

# Cosmic Ecology

An exploration of the cosmic significance of humanity based on the natural philosophy of J.G. Bennett and drawing on multiple sources of science and spirituality,

Part 1 – Human Beings in the Universe

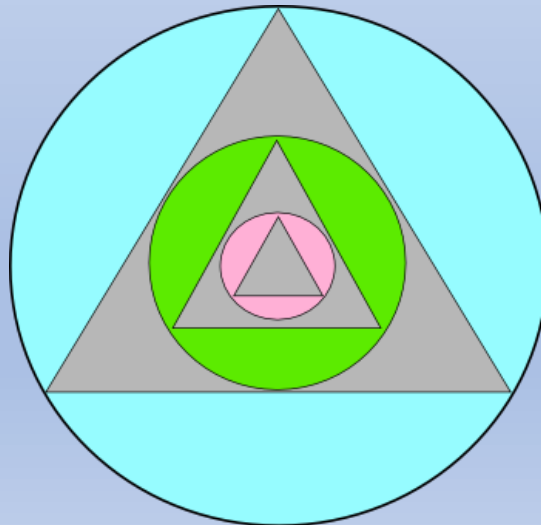
Module 2 – Twelve Levels of the Universe

Dr. Anthony Hodgson



# Section 1

## Recovering the Being of the Universe



# The Observable Universe

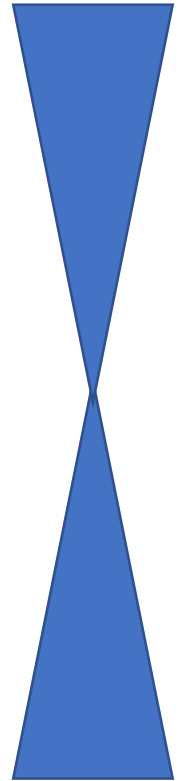
In the last 100 years our appreciation of the scale and complexity of the universe has exploded.

Here is a quick look:

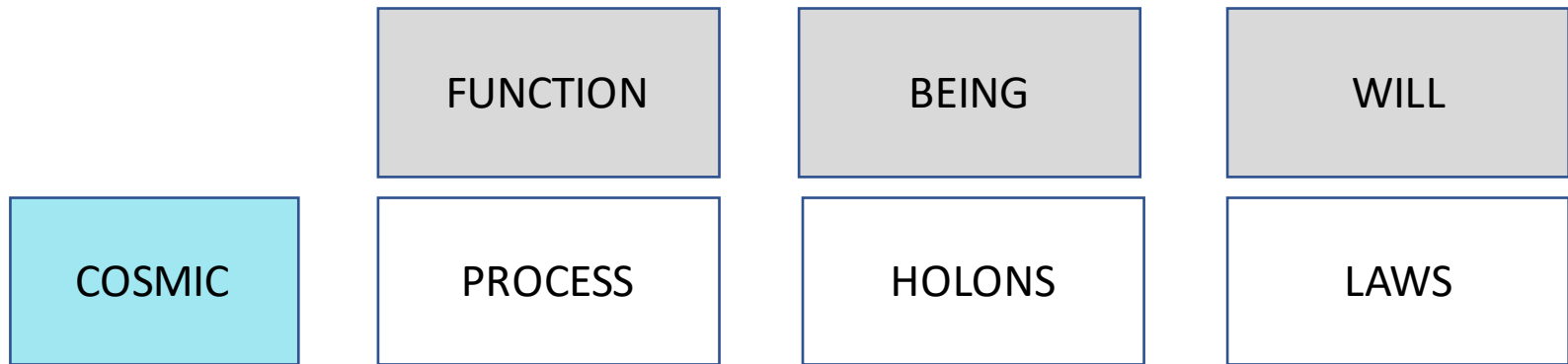
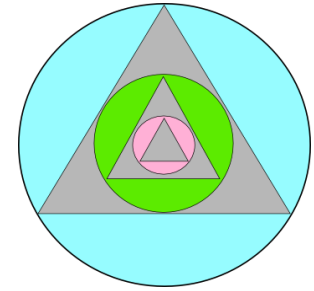
Powers of Ten

<https://www.youtube.com/watch?v=OfKBhvDjuy0>

(You might want to paste this into a separate browser)



# How Are We Going to Understand This ?



*Where does the human sit amongst the very large and the very small?*

*What evokes wonder in the human mind?*

*How do all these scales and processes link together?*





BEING

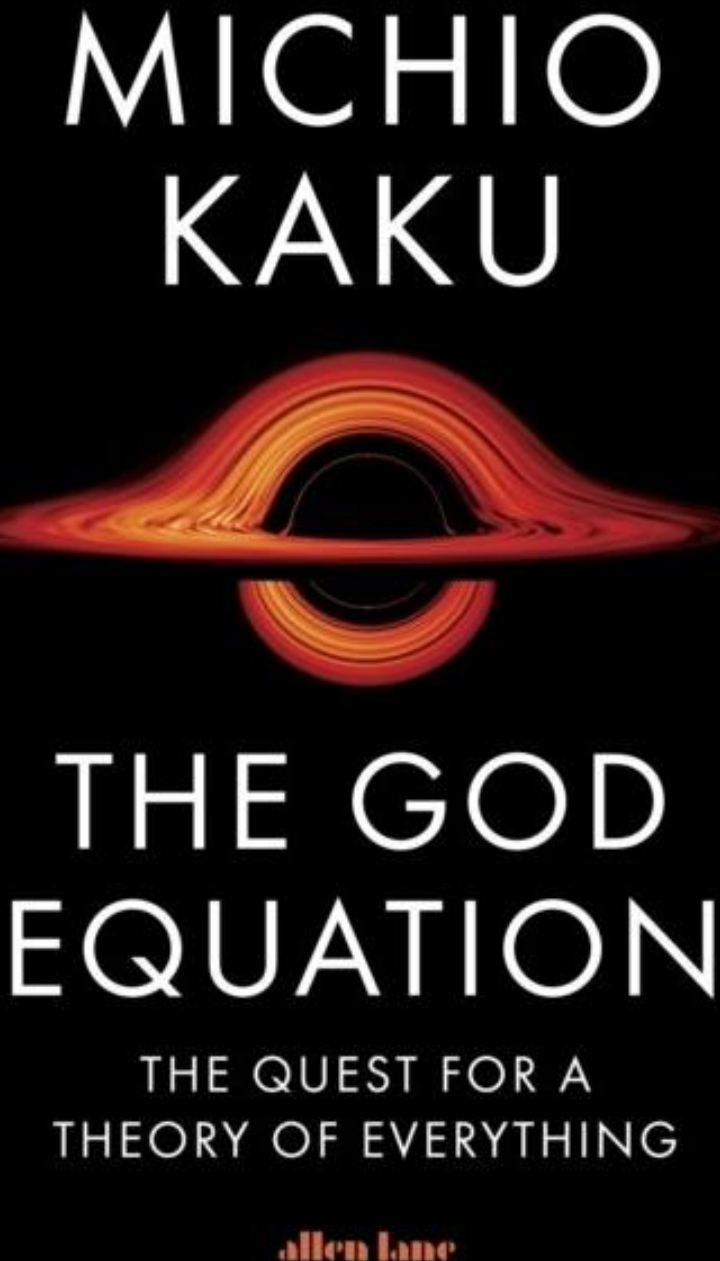
HOLONS

# Cosmic Journey: Wonderment at the Ladder of Being

Angels ascending  
and descending  
between heaven  
and earth.

Bath Abbey,  
England





# The God Equation

LAWS

PATTERNS

Professor Michio Kaku dubs the final Grand Unified Theory of relativity and quantum gravity *The God Equation* with an 11-dimensional string theory as the only self-consistent theory that seems to fit the bill.

$$L = \Phi^\dagger [i\partial_\tau - H] \Phi + \Phi^\dagger * \Phi * \Phi$$

One String Theory to Rule Them All

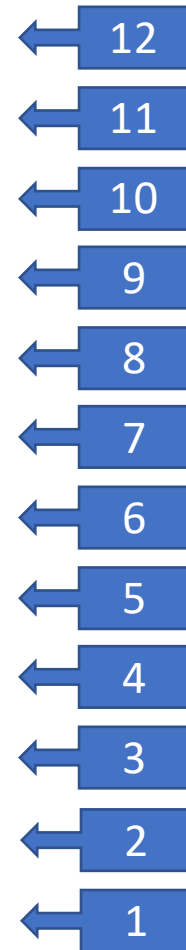
# Postulate – The Discontinuity of Beingness (Qualtum as well as Quantum)

- The equivalent of the quantum scale leaps at the universal scale
- Each level plays a different qualitative role in the cosmic ecology
- A cosmos is an interacting combination of qualtum levels
- So we need to grasp the levels to be able to conceive of the cosmoses



Rather than simply a smooth linear scale the cosmic ecology is based on a hypothesis that there are 12 basic levels of being that are qualitatively distinct.

These will later provide the basis for the defining the transformative structures of the Eight Cosmoses of Reciprocal Maintenance.



## Discussion Interlude 1

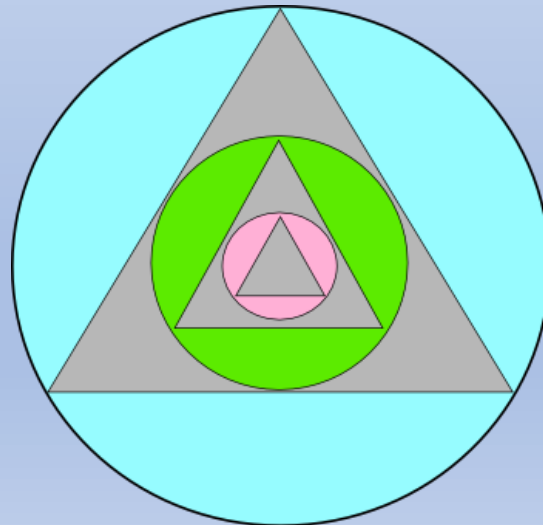
Share your feelings and intuitions you about viewing the universe as having levels of different qualities

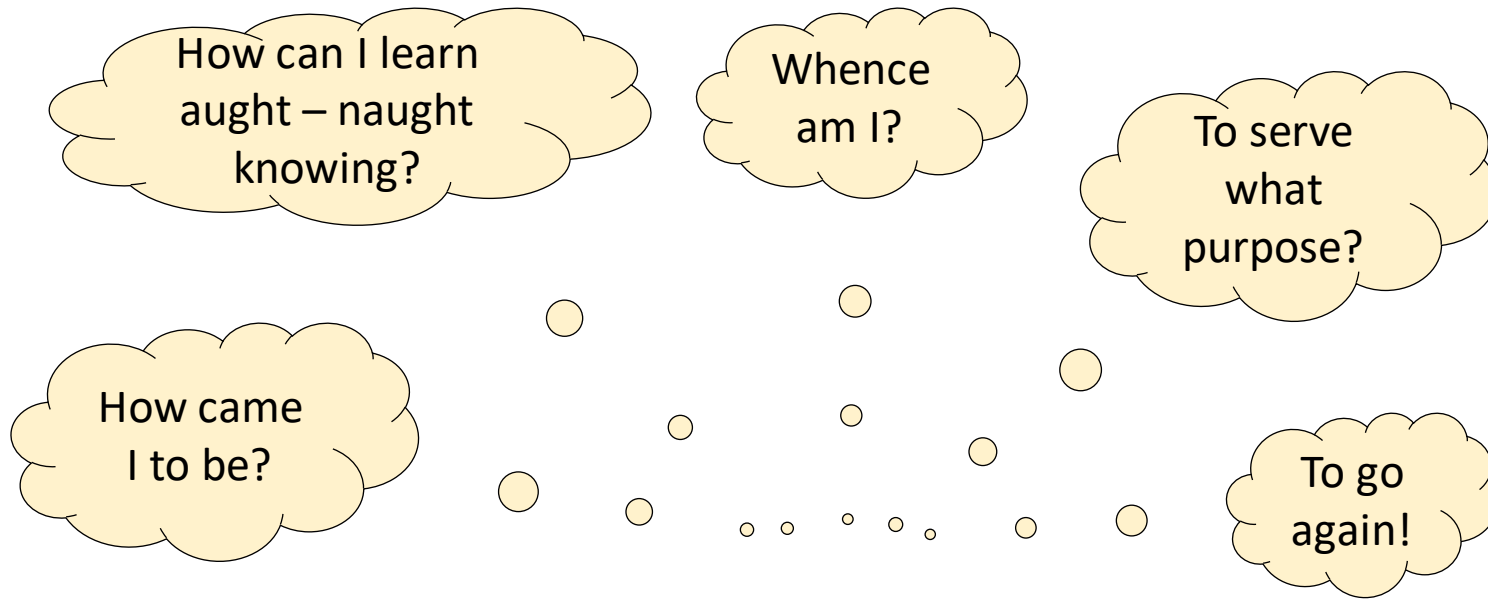


RANDOM  
PAIRS

# Section 2

## Humans to Soil and Ocean





# 8 HUMANS

We awaken to ourselves here and now with mind, feelings and body; and many many questions in a world we try to dominate but do not understand and are unable to see its future.



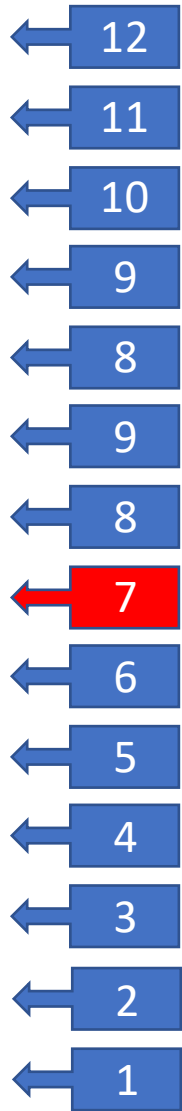


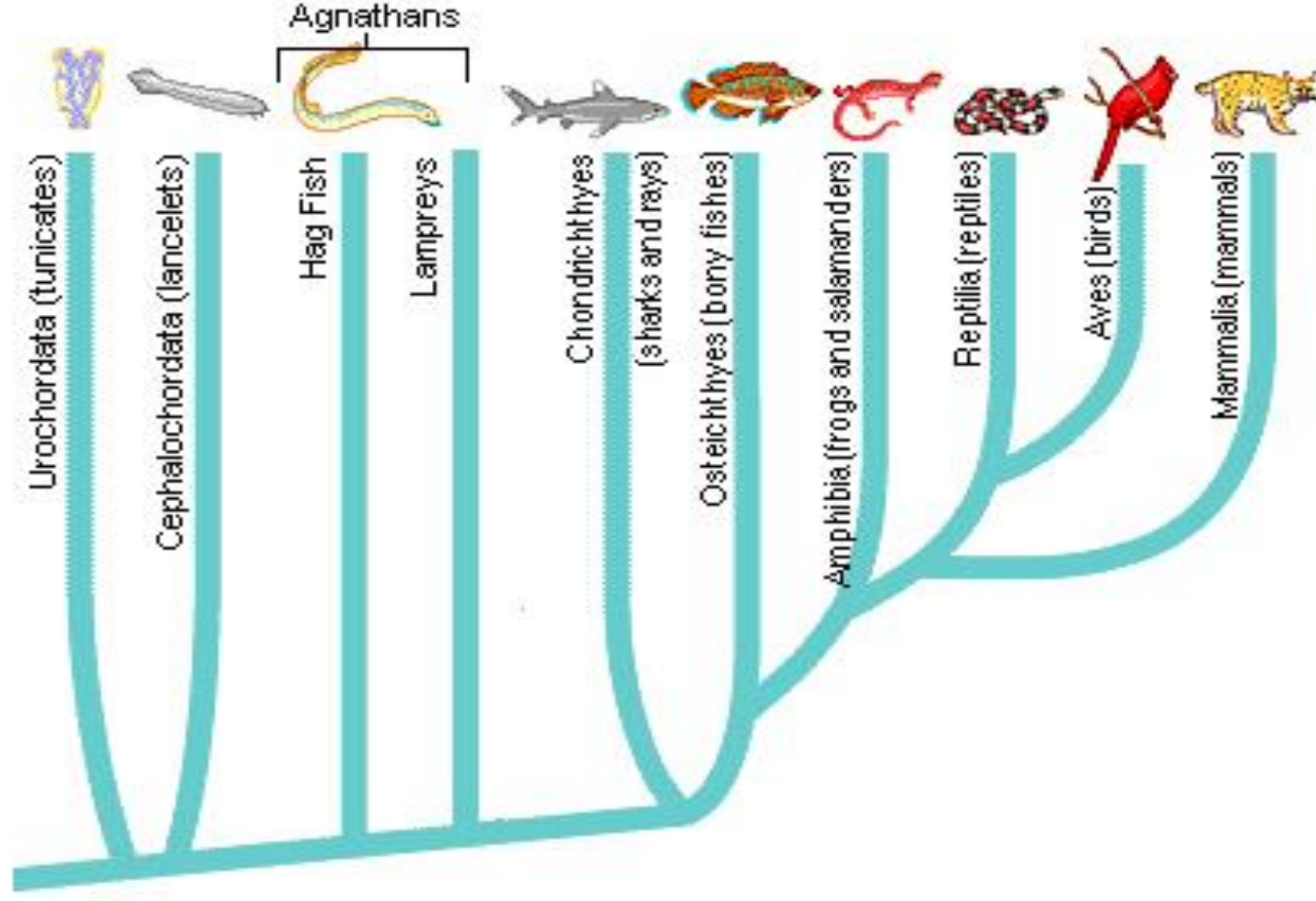




# 7 ANIMALS

What we discover here is a wide variety of creatures, that have mobility on land, sea and in the air, each of which occupies a niche in complex habitats. Higher animals show they have sentience, the capacity to stare at us.









