

Beyond the Cosmos: What Recent Discoveries Reveal about God



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Reasons to Believe (www.reasons.org)

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Test all things; hold fast to what is good.
- 1 Thessalonians 5:21



Probability for Planet Parameter to be in range needed to support life

1. galaxy size

.1

2. galaxy type

.1

3. galaxy location

.1

4. star distance from galaxy center .2

5. star distance from spiral arms

.1



Probability for Planet Parameter to be in range needed to support life

6. proximity to supernova event	.01
7. timing of the supernova event	.01
8. number of stars	.2
9. star birth date	.2
10. star age	.4
11. star mass	.001



*Probability for Planet Parameter
to be in range needed to support life*

12. star luminosity vs. speciation .0001

13. star color .4

14. supernovae rates & locations .01

15. White dwarf binary types, rates
& locations .01



Probability for Planet Parameter to be in range needed to support life

16. planetary distance from star	.001
17. inclination of planetary orbit	.8
18. axis tilt	.3
19. rotation period	.1
20. change in rotation period	.05
21. orbit eccentricity	.3



Probability for Planet Parameter to be in range needed to support life

22. surface gravity (escape velocity)	.001
23. tidal force	.1
24. magnetic field	.01
25. albedo	.1
26. density	.1
27. thickness of crust	.01



Probability for Planet Parameter to be in range needed to support life

28. oceans-to-continents ratio	.2
29. change in oceans-to-cont. ratio	.1
30. global distance of continents	.3
31. asteroid & comet collision rates	.1
32. change in a. & c. collision rates	.1
33. body mass colliding with Earth	.002
34. timing of body's collision	.05



Probability for Planet Parameter to be in range needed to support life

35. position & mass of Jupiter	.01
36. major planet eccentricities	.1
37. major planet orbital stabilities	.1
38. drift in major planet distances	.1
39. soil mineralization	.1



Probability for Planet Parameter to be in range needed to support life

40. atmospheric transparency	.01
41. atmospheric pressure	.1
42. atm. electric discharge rate	.1
43. atm. temperature gradient	.01
44. carbon dioxide level in atm.	.01
45. oxygen quantity in atm.	.01



Probability for Planet Parameter to be in range needed to support life

46. ozone quantity and location	.01
47. water vapor level in atmosphere	.01
48. oxygen to nitrogen ratio in atm.	.1
49. quantity of greenhouse gases	.01



Probability for Planet Parameter to be in range needed to support life

50. tectonic activity	.1
51. rate of decline in tectonics	.1
52. volcanic activity	.1
53. rate of decline in vulcanism	.1



What all this means...

- dependency factors:

10,000,000,000.

- longevity requirements:

.0001

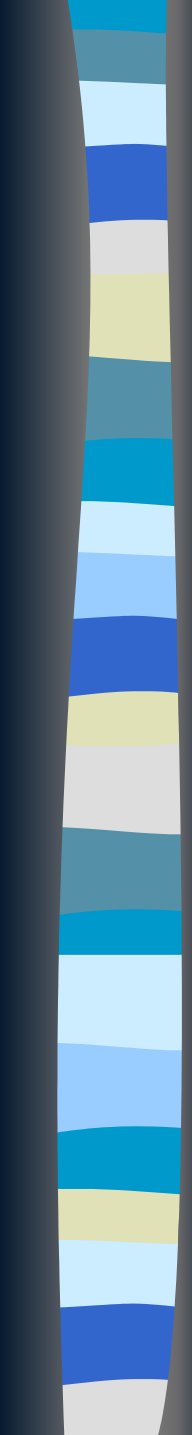
- Probability for all 53 parameters:

less than 1 in 10^{68} .

- Maximum number of planets in universe:

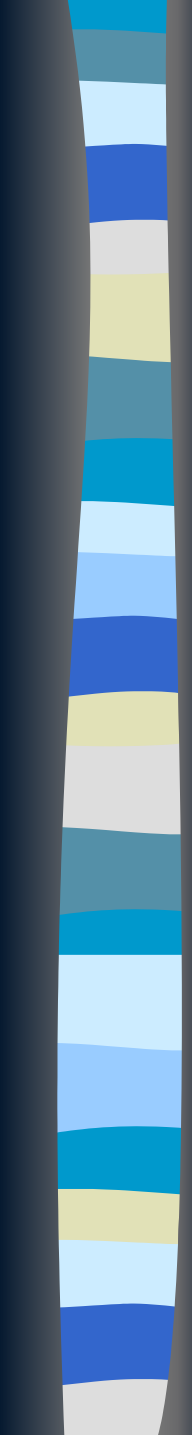
10^{22} .

- Less than 1 in ten billion trillion trillion trillion chance for one such planet to exist anywhere in the cosmos!



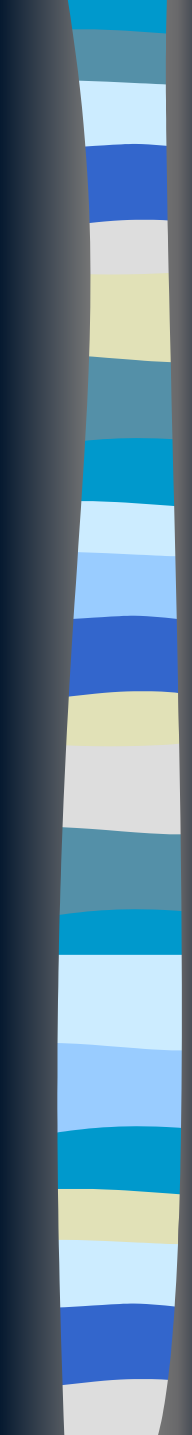
“A superintellect has monkeyed with physics, as well as with chemistry and biology.”

- Sir Fred Hoyle, *The Universe*



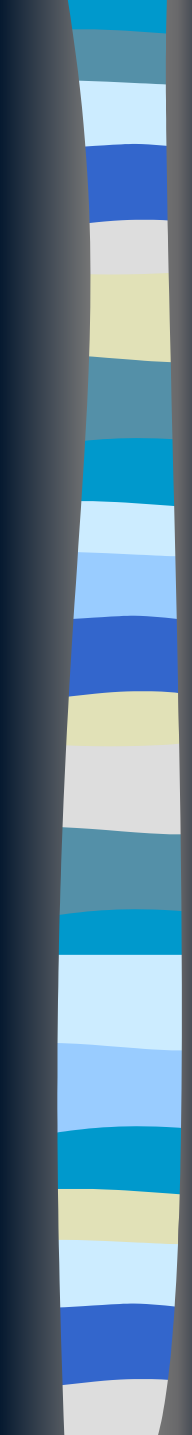
“It seems as though somebody has fine-tuned nature’s numbers to make the Universe.”

- Paul Davies, *The Cosmic Blueprint*



“As we survey all the evidence, the thought insistently arises that some supernatural agency – or rather Agency – must be involved.”

– Georges Greenstein, *The Symbiotic Universe*



“The impression of design is
overwhelming.”

- Paul Davies, *The Cosmic Blueprint*