Subjective Historical Timelines

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My observations and measurements of the lengths of time elapsed up till the present since the occurrence of events on all time scales when converted to numbers of Planck times equal integer and fractional (half-integer, quarter-integer, eighth-integer etc) powers of π and e.

1 Introduction

Evidence of a subjective reality on macroscopic scales showed up when I found that the distances from Earth of the stars when measured in numbers of Planck lengths equalled integer and fractional (half-integer, quarter-integer, eighth-integer etc) powers of π and e *despite the inconstancy of interstellar distances* [1]. I then found that my own measurements of mundane parameters (masses, distances and elapsed times) produced values that in numbers of Planck units equalled integer and fractional powers of π and e [2]. The values of all sorts of parameters, either measured by others or by me, are similarly disposed [3, 4, 5].

Since it appeared that the values in Planck units of all macroscopic (large number) parameters would, when measured, be equal to integer and fractional powers of π and e, I have now made a study of the lengths of time elapsed up till the present since some historical events took place. For events in the distant (geological) past the measurements of elapsed time were made by others and my knowledge of the values of the measurements has come about through my observations of their results. For the other events the measurements of elapsed time were made by me.

Expressing each value of elapsed time (in numbers of Planck times) as powers n_1 and n_3 of π and e, respectively, the elapsed times lie on 'principal' levels of integer level-number and 'sub-levels' of half-integer, quarter-integer, eighth-integer, etc level-number in two geometric sequences of time-scale that ascend from the Planck time: Sequence 1 of common ratio π and Sequence 3 of common ratio e. Sequence 2, of common ratio π/2, does not feature here. Levels in Sequences 1 and 3 are numbered n_1 and n_3, respectively. The level-numbers are plotted one against the other, the markers lying on a straight line since the level-numbers in the two sequences are in constant ratio.

2 Results

First, I shall consider the lengths of time elapsed since boundaries in time between geological eons and eras, and then the lengths of time elapsed since the mass extinction events of the Phanerozoic Eon.

Geological time is divided into four eons [6]:

1. Phanerozoic Eon (0-541.0 Myr BP), which is sub-divided into three eras: Cenozoic Era (0-66.0 Myr BP); Mesozoic Era (66.0-251.9 Myr BP); Paleozoic Era (251.9-541.0 Myr)
2. Proterozoic Eon (541.0 Myr-2.5 Gyr BP)
3. Archaen Eon (2.5-4.0 Gyr BP)
4. Hadean Eon (4.0-4.6 Gyr BP)

The values of the powers n_1 and n_3 of π and e, respectively, calculated for the three eon-eon boundaries, the two era-era boundaries of the Phanerozoic Eon, and the age of the Earth (~4.6 Gyr) are plotted in Figure 1.

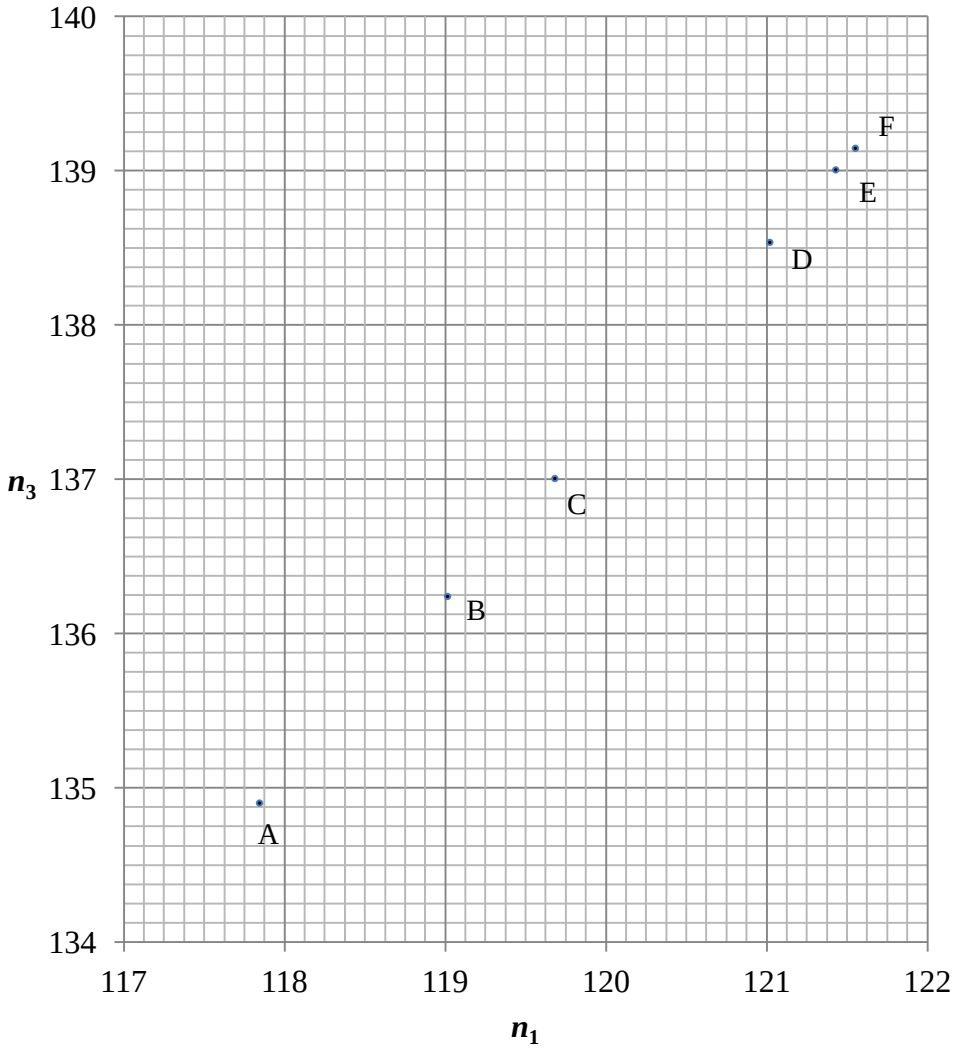

Figure 1: The lengths of time elapsed in Planck units since boundaries in geological time [6]. Shown as powers n_1 and n_3 of π and e, respectively, on the levels and sub-levels of Sequences 1 and 3.
A Cenozoic Era - Mesozoic Era, 66.0 Myr BP
B Mesozoic Era - Paleozoic Era, 251.9 Myr BP
C Phanerozoic Eon - Proterozoic Eon, 541.0 Myr BP
D Proterozoic Eon - Archaen Eon, 2.5 Gyr BP
E Archaen Eon - Hadean Eon, 4.0 Gyr BP
F Age of Earth, 4.6 Gyr BP

All three boundaries between geological eons lie on or at least very close to principal levels in the time sequences. In the Phanerozoic Eon, the boundary of the Mesozoic Era and the Paleozoic Era, resulting from the worst mass extinction event ever to befall Earth, lies on a principal level in Sequence 1.

