65 billion years older than the Big Bang explosion? Of all the samples, 63 are older than the Earth, 32 are older than the Galaxy and 29 are older than the Universe. There is a 75 billion year spread of dates between the youngest and the oldest ages.

Table 19

Statistics	207Pb/206Pb	206Pb/238U	208Pb/232Th
Average	5,077	15,565	47,442
Maximum	5,327	30,179	90,595
Minimum	4,963	7,496	14,271
Difference	364	22,683	76,324

Table 20

Statistics	206Pb/238U	207Pb/206Pb
Average	11,520	4,495
Maximum	25,513	4,576
Minimum	4,283	4,411
Difference	21,229	166

Conclusion

Yuri Amelin states in the journal Elements that radiometric dating is extremely accurate: "However, four 238U/235U-corrected CAI dates reported recently (Amelin et al. 2010; Connelly et al. 2012) show excellent agreement, with a total range for the ages of only 0.2 million years – from 4567.18 ± 0.50 Ma to 4567.38 ± 0.31 Ma." [44-46]

To come within 0.2 million years out of 4567.18 million years means an accuracy of 99.99562%. Looking at some of the dating it is obvious that precision is much lacking. The Bible believer who accepts the creation account literally has no problem with such unreliable dating methods. Much of the data in radiometric dating is selectively taken to suit and ignores data to the contrary.

References

1 http://web.archive.org/web/20051223072700/http://pubs.usgs.gov/gip/geotime/age.html
The age of 10 to 15 billion years for the age of the Universe.

2 http://en.wikipedia.org/wiki/Age_of_the_universe

3 http://arxiv.org/pdf/1001.4744v1.pdf
Microwave Anisotropy Probe Observations, Page 39, By N. Jarosik

4 http://en.wikipedia.org/wiki/Age_of_the_Earth

5 http://sp.lyellcollection.org/content/190/1/205
The age of the Earth, G. Brent Dalrymple
Geological Society, London, Special Publications, January 1, 2001, Volume 190, Pages 205-221

6 **The age of the earth, Gérard Manhes**
Earth and Planetary Science Letters, Volume 47, Issue 3, May 1980, Pages 370–382

7 http://arxiv.org/pdf/astro-ph/0506458v1.pdf
The age of the Galactic disk, By E. F. del Peloso and L. da Silva
Astronomy & Astrophysics, Manuscript no. 3307, February 2, 2008

C:\Essays\Geo_Dating\Dating\Th-232_Pb-208\Th-Pb.xlsm

8 **U–Th–Pb Isotope Data, Earth and Planetary Science Letters, 2012, Volume 319-320, Pages 197-206**

9 **Reference 8, page 199**

10 http://www.bgc.org/isoplot_etc/isoplot.html

11 **U–Th–Pb Geochronology, Gondwana Research, 2012, Volume 21, Pages 728–744**

12 **Reference 11, page 735**

13 **The U, Th and Pb Compositions, Geochimica et Cosmochimica Acta, 2009, Volume 73, Pages 469–488**

14 **Reference 13, page 475, 476**

15 **Rb–Sr and U–Pb Systematics, Lithology and Mineral Resources, 2011, Volume 46, Number 2, Pages 151-164**

16 **Reference 15, page 156, 158**

17 Cu–Pb–Zn–Ag Mineralisation, Mineral Deposita, 2010, Volume 45, Pages 393-410

18 Reference 17, page 393, 394

19 Reference 17, page 397, 398

20 Uranium-Lead Age Of Baddeleyite, Journal Of Geophysical Research, 2011, Volume 116, Page 1-12

21 Reference 20, page 7

22 Reference 20, page 6

23 Mesozoic Lithosphere Destruction, Contributions Mineral Petrology, 2002, Volume 144, Pages 241-253

24 Reference 23, page 243

25 Reference 23, page 246

26 Radioactive and Stable Isotope Geology, By H.G. Attendon, Chapman And Hall Publishers, 1997. Page 73 [Rb/Sr], 195 [K/Ar], 295 [Re/OS], 305 [Nd/Nd].

27 Principles of Isotope Geology, Second Edition, By Gunter Faure, Published By John Wiley And Sons, New York, 1986. Pages 120 [Rb/Sr], 205 [Nd/Sm], 252 [Lu/Hf], 266 [Re/OS], 269 [Os/OS].

28 Absolute Age Determination, Mebus A. Geyh, Springer-Verlag Publishers, Berlin, 1990. Pages 80 [Rb/Sr], 98 [Nd/Sm], 108 [Lu/Hf], 112 [Re/OS].

29 Radiogenic Isotope Geology, Second Edition, By Alan P. Dickin, Cambridge University Press, 2005. Pages 43 [Rb/Sr], 70 [Nd/Sm], 205 [Re/OS], 208 [Pt/OS], 232 [Lu/Hf].

30 Reference 23, page 245

31 SHRIMP U–Pb Geochronology, International Earth Science, 2002, Volume 91, Pages 406-432

32 Reference 31, pages 414, 416, 423

33 The Beverley Uranium Deposit, Economic Geology, 2011, Volume 106, Pages 835-867

34 Reference 33, pages 846

35 Reference 33, pages 866

36 Isotopic Systematics of the Goalpara Ureilite, Gcochimica et Cosmochimtca Acta, 1995, Volume 59, Number 2, Pages 381-390

37 Reference 36, page 384

38 Middle Atlas Peridotite Xenoliths, Geochimica et Cosmochimica Acta, 2010, Volume 74, Pages 1417-1435

39 Reference 38, page 1425

40 A Precise 232Th-208Pb Chronology, Geochimica et Cosmochimica Acta, 1994, Volume 58, Number 15, Pages 3155-3169

41 Reference 40, page 3160-3163

42 Age of the MET 78008 Ureilite, Geochimica et Cosmochimica Acta, 1995, Volume 59, Number 11, Pages 2319-2329

43 Reference 42, page 2324

44 Dating the Oldest Rocks in the Solar System, Elements, 2013, Volume 9, Pages 39-44

45 Amelin, Earth and Planetary Science Letters, 2010, Volume 300, Pages 343-350

46 Connelly, Science, 2012, Volume 338, Pages 651-655

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