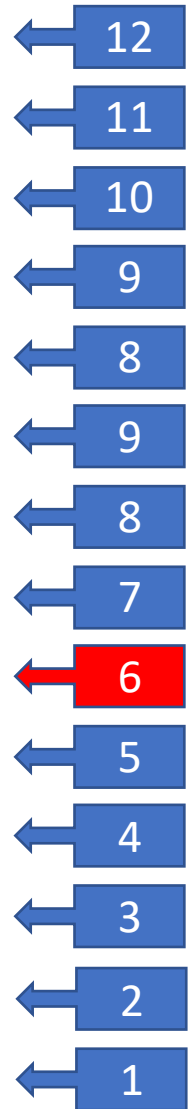


Birds  
of  
North America  
THE COMPLETE COLLECTION



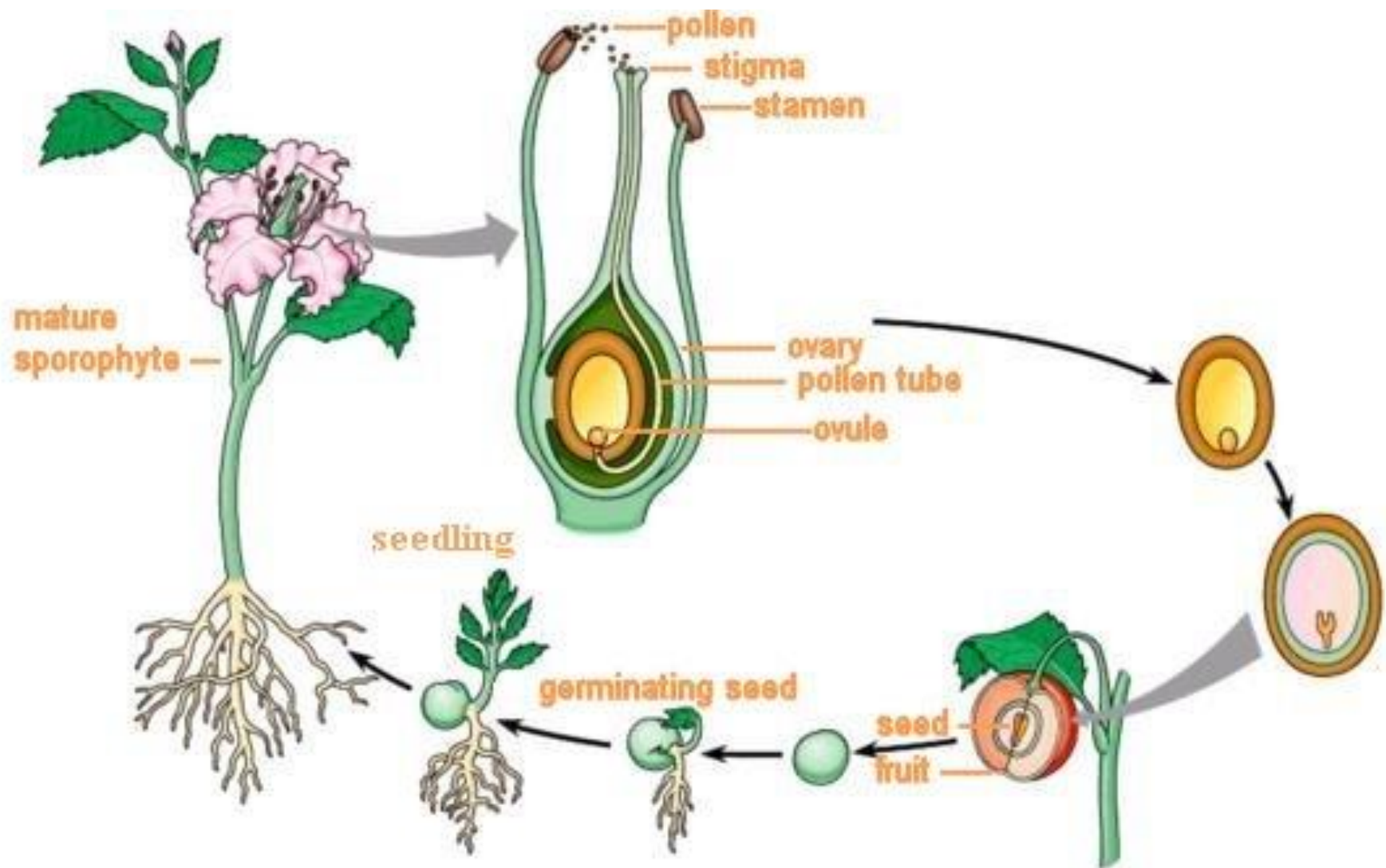
# 6 GERM CELLS

*What we discover here is a layer of life, in both plants and animals that sustains genetic variety at many levels through sexual reproduction*



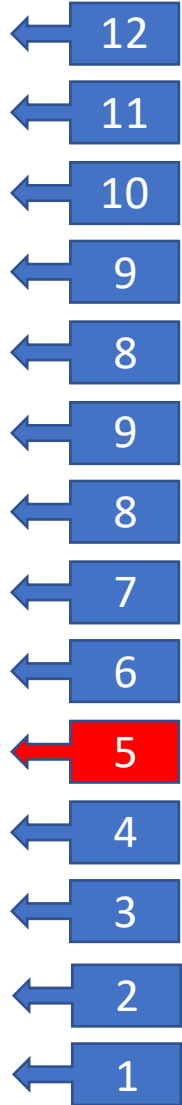






# 5 PHYTO VEGETATION

*What we discover here is a largely green world where the energy of sunlight is transformed into the stuff of life*

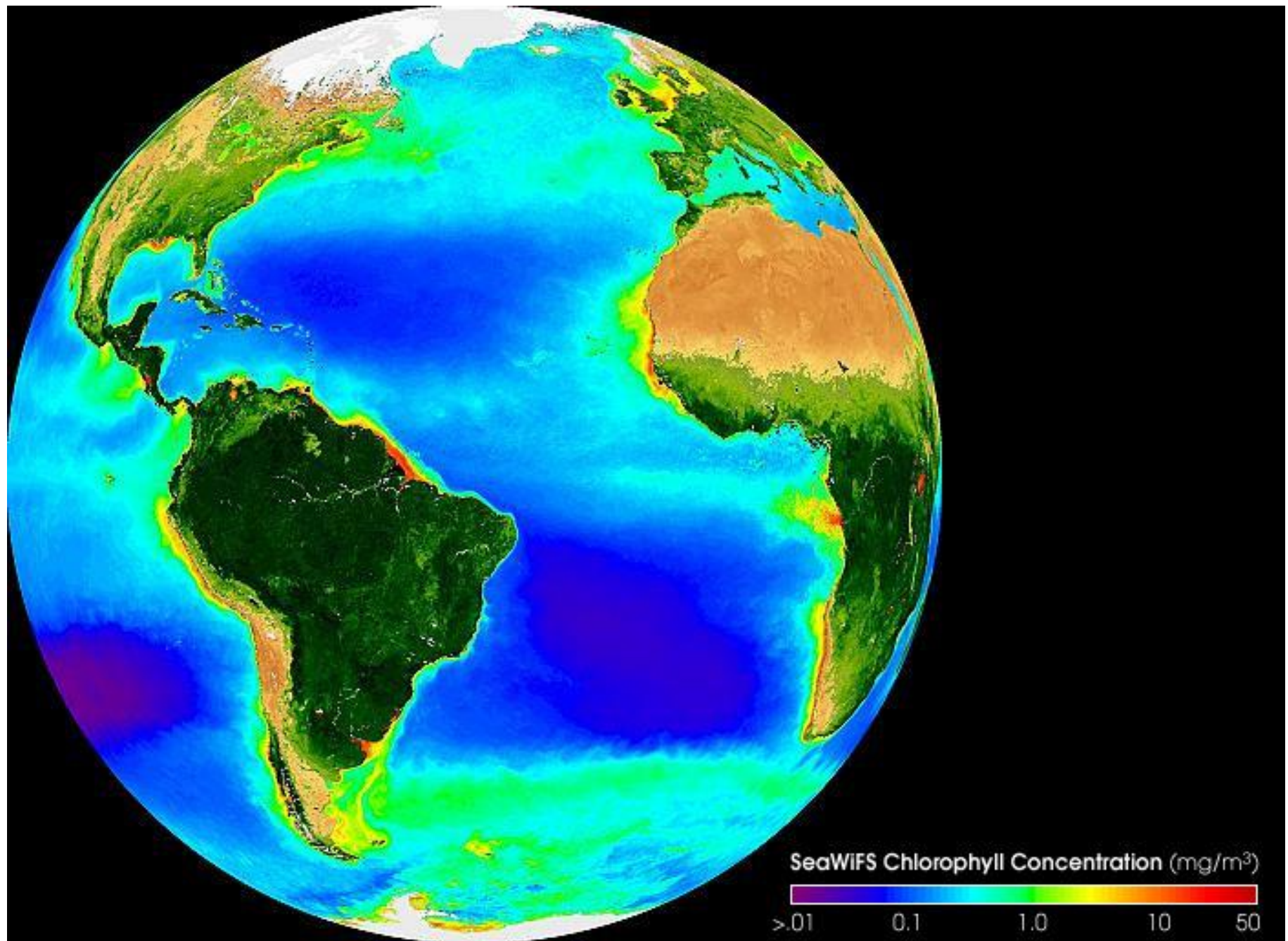




[www.ShowCheer.com](http://www.ShowCheer.com)

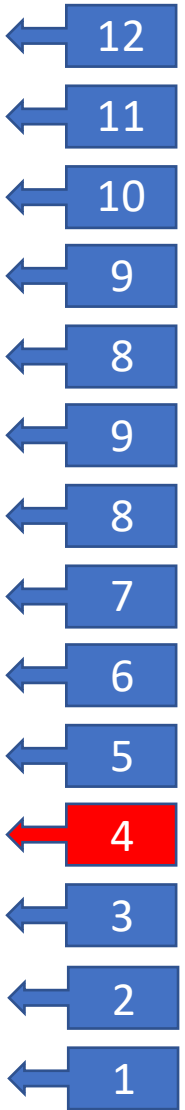






# 4 SOIL AND OCEAN

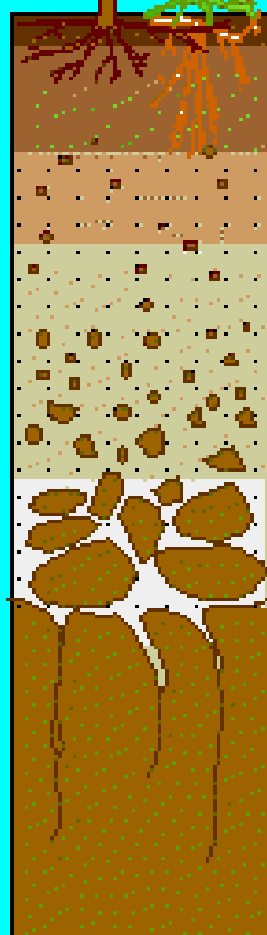
*What we discover here are thin layers of land and ocean surface that have very complex populations of different living and non-living components that make the support of phyto-vegetation possible and creates the biosphere.*







# Soil Layers



O Horizon (humus)

A Horizon (topsoil)

E Horizon (eluviation layer)

B Horizon (subsoil)

C Horizon (regolith)

R Horizon (bedrock)