All of the 'Big Five' mass extinction events of the Phanerozoic Eon are shown in Figure 2 to lie close to principal levels or sub-levels of lower order[1] in the time sequences.

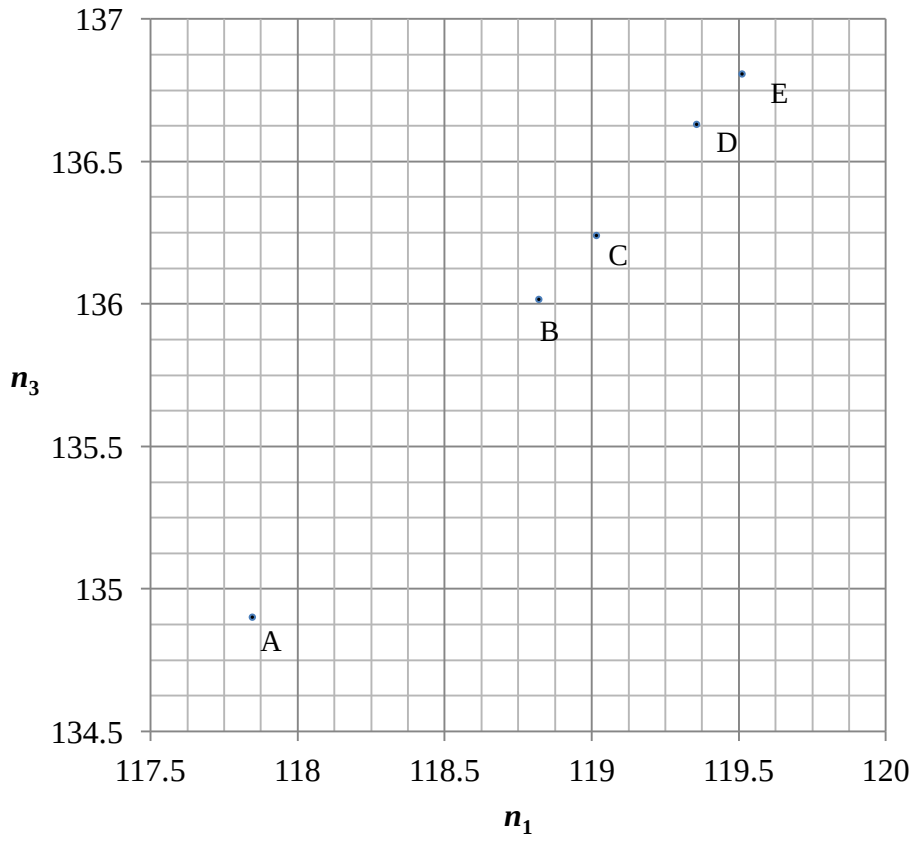

Figure 2: The lengths of time elapsed in Planck units since the 'Big Five' mass extinctions of the Phanerozoic Eon [7]. Shown as powers n_1 and n_3 of π and e, respectively, on the levels and sub-levels of Sequences 1 and 3.
A Cretaceous - Paleogene, 66 Myr BP
B Triassic - Jurassic, 201 Myr BP
C Permian - Triassic, 252 Myr BP
D Late Devonian: Kellwasser event, 372 Myr BP
E Ordovician - Silurian, 444 Myr BP

[1] The sub-levels shown are of first, second and third order. Principal levels are of zeroth order.

On more recent timescales the first three events that came to mind were the birth of Jesus Christ (ca.1AD), the Battle of Hastings (1066) and the Great Fire of London (1666). The values of n_1 and n_3 calculated for the lengths of times elapsed since these events, and the Great Plague (1665), occurred are plotted in Figure 3, where they can be seen to occupy low-order sub-levels.

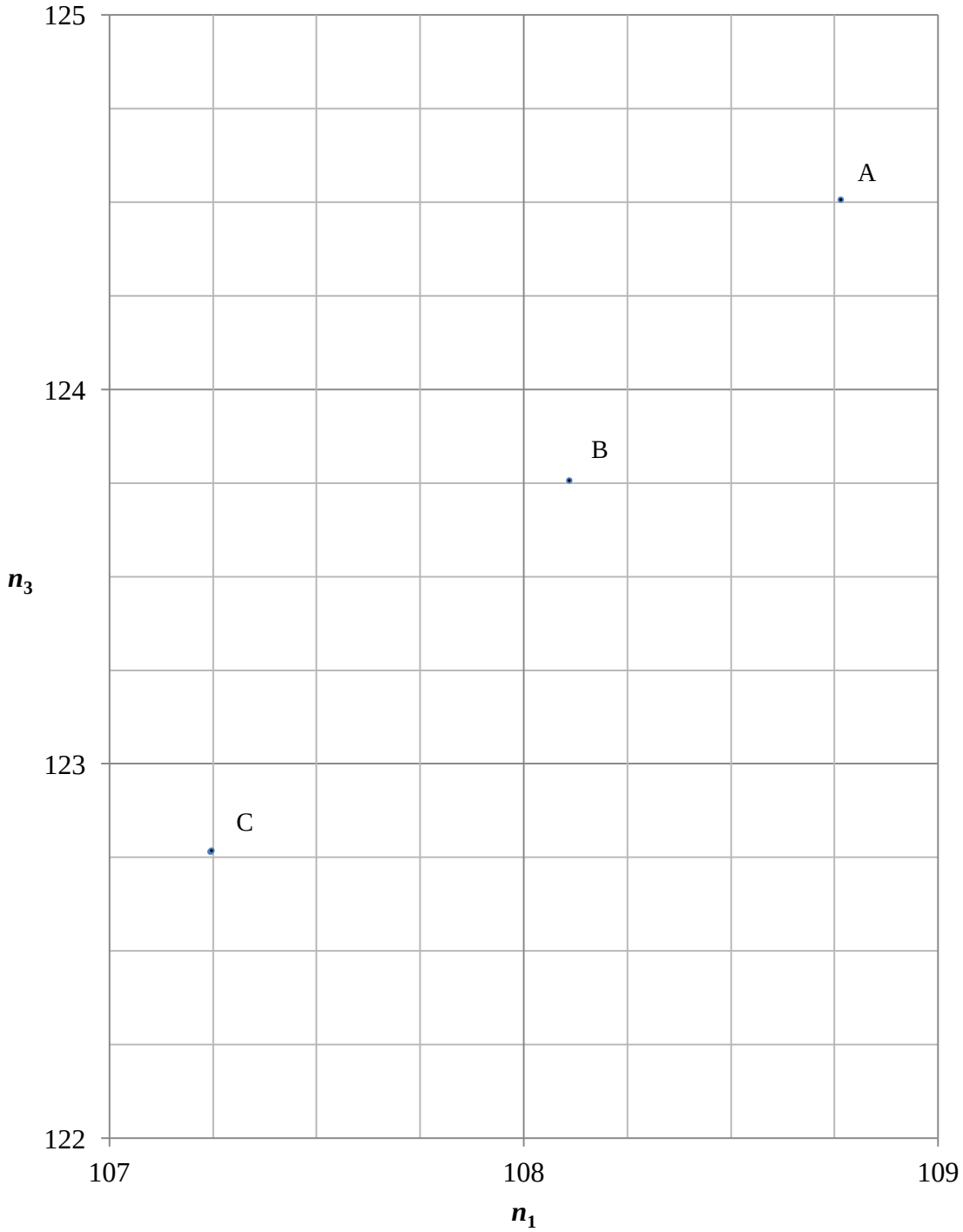

Figure 3: The lengths of time elapsed in Planck units up till the present (17 January 2021) since some prominent events. Shown as powers n_1 and n_3 of π and e, respectively, on the levels and sub-levels of Sequences 1 and 3.
A Birth of Jesus Christ (1 AD)
B Battle of Hastings (1066)
C The Great Plague (1665); Great Fire of London (1666)

The values of n_1 and n_3 calculated from my measurements of the lengths of time elapsed up till the present since the six total solar eclipses anywhere on Earth during the 2010s have been plotted in Figure 4. The events are closely aligned with principal levels and lower-order sub-levels.

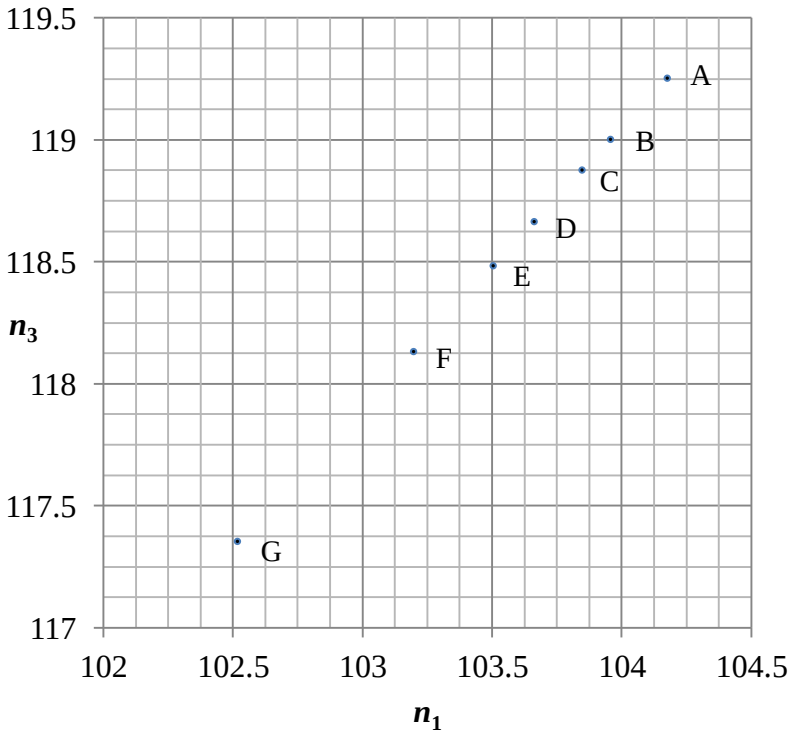

Figure 4: The lengths of time elapsed in Planck units up till the present (28 January 2021) since the six total solar eclipses of the 2010s [8]. Shown as powers n_1 and n_3 of π and e, respectively, on the levels and sub-levels of Sequences 1 and 3.
A 11 July 2010
B 13 November 2012
C 3 November 2013
D 20 March 2015
E 9 March 2016
F 21 August 2017
G 2 July 2019

The values of n_1 and n_3 calculated from my measurements of the time intervals between the present and the dates of the six total solar eclipses predicted to occur during the 2020s are plotted in Figure 5. The events are closely aligned with lower-order sub-levels.