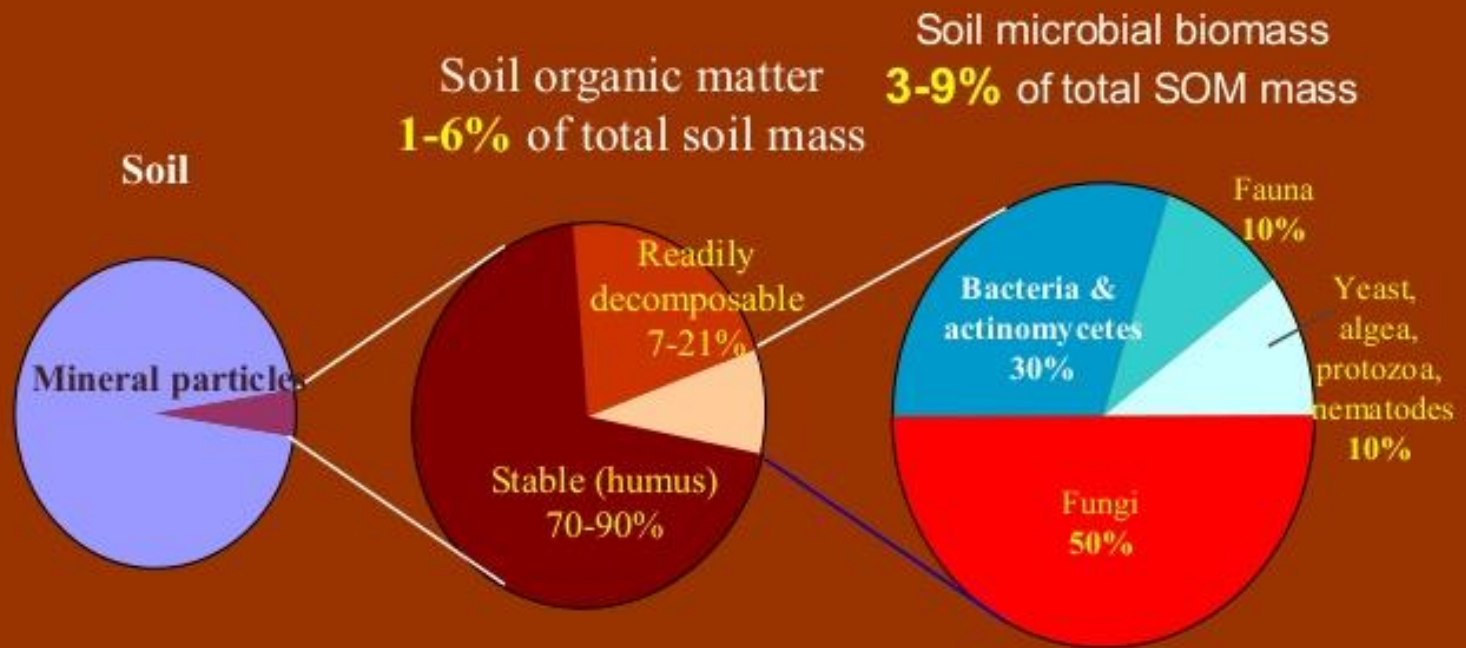
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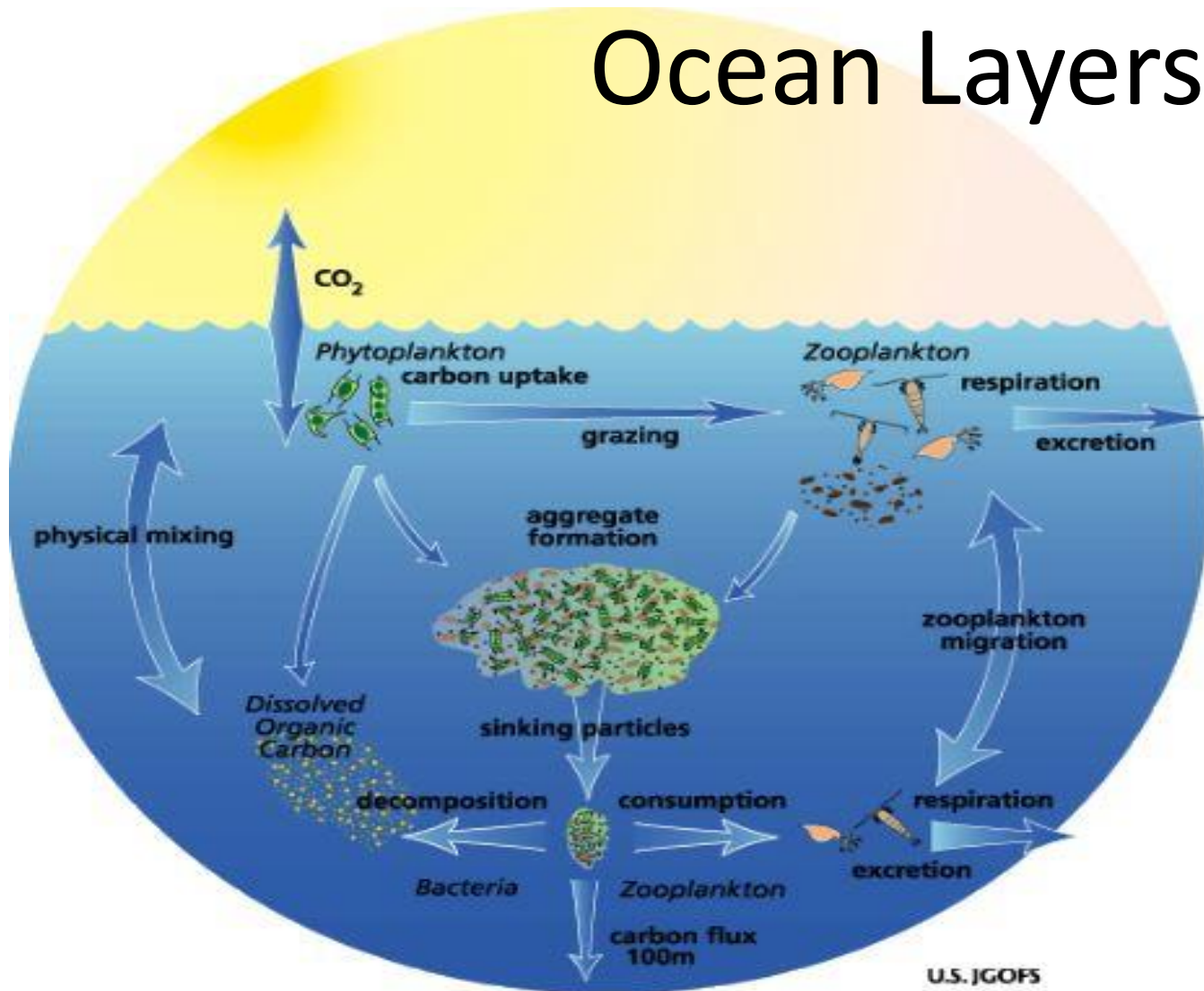
# Soil Organic Matter Composition



**SOM as a “revolving nutrient fund”**



# Ocean Layers



## Discussion Interlude 2

How does the scheme of levels begin to change the values we place on their presence of different levels and their role?

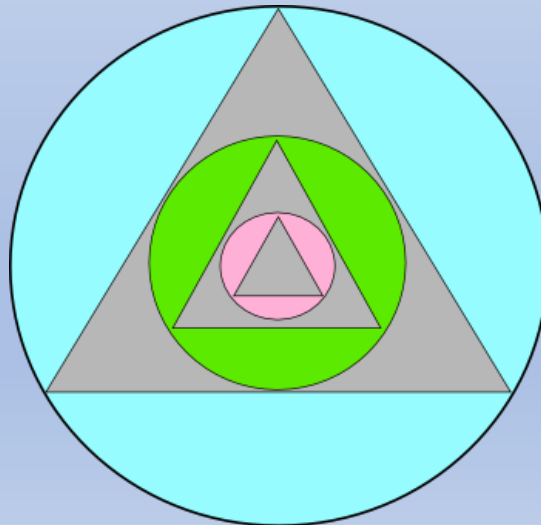


RANDOM  
PAIRS



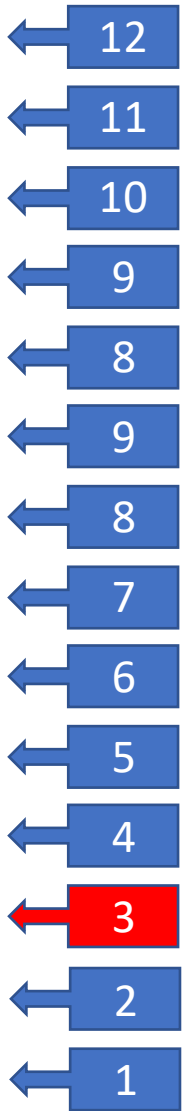
# Section 3

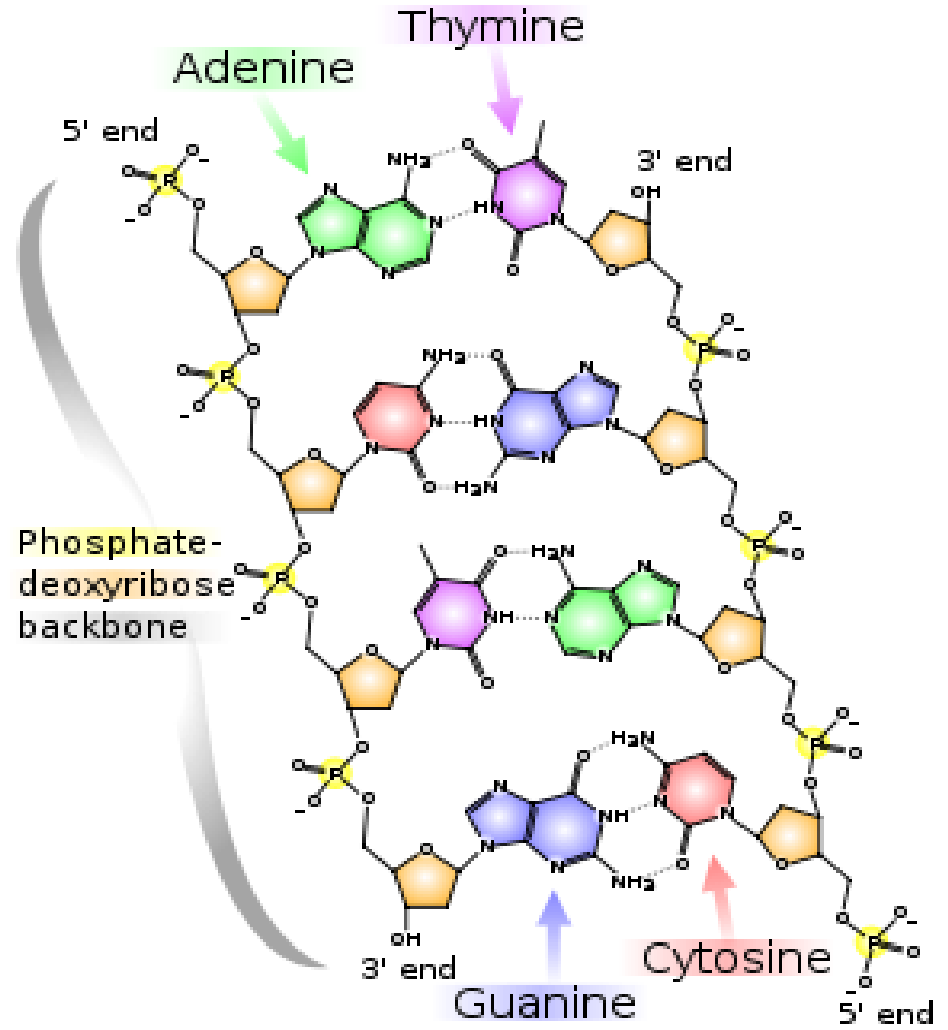
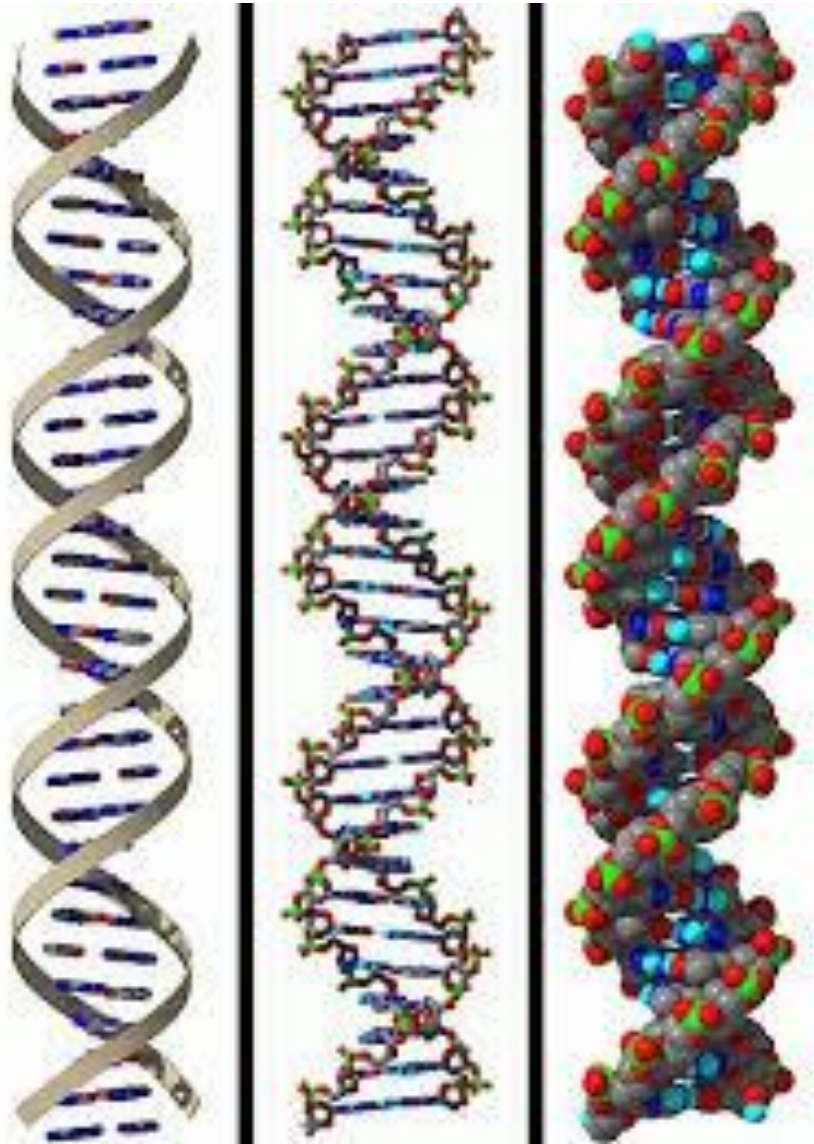
## Molecules to Universal Field

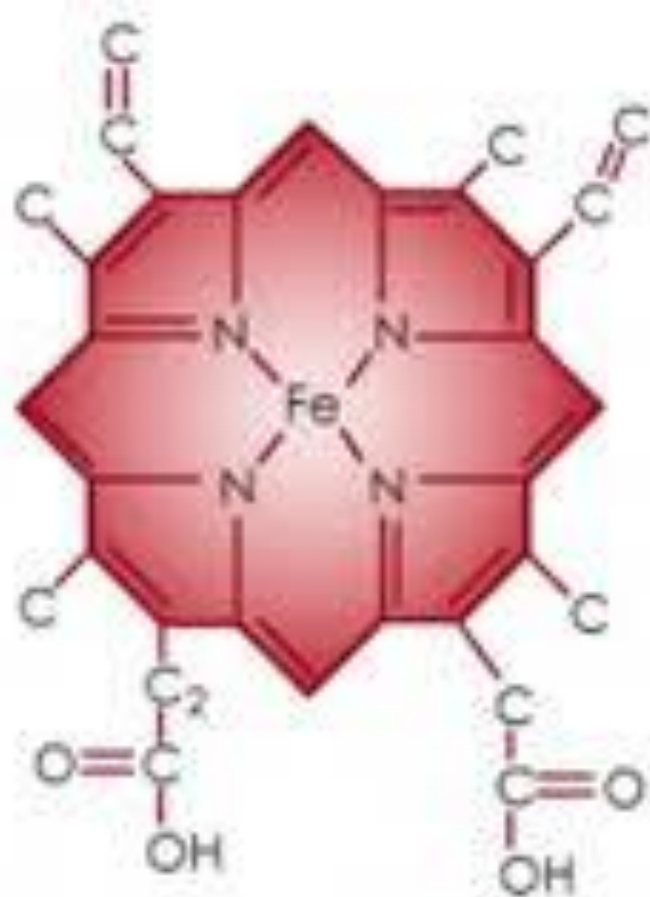


# 3 MOLECULAR STRUCTURES

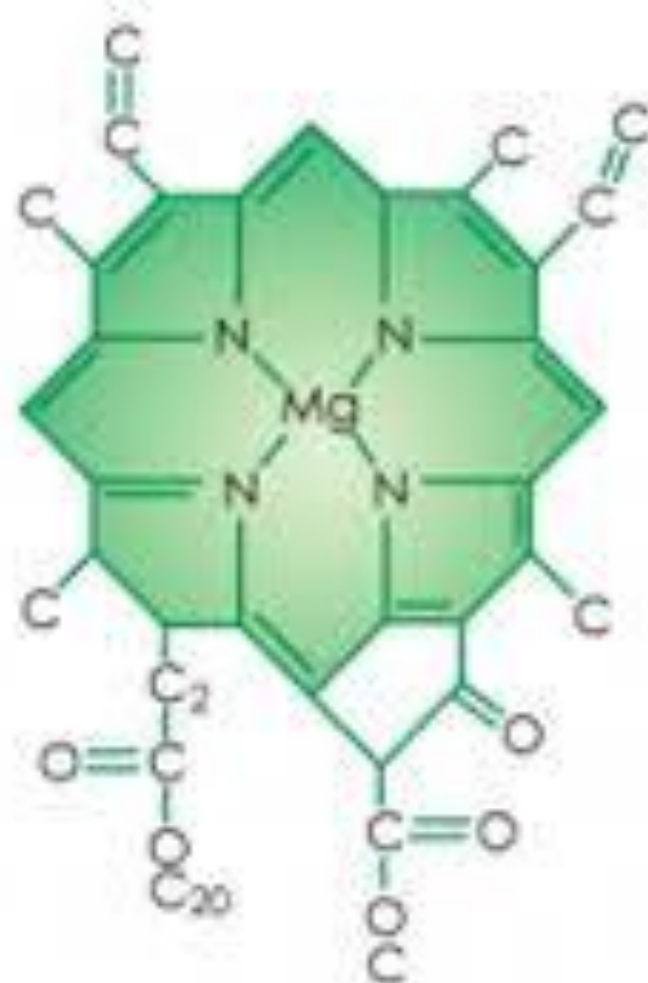
*What we discover here are the complex molecules of life – the proteins, the enzymes, the viruses that dance in a myriad of energy exchanges and patterns of interaction*