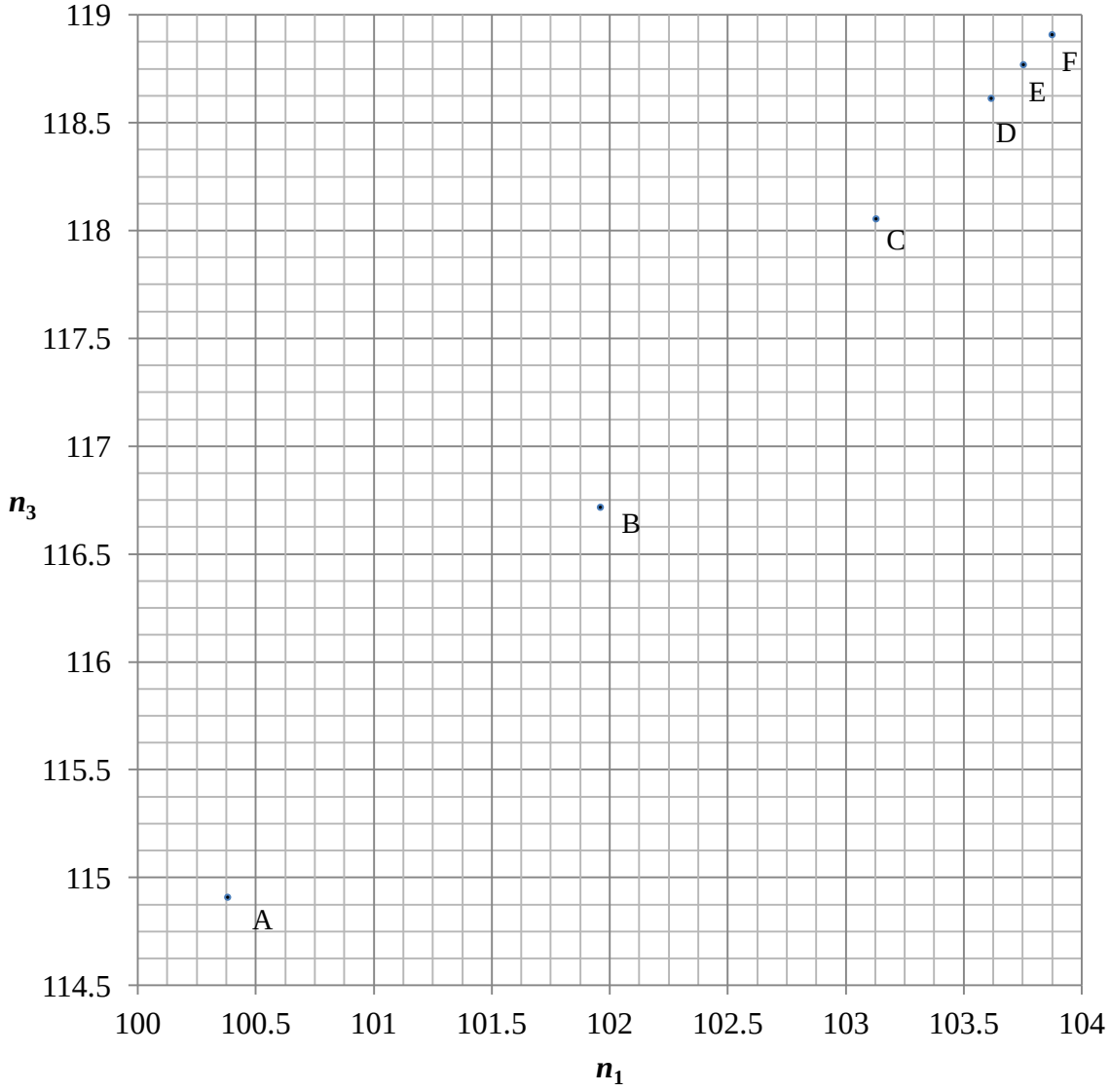

Figure 5: Time intervals in Planck units between the present (2 February 2021) and the predicted dates of the six total solar eclipses of the 2020s [8]. Shown as powers n_1 and n_3 of π and e, respectively, on the levels and sub-levels of Sequences 1 and 3.
A 14 December 2020. Note that this date is in the past.
B 4 December 2021
C 8 April 2024
D 12 August 2026
E 2 August 2027
F 22 July 2028

I have shown that the shortest distances above Earth's surface of the three closest known non-impacting asteroids to pass by Earth occupied principal and lower-order sub-levels in (Length) Sequences 1 and 3 [5]. The lengths of time elapsed since the close passages occurred are shown in Figure 6 to occupy lower-order sub-levels in the time sequences. Each occupied sub-level lies adjacent to a principal level.

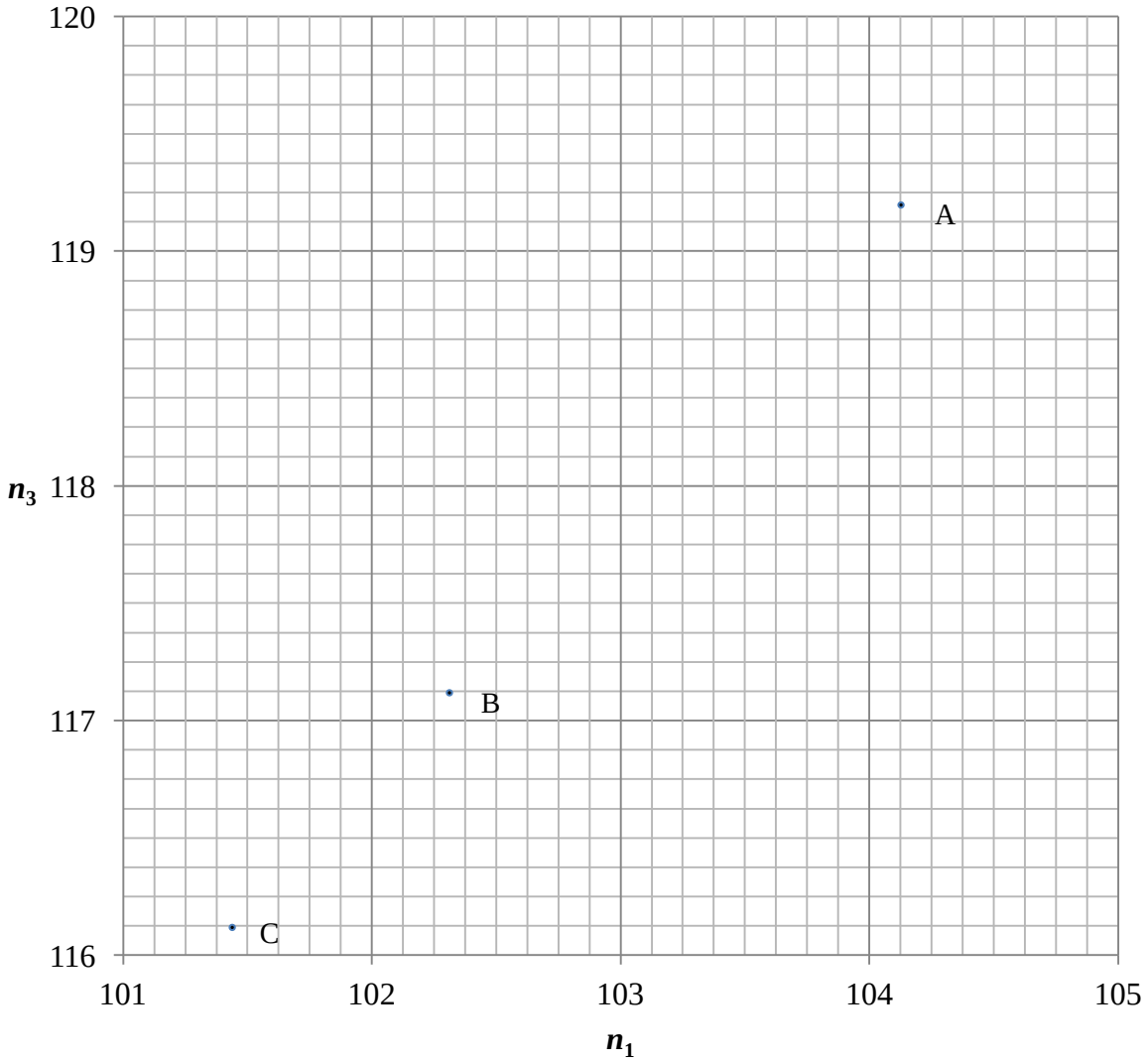

Figure 6: The lengths of time elapsed in Planck units up till the present (30 January 2021) since the three closest known non-impacting asteroids passed by Earth [9]. Shown as powers n_1 and n_3 of π and e, respectively, on the levels and sub-levels of Sequences 1 and 3.
A 2011 CQ_1, 4 February 2011
B 2019 UN_{13}, 31 October 2019
C 2020 QG, 16 August 2020: the closest passage

The values of n_1 and n_3 calculated for the lengths of time elapsed since the six UK general elections that have taken place since the year 2000 are shown in Figure 7. The events are closely aligned with a principal level and lower-order sub-levels. The dates when the five UK prime ministers in post since 2000 acceded to office are closely aligned with sub-levels, as shown in Figure 8.

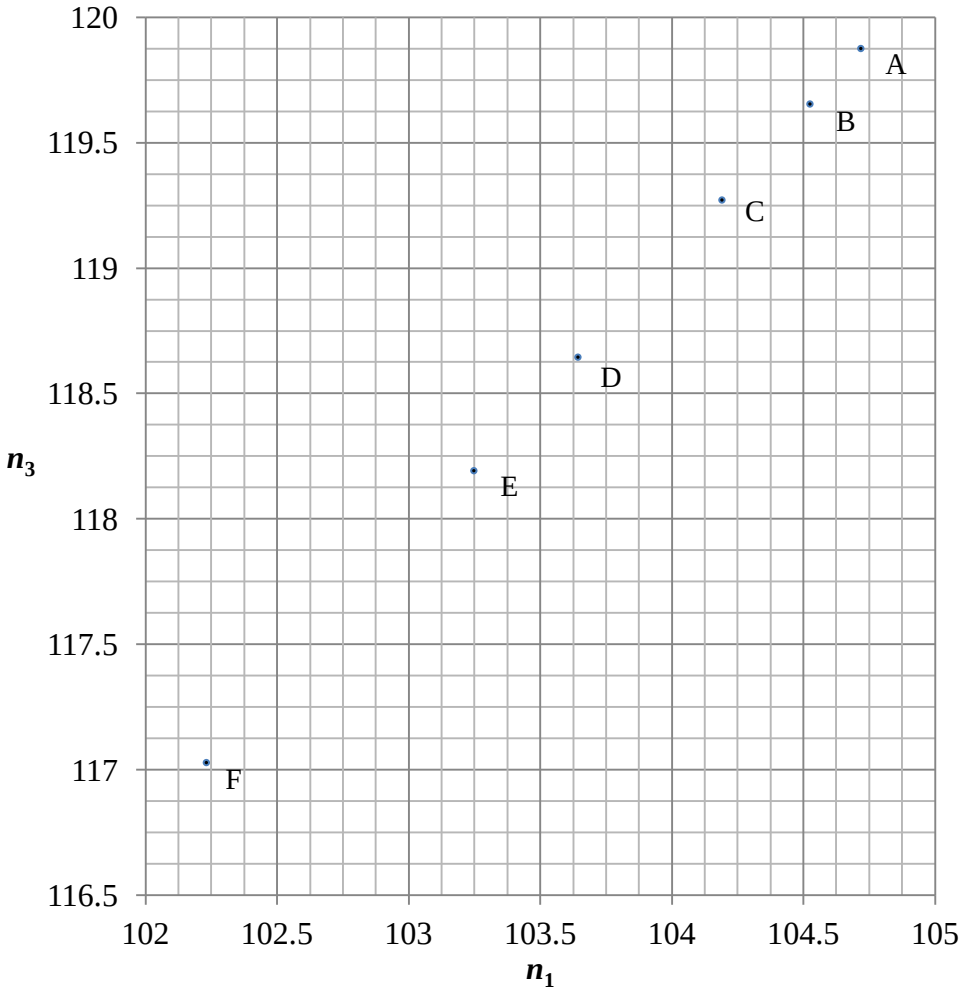

Figure 7: The lengths of time elapsed in Planck units up till the present (1 February 2021) since the six UK general elections held since 2000 took place. Shown as powers n_1 and n_3 of π and e, respectively, on the levels and sub-levels of Sequences 1 and 3.
A 7 June 2001
B 5 May 2005
C 6 May 2010
D 7 May 2015
E 8 June 2017
F 12 December 2019