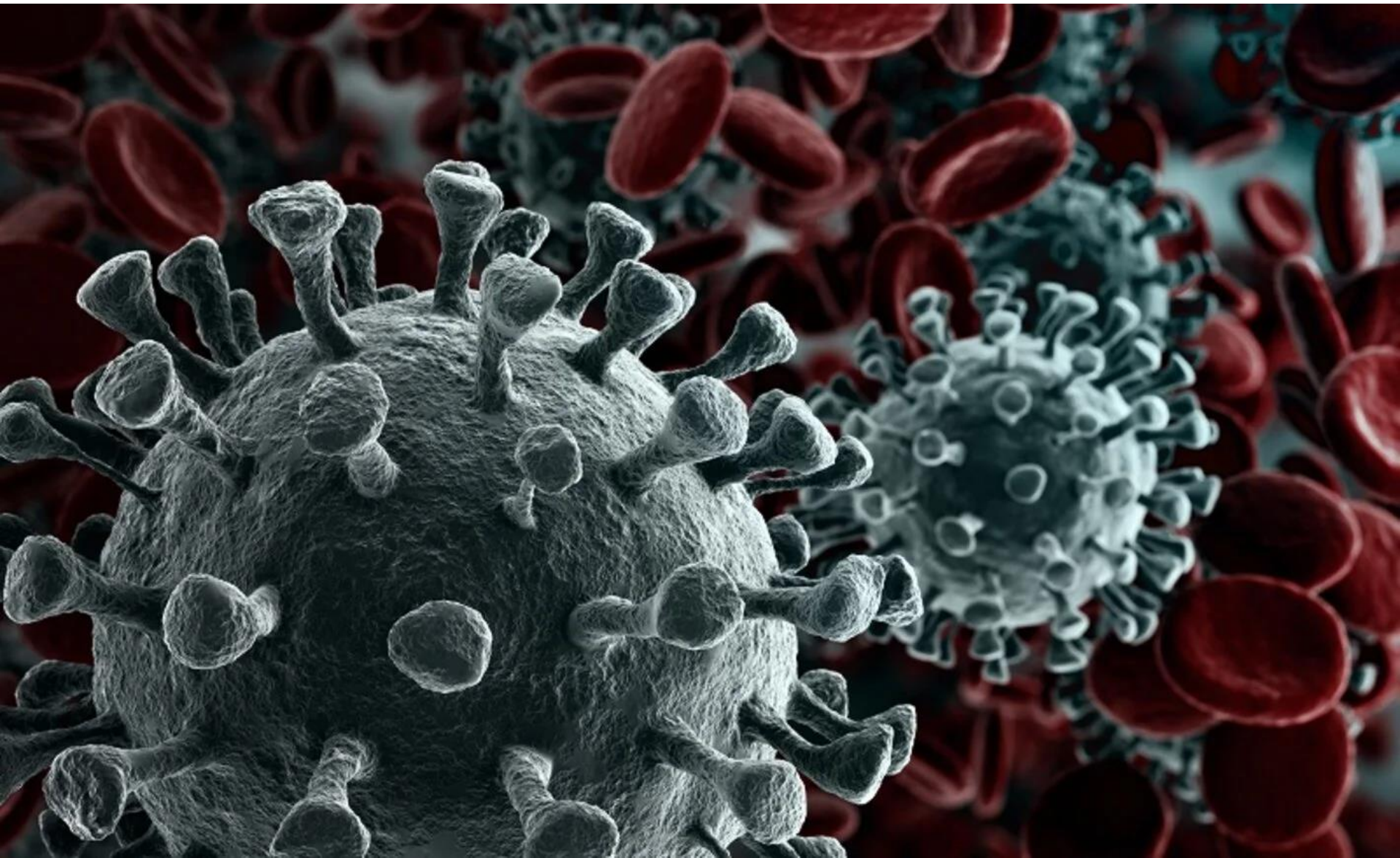


Human Blood  
Hemoglobin



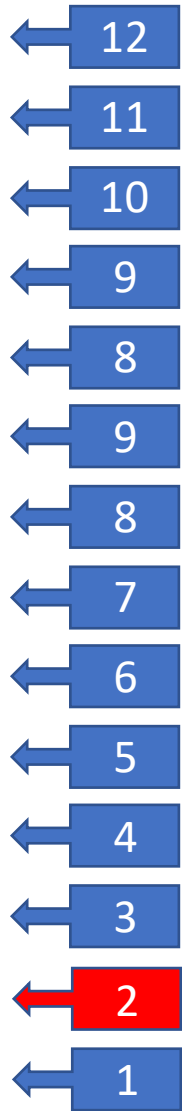
Plant Chlorophyll

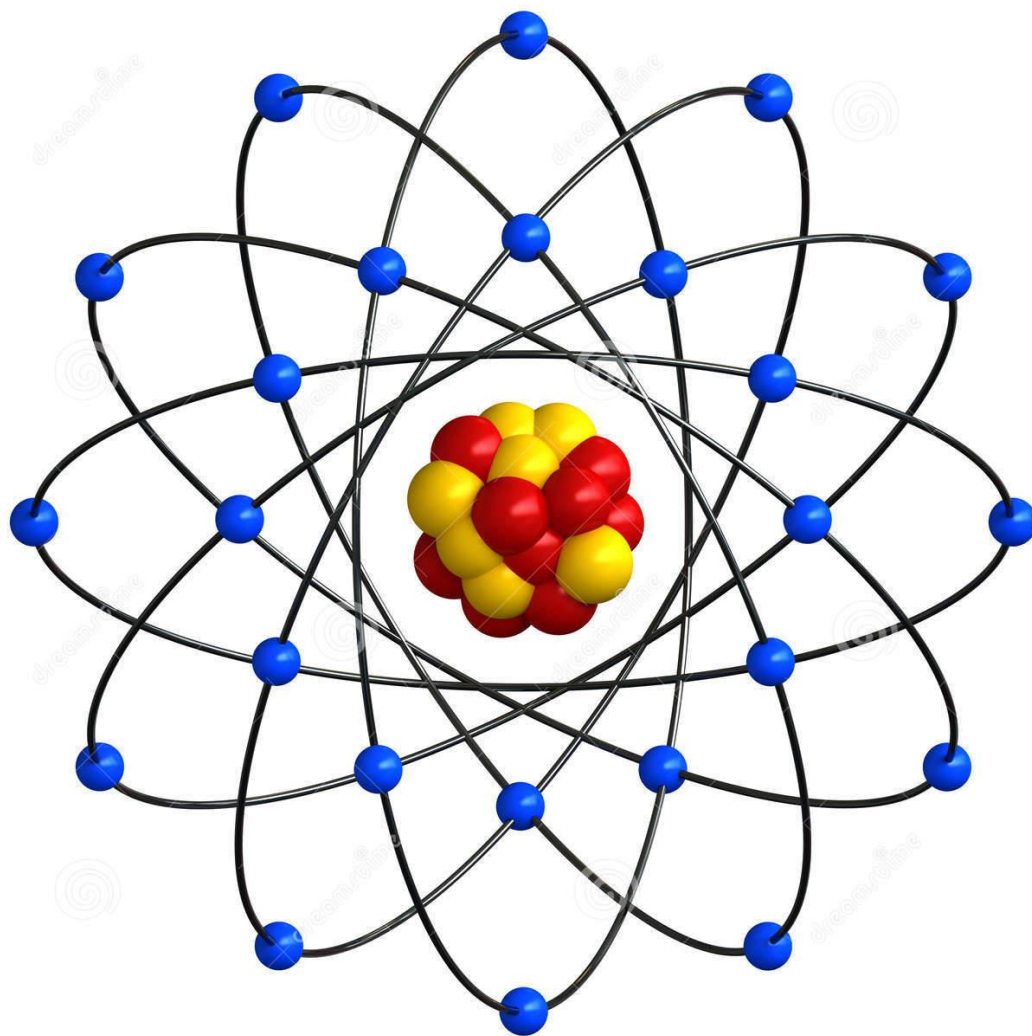




# 2 ELEMENTAL COMPLEXES

*What we discover here are the elements, their atomic structure which enables them to be combined in a myriad ways that give structure and process to our world.*





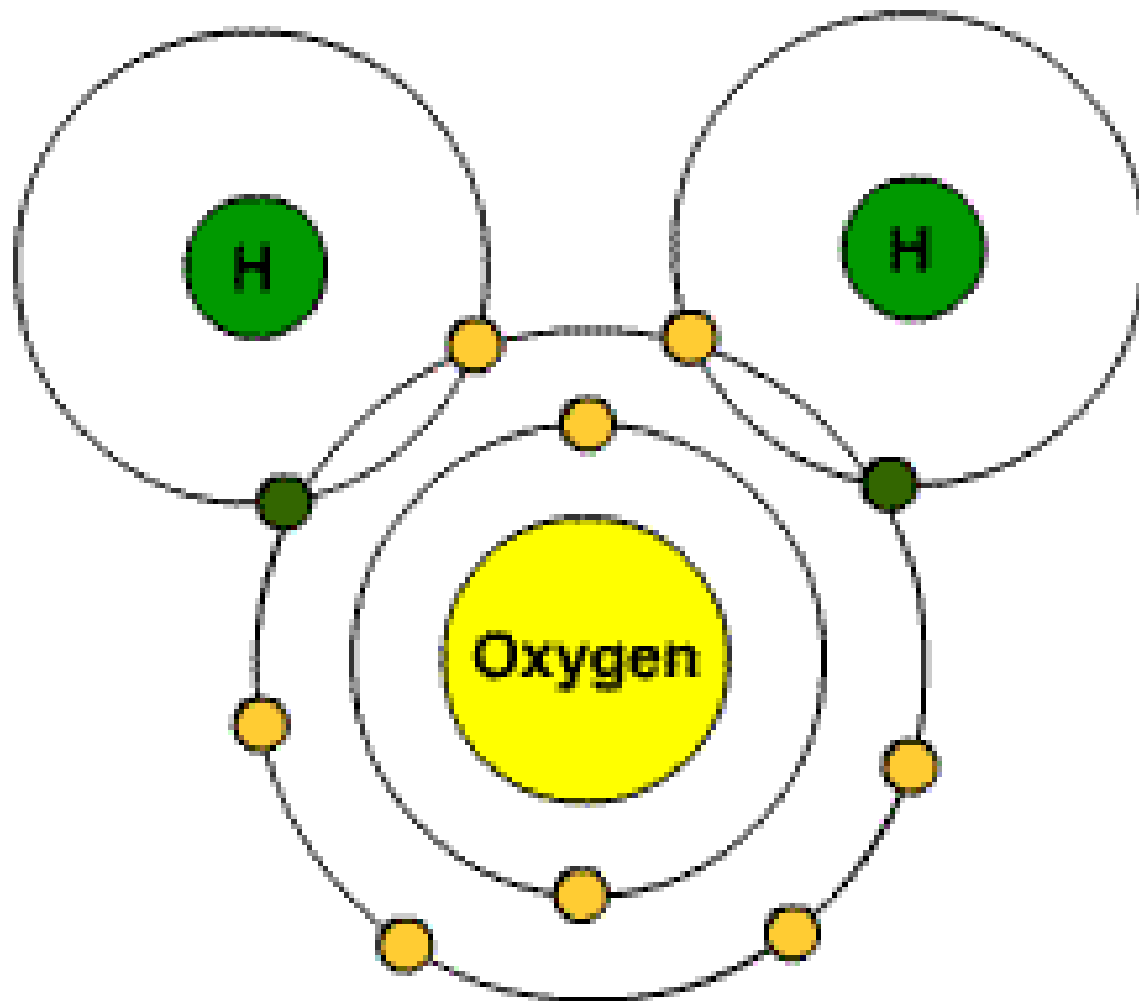
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# Periodic Table of the Elements

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# Periodic Table of the Elements

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hydrogen
alkali metals
alkali earth metals
transition metals

poor metals
nonmetals
noble gases
rare earth metals

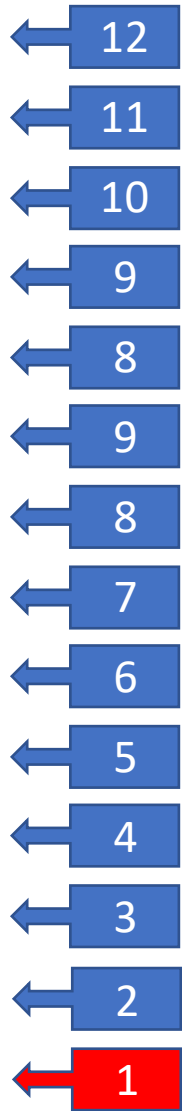
1 H																	2 He				
3 Li	4 Be															5 B	6 C	7 N	8 O	9 F	10 Ne
11 Na	12 Mg															13 Al	14 Si	15 P	16 S	17 Cl	18 Ar
19 K	20 Ca	21 Sc	22 Ti	23 V	24 Cr	25 Mn	26 Fe	27 Co	28 Ni	29 Cu	30 Zn	31 Ga	32 Ge	33 As	34 Se	35 Br	36 Kr				
37 Rb	38 Sr	39 Y	40 Zr	41 Nb	42 Mo	43 Tc	44 Ru	45 Rh	46 Pd	47 Ag	48 Cd	49 In	50 Sn	51 Sb	52 Te	53 I	54 Xe				
55 Cs	56 Ba	57 La	72 Hf	73 Ta	74 W	75 Re	76 Os	77 Ir	78 Pt	79 Au	80 Hg	81 Tl	82 Pb	83 Bi	84 Po	85 At	86 Rn				
87 Fr	88 Ra	89 Ac	104 Unq	105 Unp	106 Unh	107 Uns	108 Uno	109 Une	110 Unn												