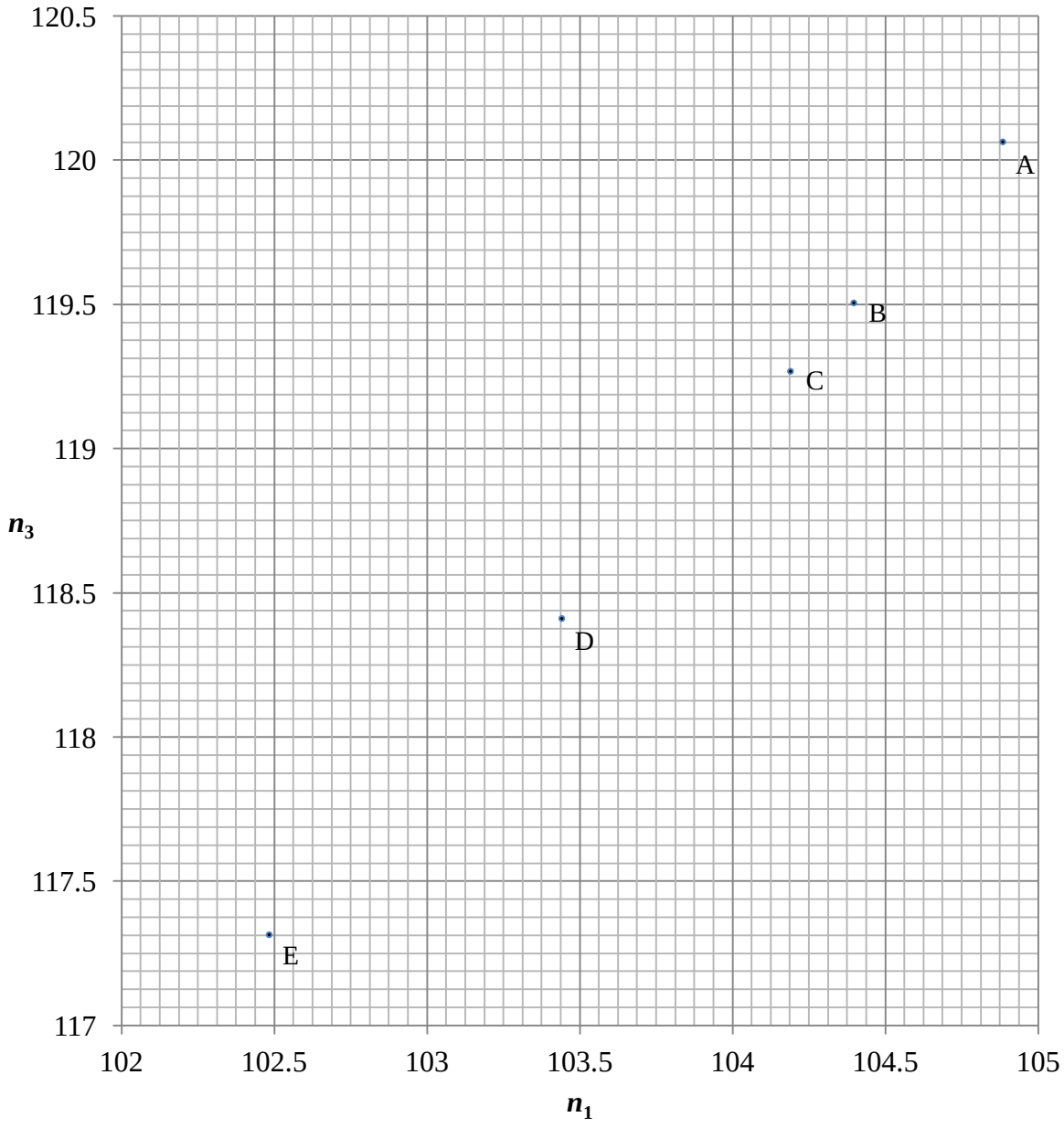

Figure 8: The lengths of time elapsed in Planck units up till the present (30 January 2021) since the five UK prime ministers in post since 2000 acceded to office. Shown as powers n_1 and n_3 of π and e, respectively, on the levels and sub-levels of Sequences 1 and 3.

A Tony Blair, 2 May 1997
B Gordon Brown, 27 June 2007
C David Cameron, 11 May 2010
D Theresa May, 13 July 2016
E Boris Johnson, 24 July 2019

The lengths of time elapsed since three important events in twentieth century UK history are shown on the levels and sub-levels of Sequences 1 and 3 in Figure 9. The events lie on or close to principal levels.

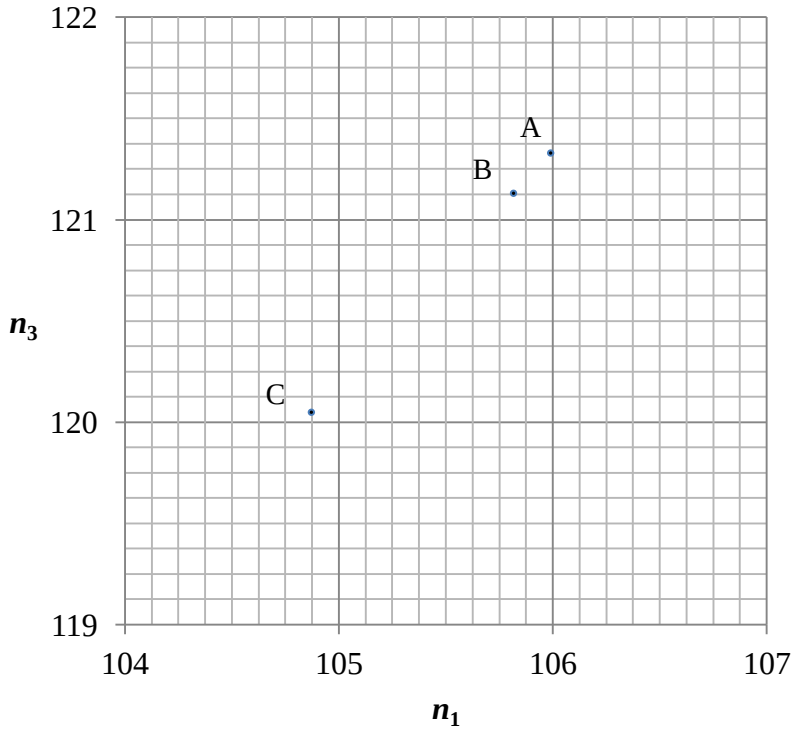

Figure 9: The lengths of time elapsed in Planck units up till the present (21 January 2021) since three important events in twentieth century UK history. Shown as powers n_1 and n_3 of π and e, respectively, on the levels and sub-levels of Sequences 1 and 3.
A Abdication of Edward VIII; succession of George VI (11 December 1936)
B Death of George VI; succession of Elizabeth II (6 February 1952)
C Death of Diana (31 August 1997)

The lengths of time elapsed up till the present since all eight current men's Olympic-distance running (without obstacles) world records were set are shown to lie on the principal levels and sub-levels of Sequences 1 and 3 in Figure 10.

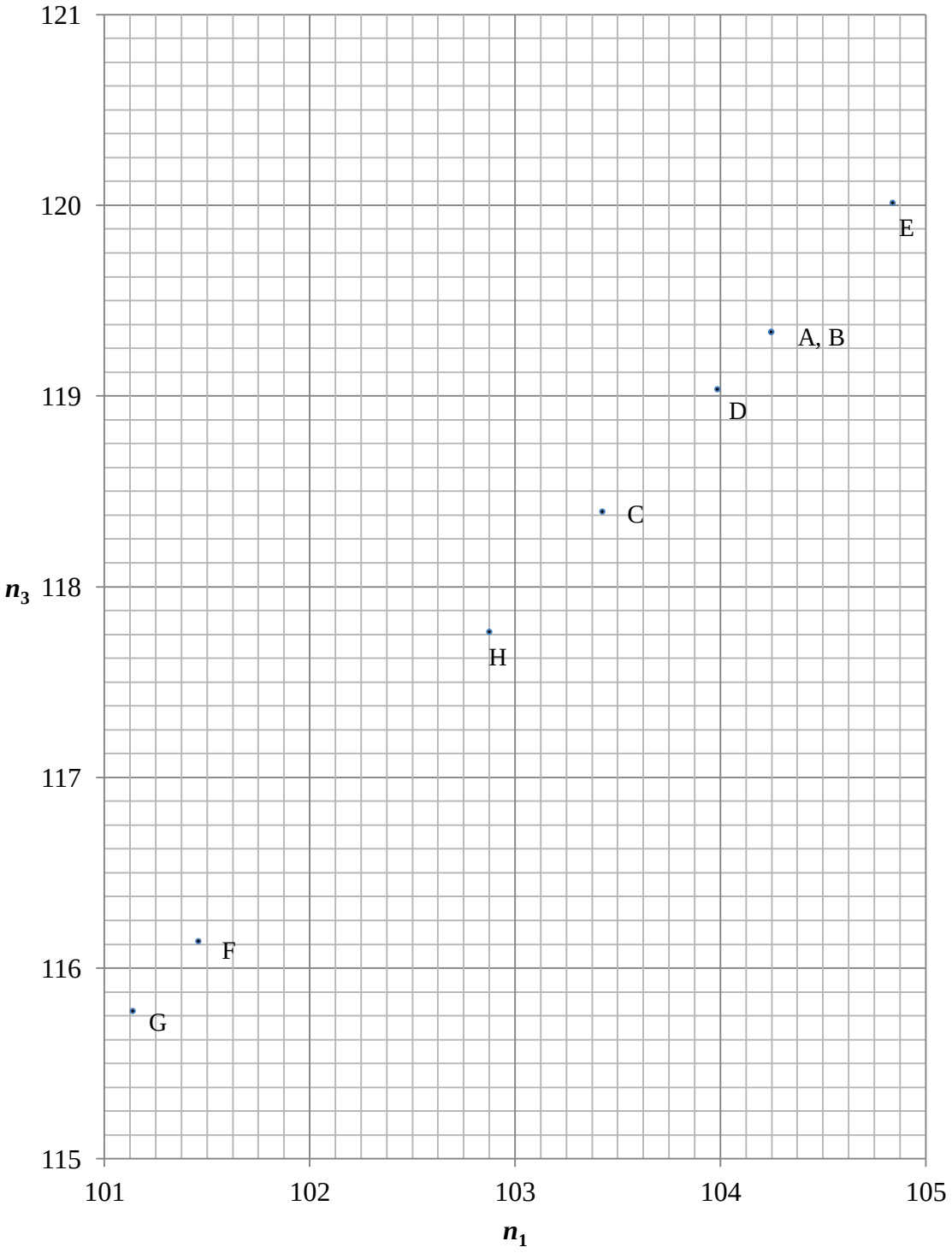

Figure 10: The lengths of time elapsed in Planck units up till the present (3 February 2021) since the current men's running world records shown below were set. Shown as powers n_1 and n_3 of π and e, respectively, on the levels and sub-levels of Sequences 1 and 3.

A 100 m: Usain Bolt, 16 August 2009
B 200 m: Usain Bolt, 20 August 2009
C 400 m: Wayde van Niekerk, 14 August 2016
D 800 m: David Rudisha, 9 August 2012
E 1500 m: Hicham El Guerrouj, 14 July 1998
F 5000 m: Joshua Cheptegei, 14 August 2020
G 10000 m: Joshua Cheptegei, 7 October 2020
H Marathon: Eliud Kipchoge, 16 September 2018

The lengths of time elapsed up till the present since the release dates of all seven studio albums by the band Avenged Sevenfold lie on the lower-order sub-levels of Sequences 1 and 3, as shown in Figure 11.