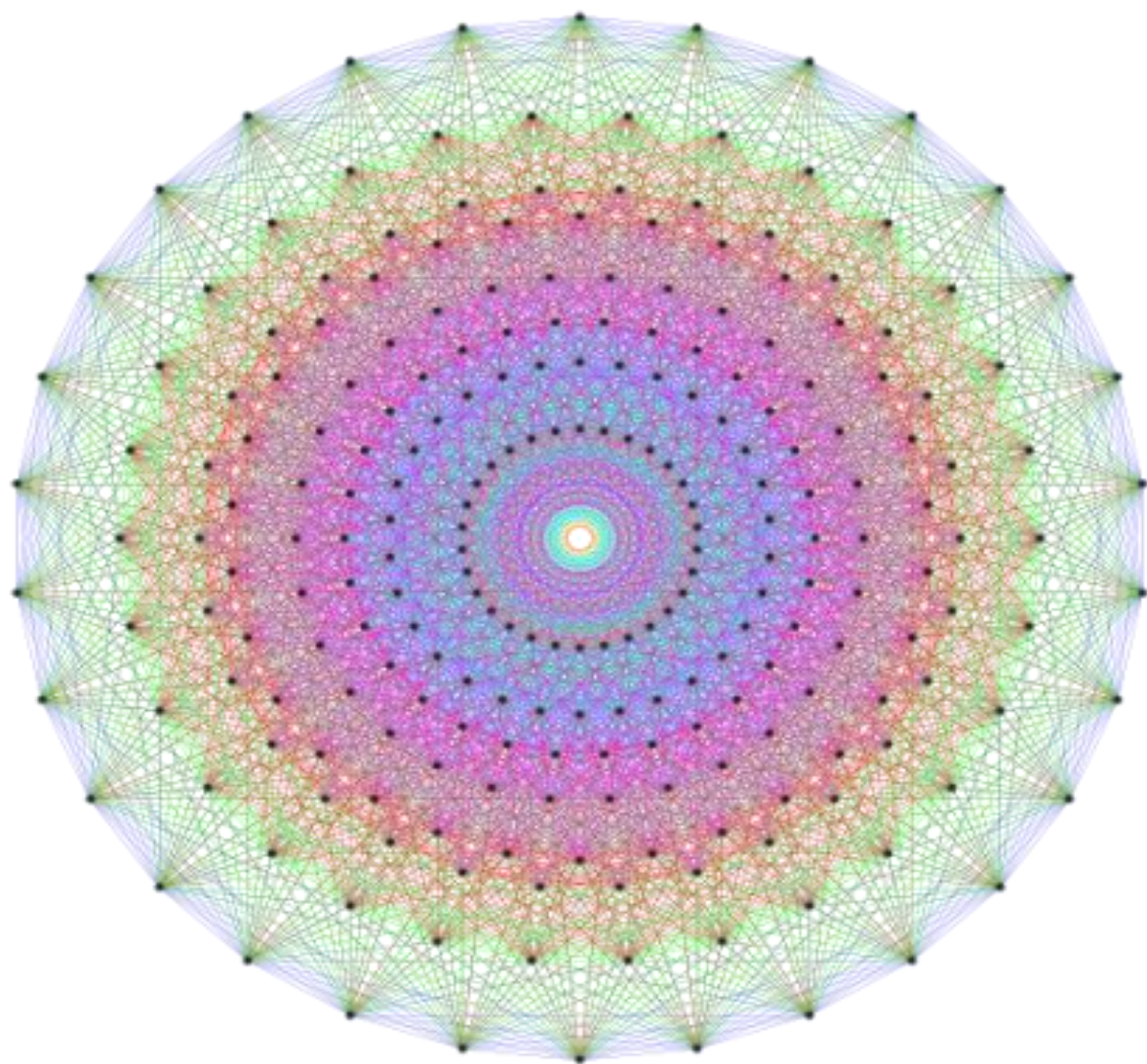
- hydrogen
- alkali metals
- alkali earth metals
- transition metals
- poor metals
- nonmetals
- noble gases
- rare earth metals

58 Ce	59 Pr	60 Nd	61 Pm	62 Sm	63 Eu	64 Gd	65 Tb	66 Dy	67 Ho	68 Er	69 Tm	70 Yb	71 Lu
90 Th	91 Pa	92 U	93 Np	94 Pu	95 Am	96 Cm	97 Bk	98 Cf	99 Es	100 Fm	101 Md	102 No	103 Lr

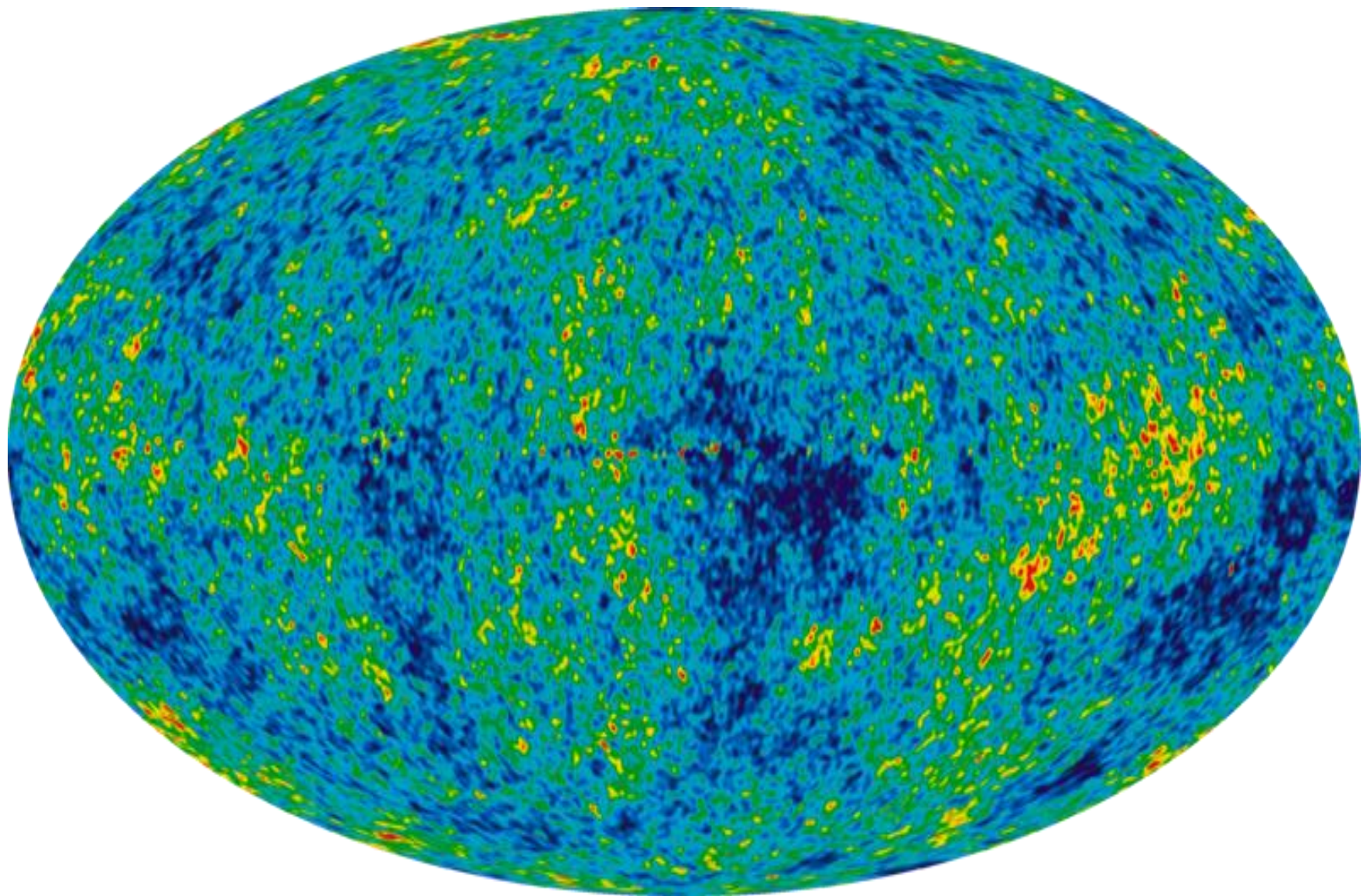
# 1 UNIVERSAL FIELD

*What we discover here is the ground state of the universe which, in astrophysics, is portrayed as the background radiation of the Big Bang but also as the Zero Point Field.*











## Discussion Interlude 3

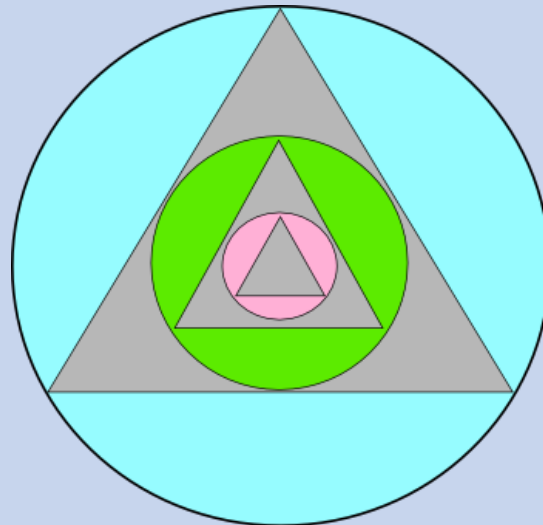
How can we appreciate  
the 'invisible' levels that  
underly the visible?