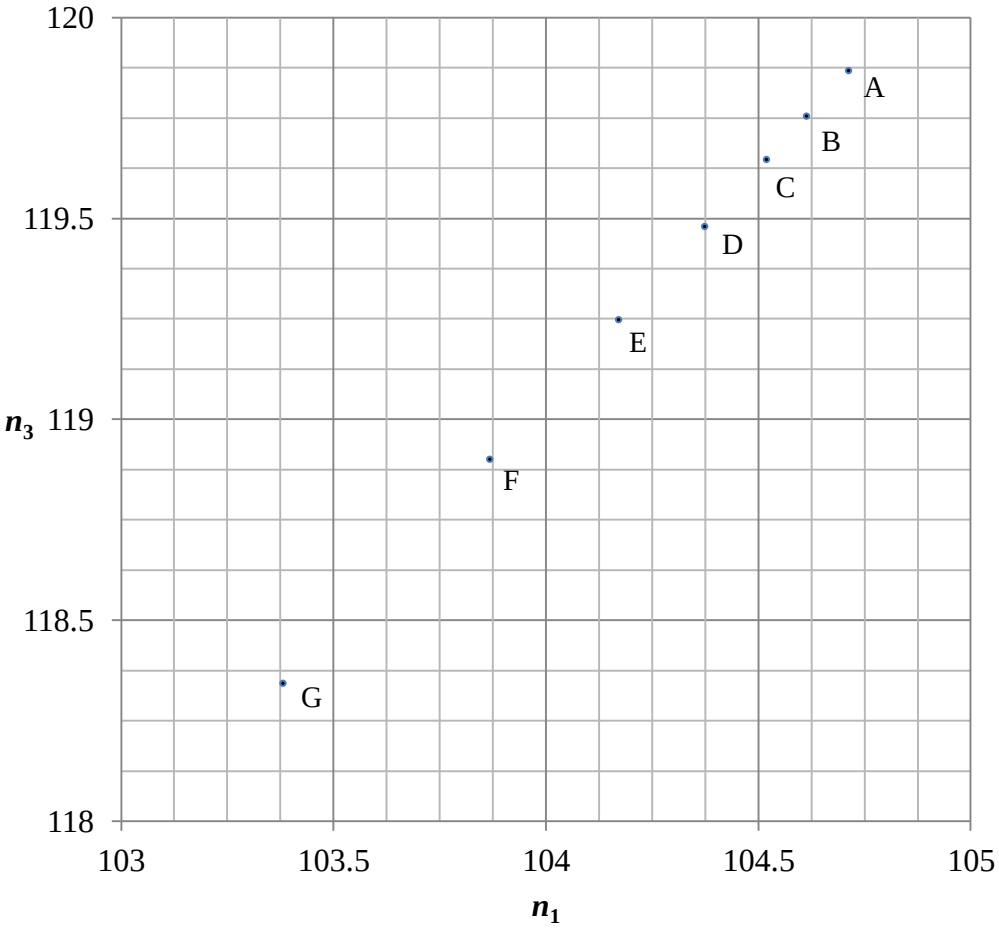

Figure 11: The lengths of time elapsed in Planck units up till the present (27 January 2021) since the release dates of all seven studio albums by Avenged Sevenfold. Shown as powers n_1 and n_3 of π and e, respectively, on the levels and sub-levels of Sequences 1 and 3.

A Sounding the Seventh Trumpet, 24 July 2001
B Waking the Fallen, 26 August 2003
C City of Evil, 6 June 2005
D Avenged Sevenfold, 30 October 2007
E Nightmare, 27 July 2010
F Hail to the King, 27 August 2013
G The Stage, 28 October 2016

The lengths of time elapsed up till the present since the uploading to the internet of four key papers – all of which are date-stamped – from this project are shown on the sub-levels of Sequences 1 and 3 in Figure 12.

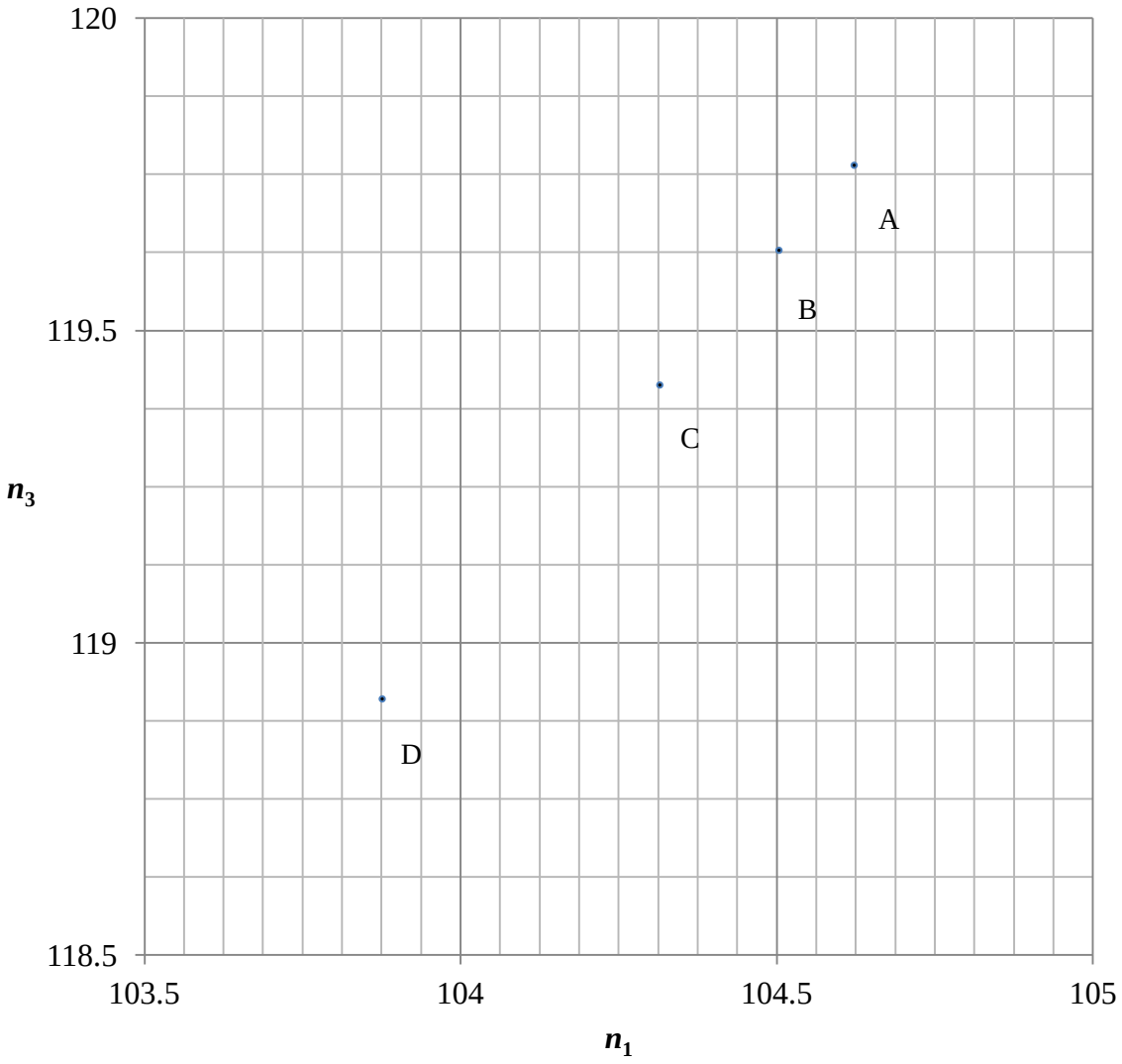

Figure 12: The lengths of time elapsed in Planck units up till the present (18 January 2021) since some important dates in this project. Shown as powers n_1 and n_3 of π and e, respectively, on the levels and sub-levels of Sequences 1 and 3.
A A particle mass sequence of common ratio 2/π was introduced; 12 June 2003 [10]
B A second particle mass sequence, of common ratio 1/π, was introduced; 9 September 2005 [11]
C A third particle mass sequence, of common ratio 1/e, was introduced; 31 August 2008 [12]
D A geometrical basis was proposed for the value of the cosmological constant; 22 July 2013 [13]

4 Conclusions

1. When measured, elapsed times, like all parameters, adopt definite values that are equal to integer or specific fractional powers of π and e.
2. Conspicuous parameters, those that draw the attention of the observer, for example the parameters of events or objects that could be described as primary, principal, clear, bright, luminous, important, familiar or interesting are the most likely to adopt values equal to integer or low-order (half-integer or quarter-integer) powers of π and e.
3. Historical timelines are subjective to the observer.

5 References

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