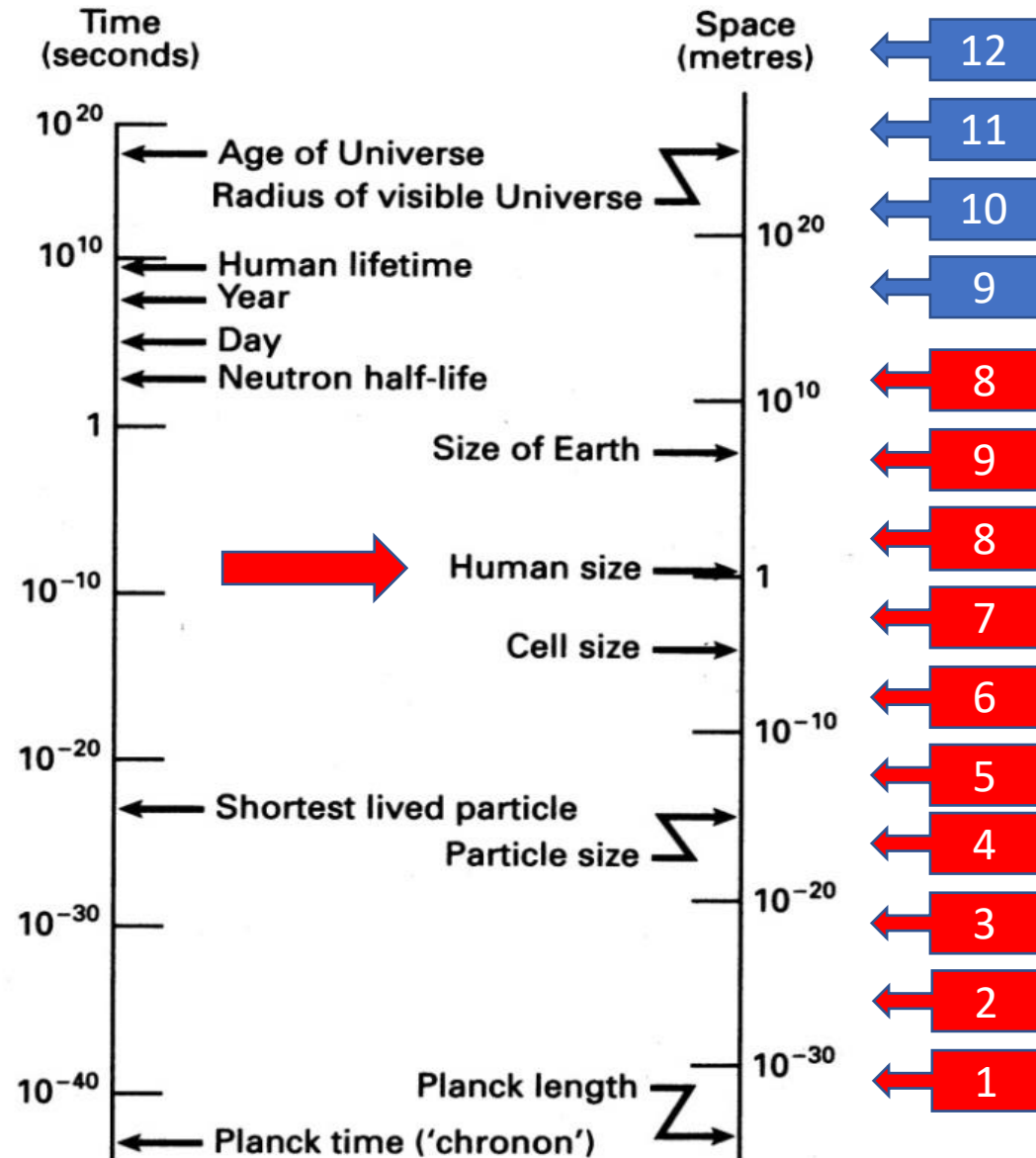
RANDOM  
PAIRS

# Section 4

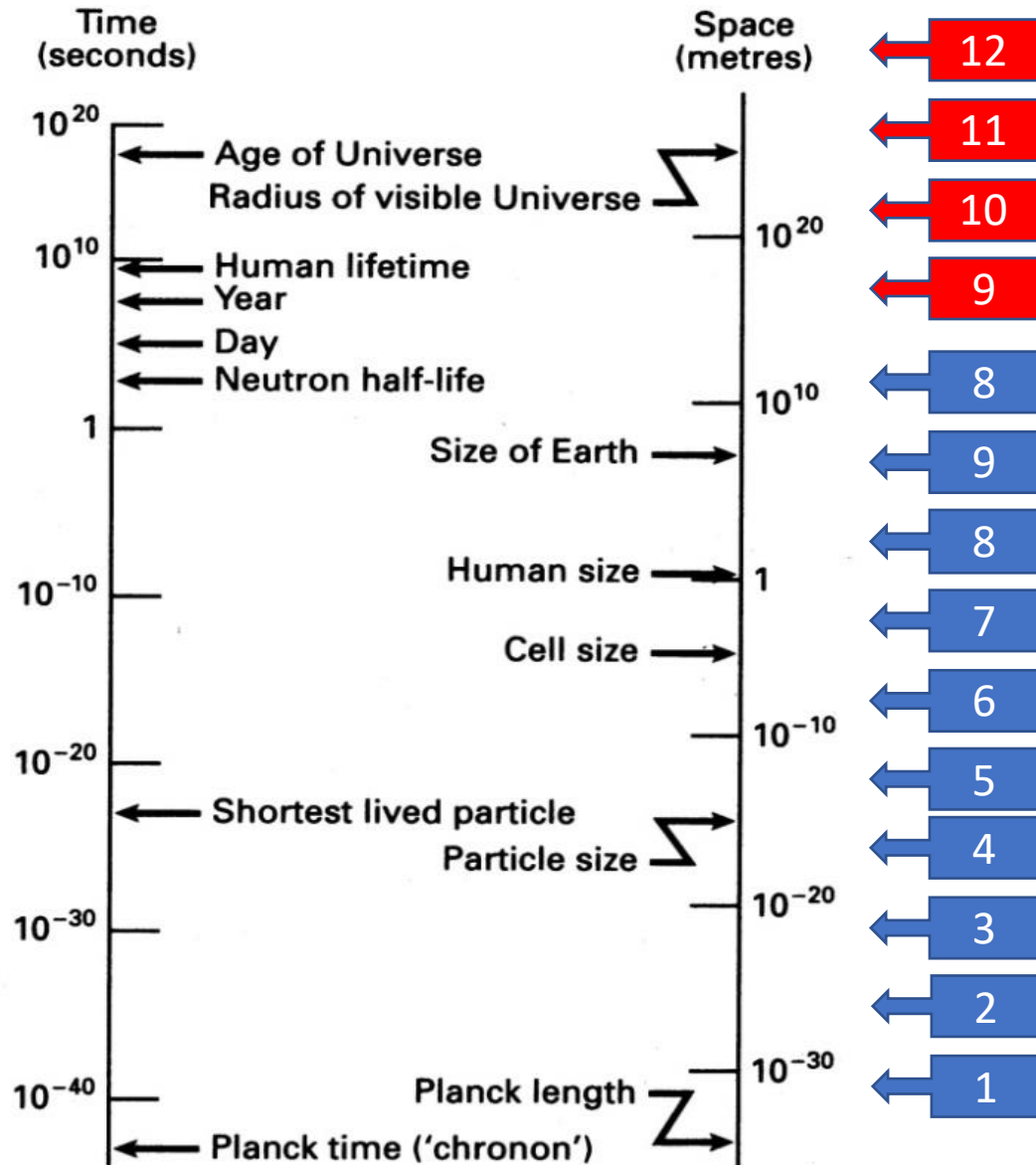
## The Vehicles of Cosmic Consciousness



# Inner Space Exploration



# Outer Space Exploration



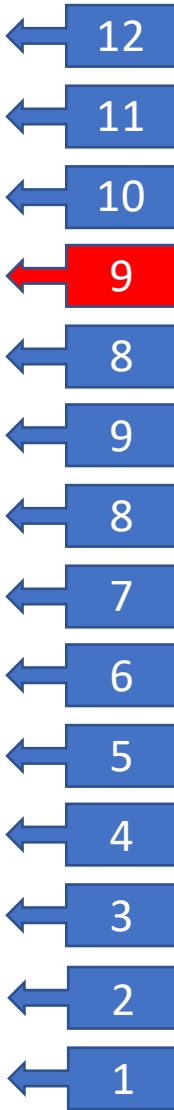


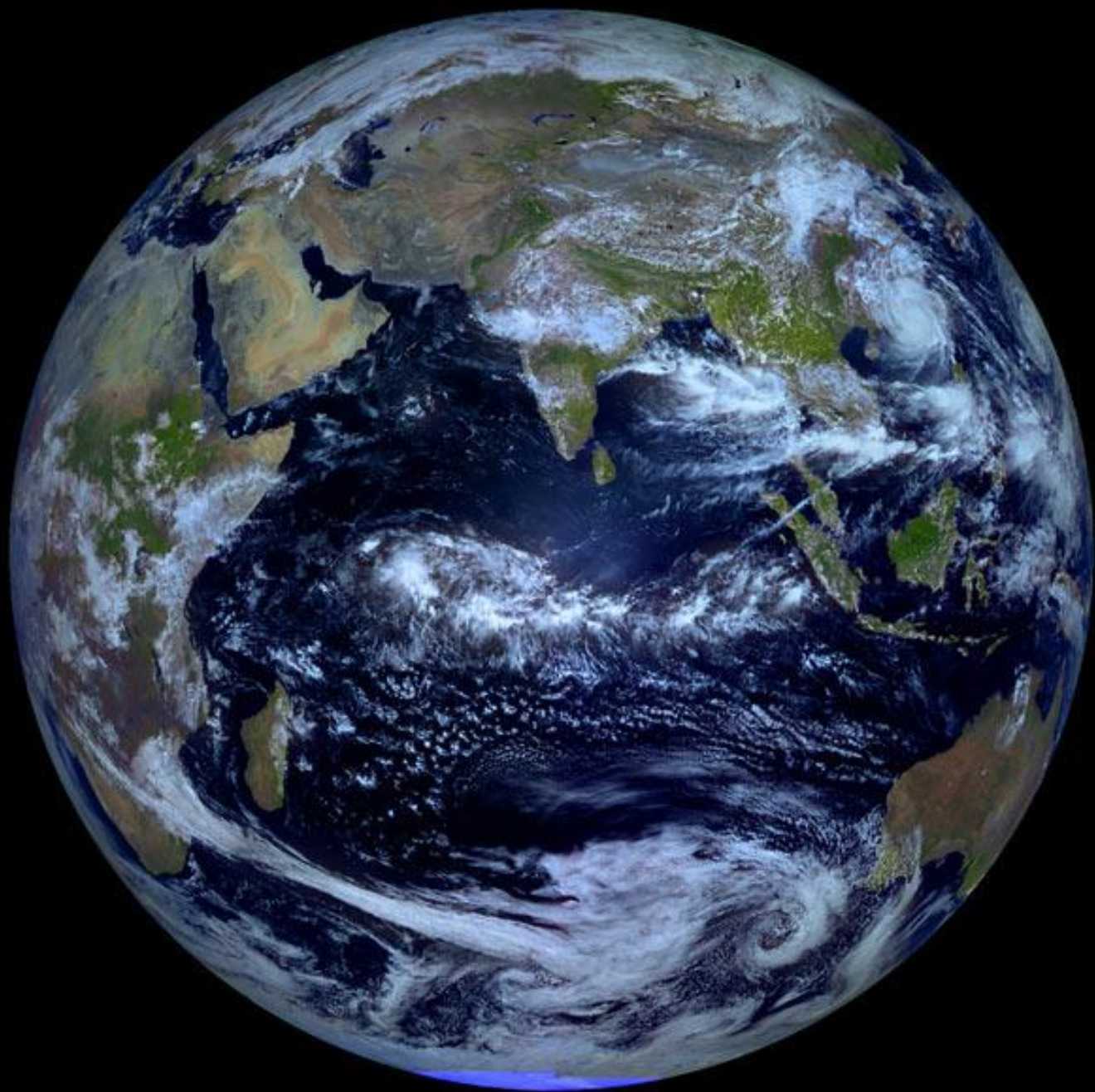
# Postulates – Going Beyond Humans

- *Postulate 1* – intelligence does not stop with man; it goes "all the way to the top" and "all the way to the bottom"
- *Postulate 2* – the scope and scale of intelligence, from the Earth and planets, through suns and stars, through galaxies, and to the totality increases by prodigious leaps from one level to another. Ultimately in this cosmic ecology, all and everything is MIND or CONSCIOUSNESS.
- *Postulate 3* – each level plays a role in evolution (for itself) and guidance (involution) for the levels it contains.
- *Postulate 4* – these higher levels are not living in the sense that we mean it in the biospheric world but they are *life-giving*.
- *Postulate 5* – some universal beings are of a nature and calibre that their intelligence can operate on these higher levels or at least be highly attuned and responsive to them.
- *Postulate 6* – every level has its own scope and scale of present moment and functions with its own pattern distributed in the seven dimensions; there is considerable interlinking transaction between them which is why we can speak of a cosmic ecology

# 9 PLANETS

Externally, our planet is a complex and layered structure which is composed of a significant component of hard solid material, rock. We should not overlook that solid material in this form is quite rare. Earth also has the thin layer of life, the biosphere, and a very thin atmosphere. The relationship amongst these factors is pretty complex: Gaia, Pachamama as the unique synergy and intelligence of the Earth-life system.





Mercury



Venus



Earth



Mars



Jupiter



Saturn



Uranus



Neptune



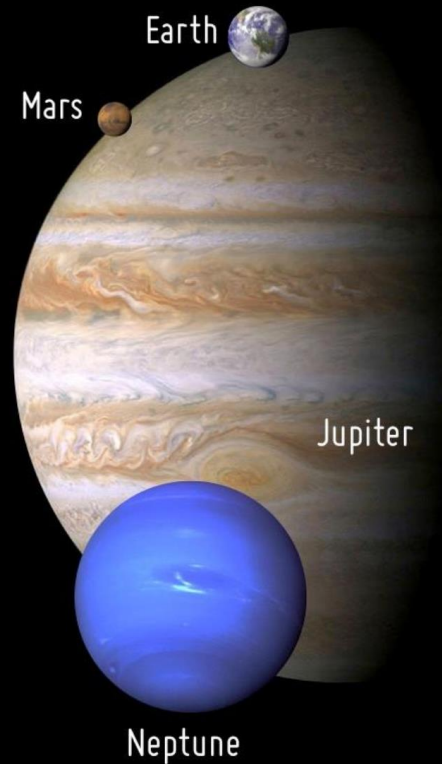
Pluto





# Potentially Habitable Exoplanets

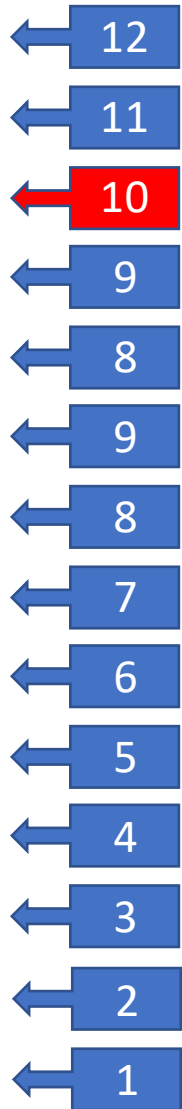
Ranked by Distance from Earth (light years)

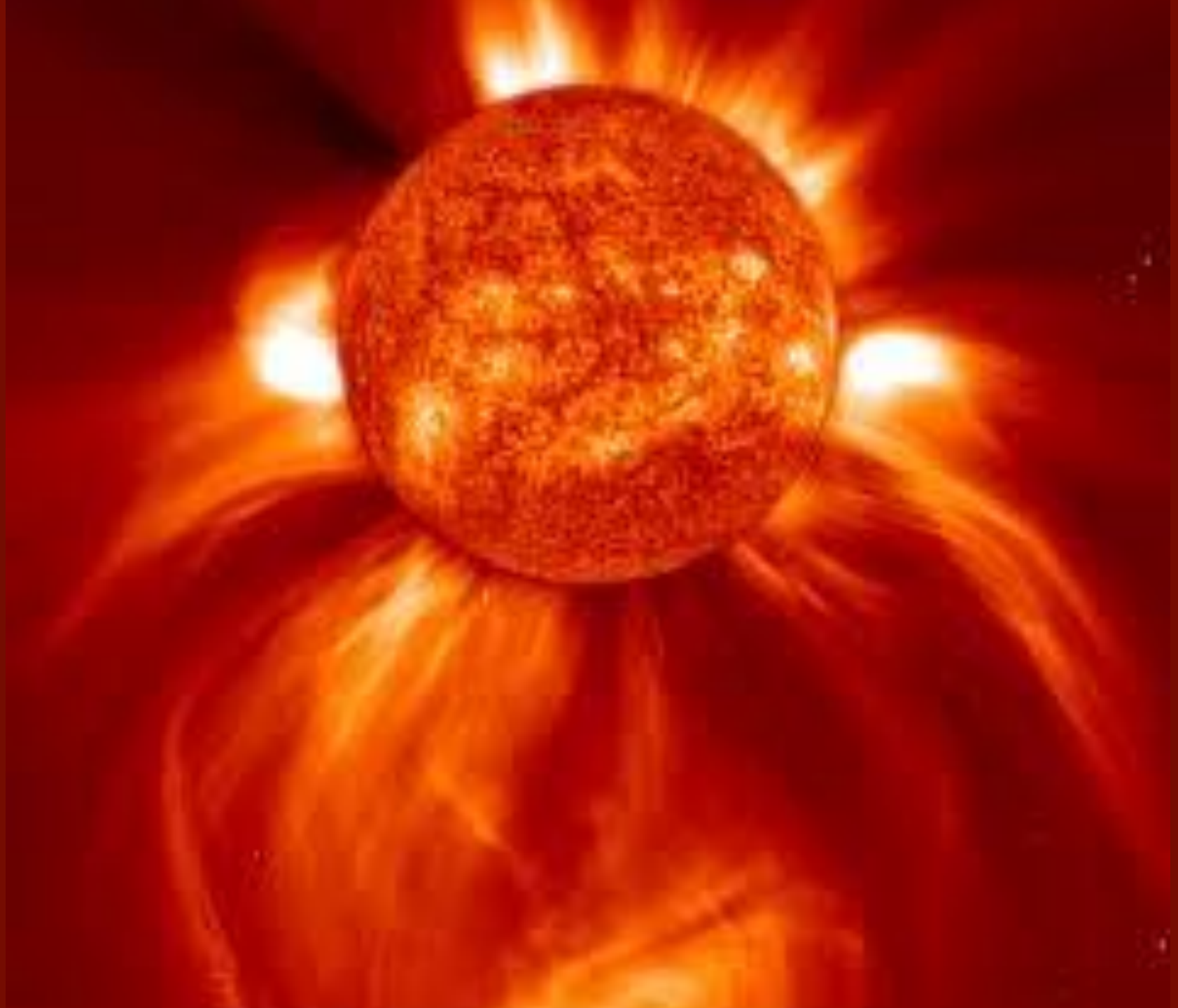


Artistic representations. Earth, Mars, Jupiter, and Neptune for scale. Distance is between brackets. Planet candidates indicated with asterisks. CREDIT: PHL @ UPR Arecibo (phl.upr.edu) January 5, 2015

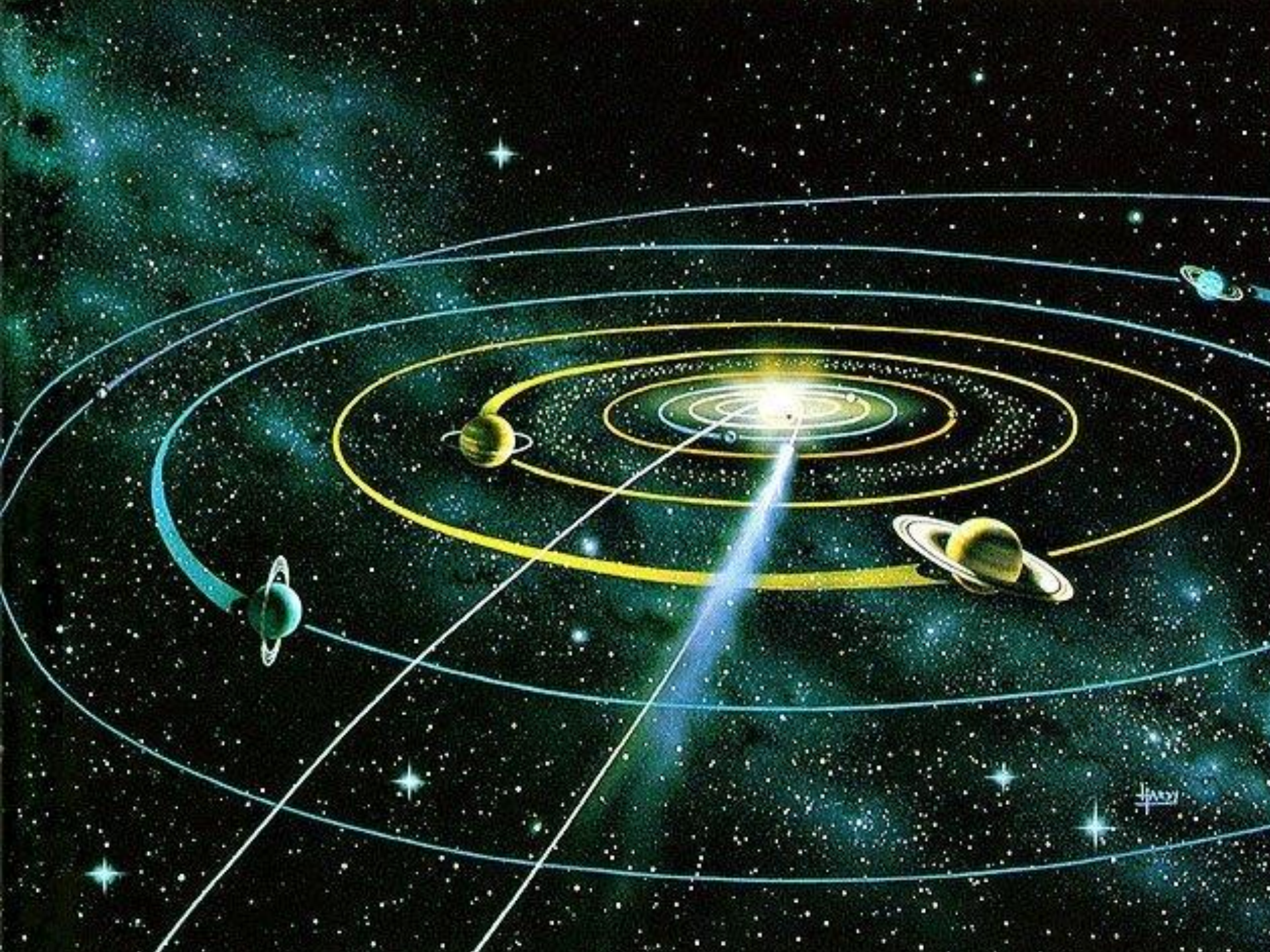
# 10 STARS AND THEIR SOLAR SYSTEMS

*The total pattern of potentialities of a solar system is held by the star in its own multi-dimensional space which acts like a giant code for the formation of not just the material level but also the subtler levels of a solar system*

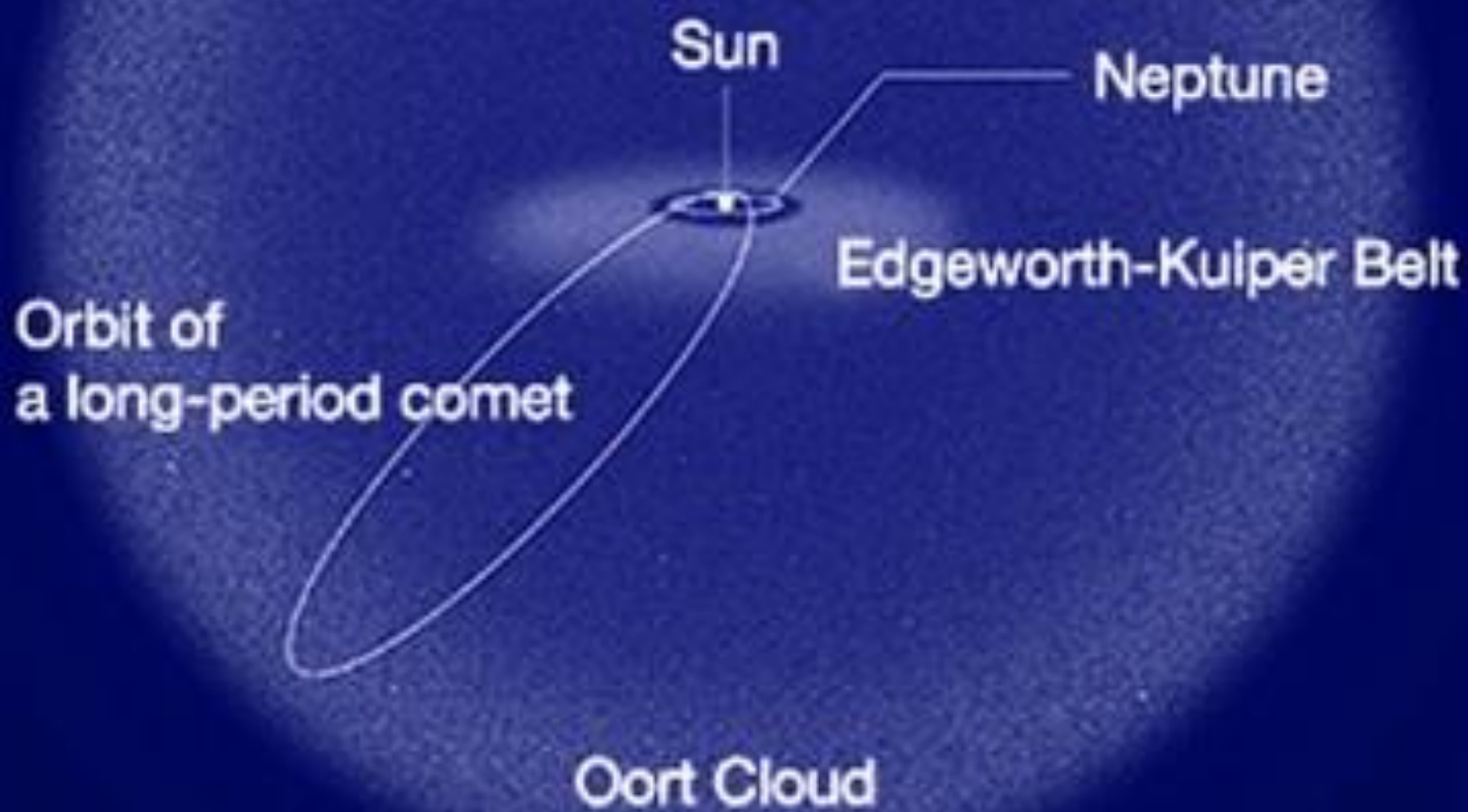






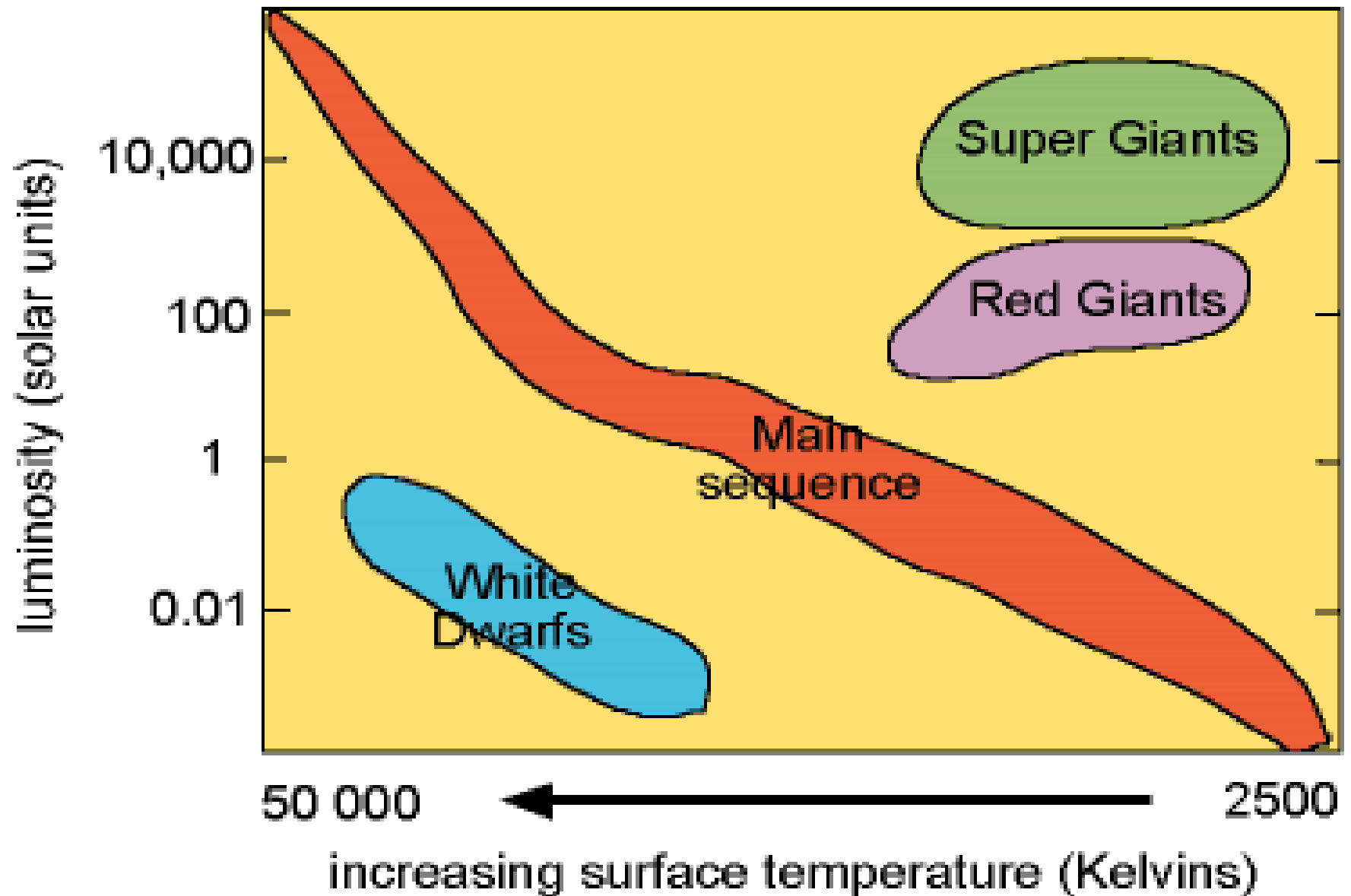








# The Hertzsprung-Russell Diagram



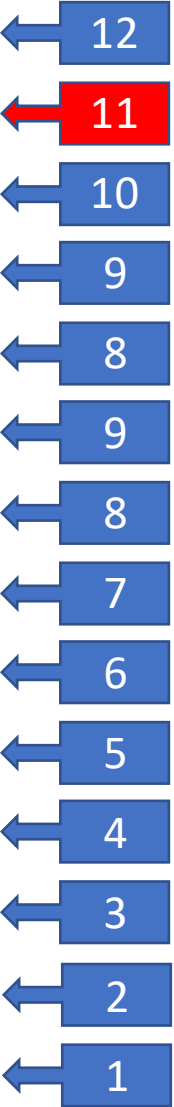






# 11 GALAXIES

*The intelligence of a galaxy is holding in multi-dimensional space the entire potentiality of the evolution of billions of stars with billions of planets with billions of beings.*

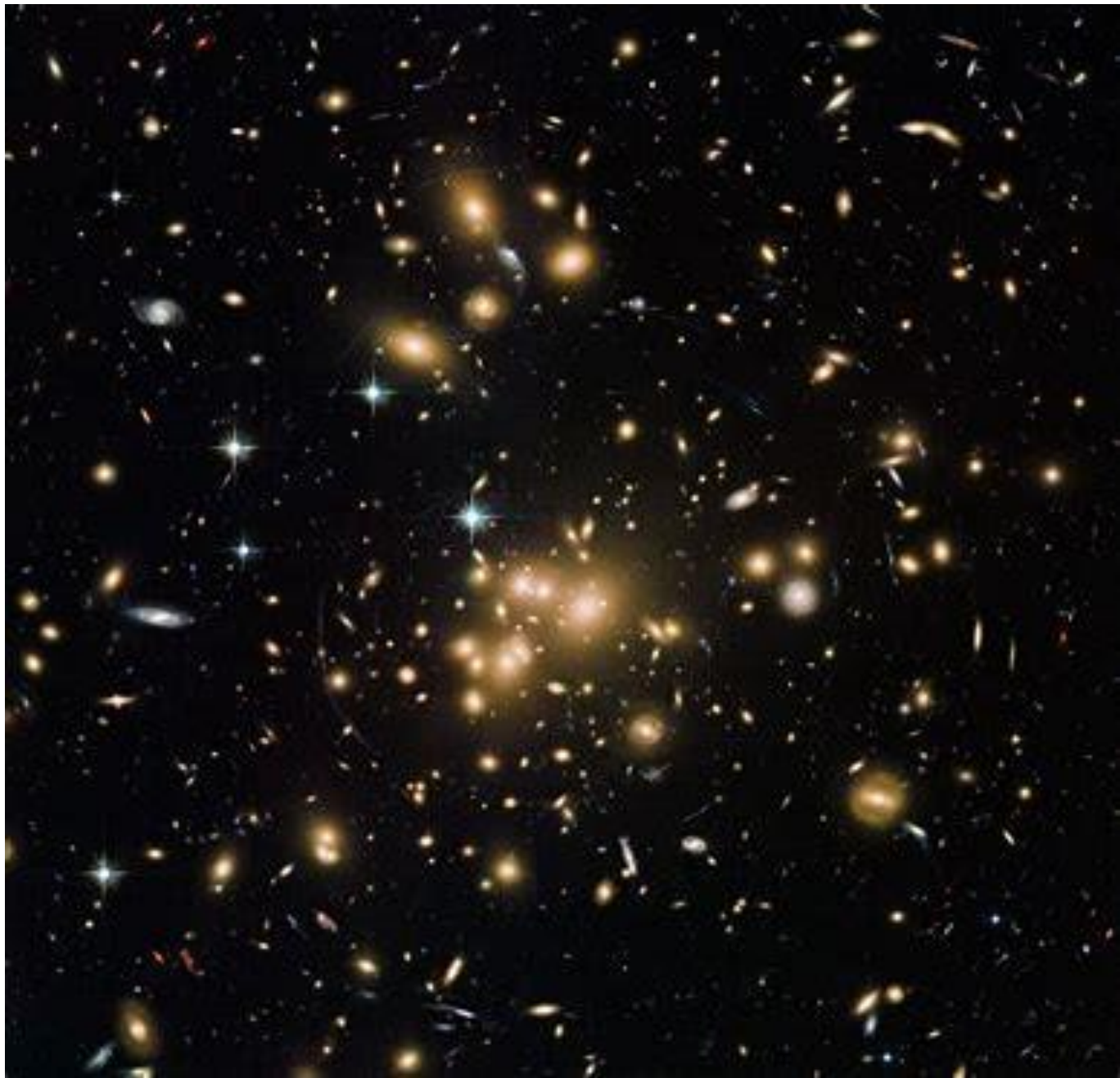






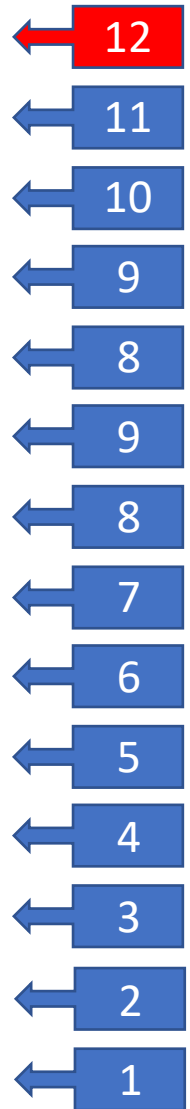


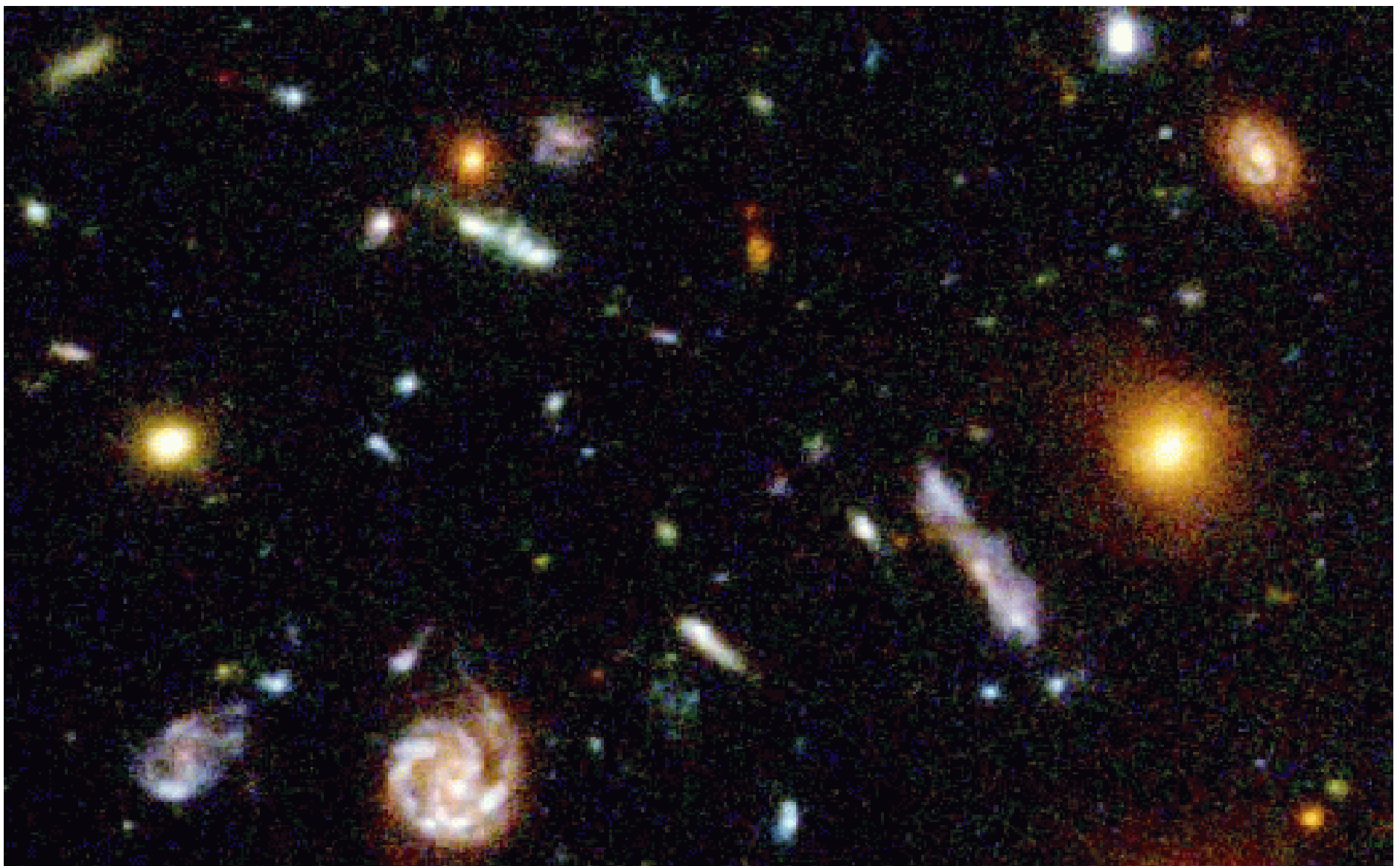


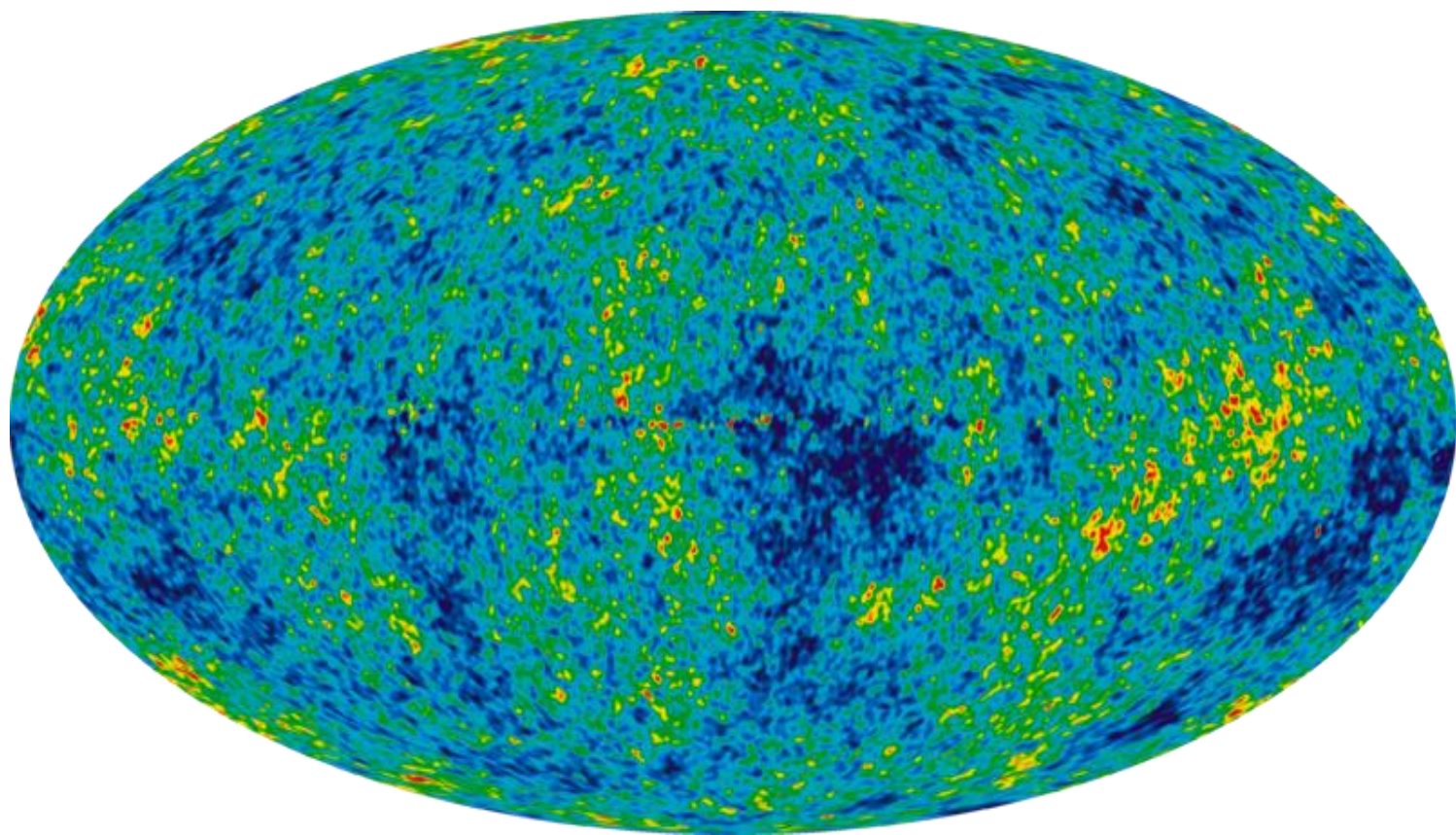


# 12 UNFATHOMABLE TOTALITY

*Is there one single universe? Are there multiple parallel universes? What is the complex geometry that might still retain the irreducible quality of Wholeness? At this level we have to entertain far-out and stretching concepts like a super-implicate order, an ultimate potential of everything*











## Discussion Interlude 3

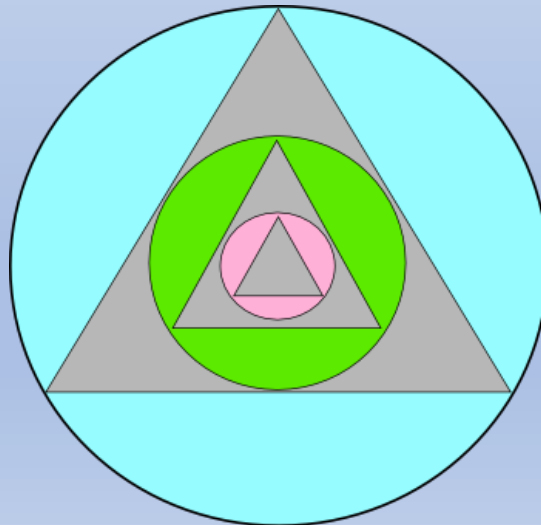
Can you entertain the idea that the 'objects in space' may be more than objects but have generative power in relation to all the levels?



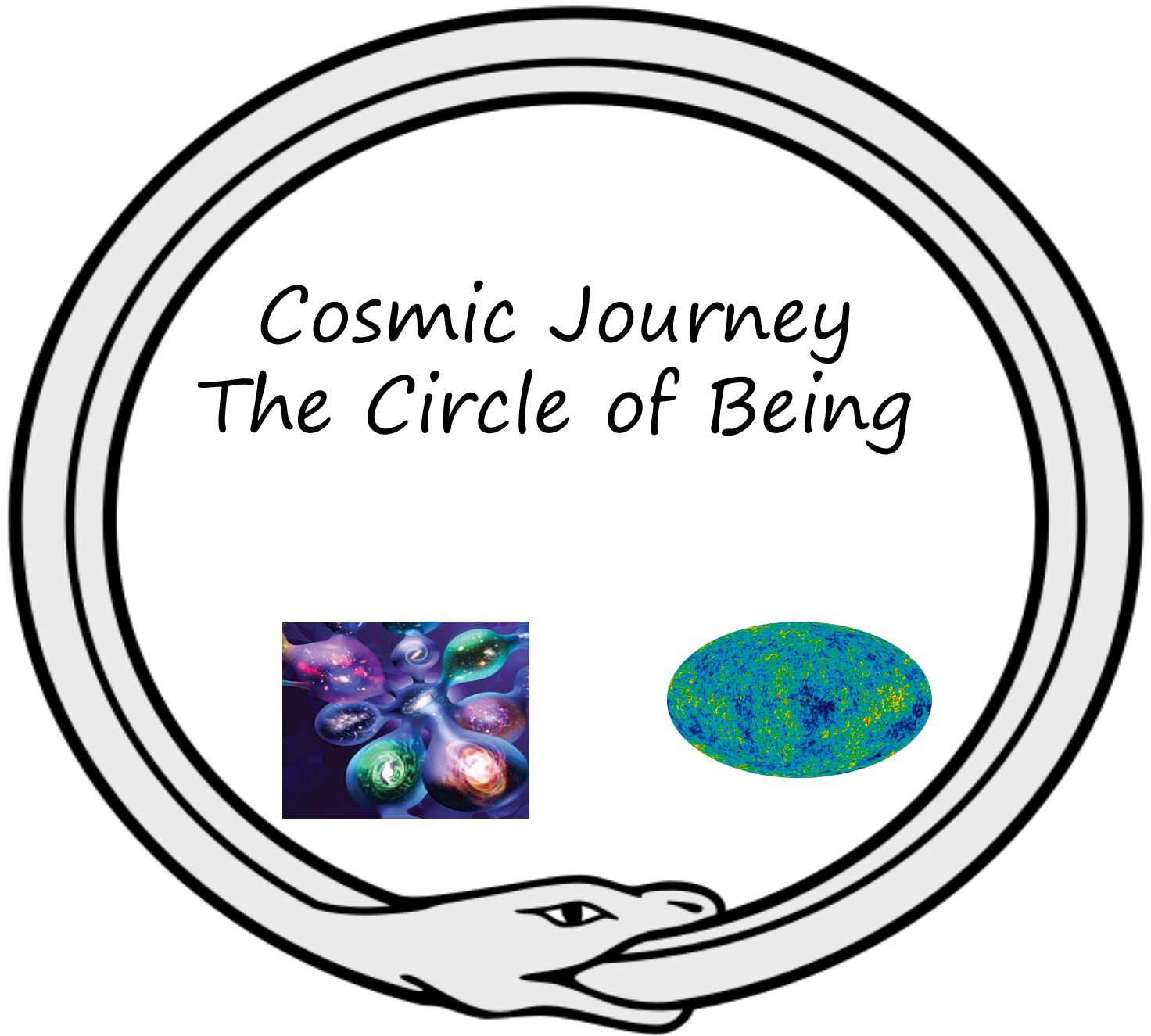
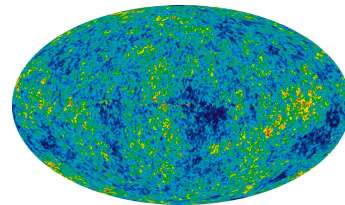
PLENARY

# Conclusion

*From the Ladder of Being to the  
Circle of Being*

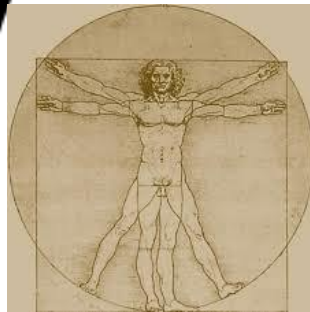


*Cosmic Journey  
The Circle of Being*

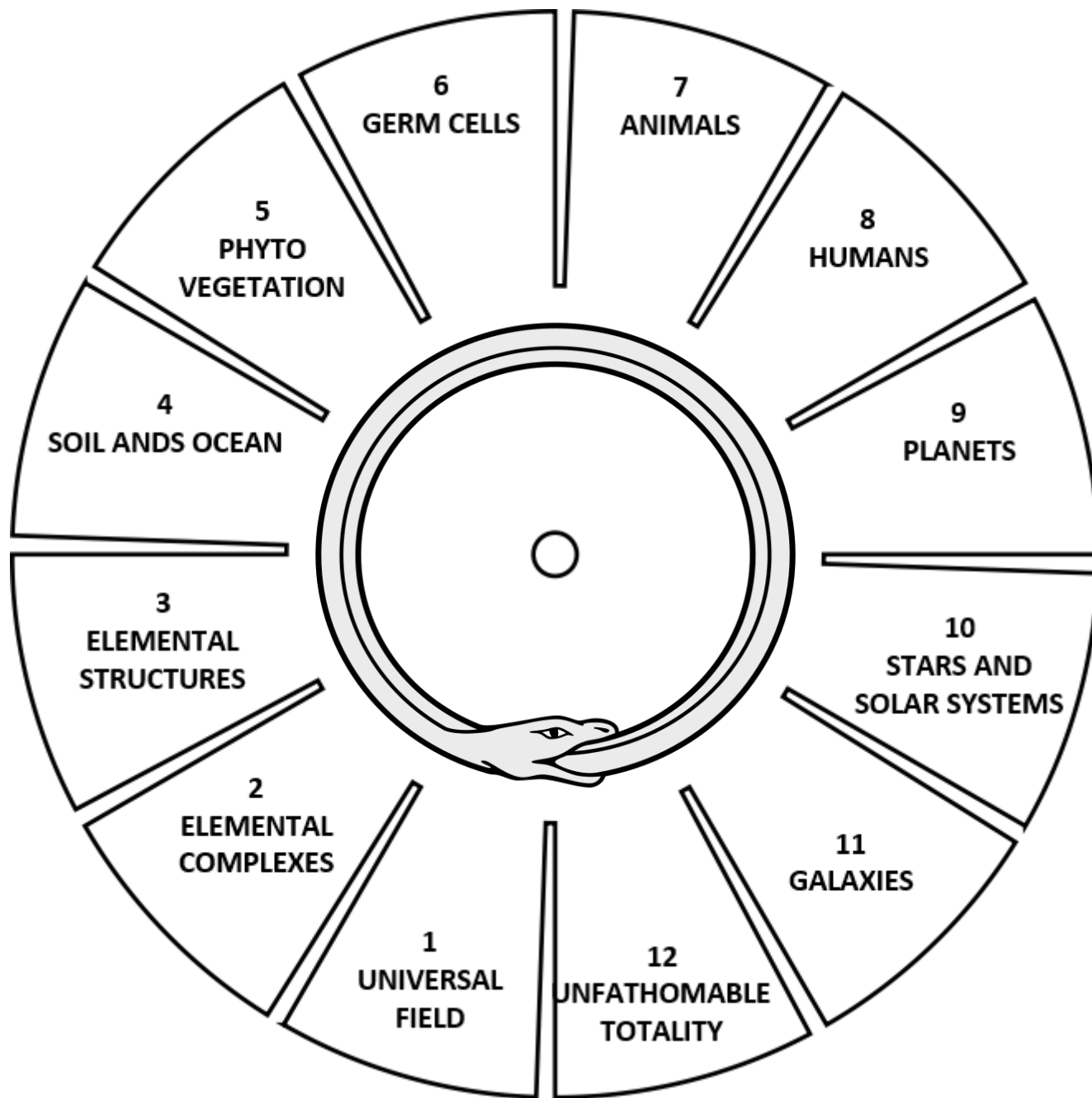




# The Cosmic Journey



# of Humanity



# Pascal's Reflection (1660)

For, in fact, what is man in nature? A Nothing in comparison with the Infinite, an All in comparison with the Nothing, a mean between nothing and everything. Since he is infinitely removed from comprehending the extremes, the end of things and their beginning are hopelessly hidden from him in an impenetrable secret; he is equally incapable of seeing the Nothing from which he was made and the Infinite in which he is swallowed up.

