

***Proposed the Good model to verify Origins of Solar System (Planet, Asteroid belt, Earth, Moon)***

***with "Multi Impact Hypothesis ", from 16' results of one time Evolution by Abduction.***

cf. Simulation is an example by Abduction from 1.

\*Akira Taneko<sup>1</sup>

1. SEED SCIENCE Lab.

We have been exploring **Origins of Solar System by Induction and Deductive methods** until now, but since we **can not go back in time to the past**, Search for Truth has not proceeded late. The theory has verified the law by explaining multiple results only for the results of detailed experiments.

Since Evolution of Origin Hypothesis that Initial State is unknown and Impossible to reproduce Experiment is reality, **One-Time Evolution happened**, so **unified** explanation of Planet of Solar system, **such as Present state**, and all of Features of Earth and Moon in particular You can verify by Method called Abduction.

Origin Hypothesis of Moon "Giant Impact Hypothesis" up to now is a Simulation that creates Moon of Mantle alone, and **it could not explain** one feature of any other Moon. In abduction it is only an illustration of N=1.

However, the "multi impact hypothesis" includes not only Origin of the moon whose component is Mantle but also Moon's Orbital Energy (60·Re), Eccentricity of Moon (always Moon's Surface faces the earth), Origin of Moon Sea , **I could explain why** there is no Ocean on the reverse side.

Furthermore, although it is Origin Hypothesis of Moon, other features of the solar system, Origins of Asteroid Belt and Origin of Differentiated Earth Meteorite, Origin of Ocean of Earth (60%>, 5 km depth), Origin of Plate Boundary, Origin of Plate Tectonics, Origin of Driving Force, Origin of Pacific Rim Orphan Ocean Island and Back Arc Concave Marine Basin, Origins of Mutual Plate Overlap, Origins of Axis Inclination, Origin of Diamond Mine, Origin of Van Allen belt eccentricity, Origin of Titian Sea, Origin of tilt, Risk of Sudden Change of Plate Movement Direction, Origin of species extinction, Origin of Jupiter large red spot, Origin of Mercury core rich, Origin of Pluto, Origin of Alps and Tibetan highland, Unified description to **Origin of Continental Drift** It can be said that it was able to be verified as Abduction by being able to do. In particular, Formation of Deep Seabed average of 5 km by Isostasy and **Air Hockey state of the plate by Asthenosphere is Driving force of Earth plate due to eccentricity of the inertial efficiency**, become **Train Asteroid of the CERRA Mantle due to CERRA rupture**, Collision at the intersection of Moon is **Injection of Moon and Earth's Mantle Defect**, it is Origin of several Seas and Origin of extinct species. Cracks in Earth's Mantle are Origin of Plate Boundary, and the **Pacific Rimback Arc Naval Basin is also Origin of Plate Overlap**. The high latitude collision is the origin of the earth's axis tilt, and **Verification of Driving Force is also made that Antarctica fits into the earth's axis and becomes immovable**.

I proposed a theoretical model to verify Origins of Solar System (Planet, Asteroid belt, Earth, Moon) by Abduction from multiple (16) results of One Time Evolution. It is particularly noteworthy to show Collision Speed and Aangle to Earth (12.4 km / s, 36.4 degrees) and Moon orbit energy (60 ·Re). At the same time I could show Feeding Zone and Bowden 's law. It is a theory model and victory of Abduction.

I entered S-CG61, U-08, S-SS12, P-PS 06, P-PS 07. Please discuss with oral and poster venue.

Keywords: Multi Impact Hypothesis, Verify with Abduction, Origin of the Solar System (Planet, Asteroid Belt, Earth, Moon), Multiple (16) results of one time evolution, Method of verifying Origin

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### 2. ナチウス・ボーアの法則の問題点、フィーディングゾーン遠点と一致

2-1. 本仮説での証明方法 種子彩 2015

- ◆水星  $n=-3$  の理由が説明できない ⇒ 禁制帯とマルチインパクト仮説
- ◆小惑星帯  $n=3$  の欠番理由が説明できない ⇒ CERRAの潮汐断層仮説

海王星  $n=7$  の不一致と、冥王星の一致の理由が説明できない ⇒ CE RRA断層片のフライバイと海王星衝突

2-2 <証明>

- 禁制帯、フィーディングゾーンでの合体
- 微惑星楕円軌道近点での衝突合体による軌道縮退
- CERRAの潮汐断層片⇒水星に
- 断層片木星スイングバイ⇒冥王星

Low of Bode is made with the Feeding Zone of Bond by collision.

	水星	金星	地球	火星	CERRA	木星	土星	天王星	海王星	冥王星
実測値(au)	0.39	0.72	0.99	1.00	1.52	2.77	5.20	9.54	19.19	30.06
長半軸(au)	0.40	0.70	0.99	1.00	1.60	2.80	6.20	10.00	19.00	30.00
禁制帯 r(au)	0.40	0.40	0.580	0.40	0.40	0.40	0.40	0.40	0.40	0.40
内接円軌道	0.30	0.40	0.80	0.40	0.40	0.40	0.40	0.40	0.40	0.40
扁平率 e	0.0513	0.2441	0.00651	0.2000	0.1633	0.1381	0.1229	0.1146	0.1101	0.1979
ba*bn	0.3600	0.4000	0.5800	0.6000	1.1200	2.0800	4.0000	7.8400	15.520	30.880
円軌道 V <sub>circ</sub>	1.5811	1.1952	1.0050	1.0000	0.7906	0.5976	0.4385	0.3102	0.2259	0.1605
遠点速度 V <sub>max</sub>	1.8020	0.9317	0.9900	0.8165	0.6704	0.5201	0.3876	0.2838	0.2022	0.1441
近点速度 V <sub>min</sub>	1.6645	1.5333	1.0000	1.2247	0.9322	0.6867	0.4962	0.3548	0.2523	0.1789
V <sub>max</sub> /V <sub>min</sub>	1.1082	1.6458	1.0102	1.5000	1.3995	1.3205	1.2804	1.2588	1.2476	1.2419
外惑星速度比	1.2566	0.9317	1.0000	1.0538	1.2119	1.1859	1.2256	1.2478	1.2597	1.2588

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### 3. 原始惑星CERRAの軌道変遷と潮汐断層

- 木星近点側に長軸が伸びて角運動量を木星に渡して偏平化。
- 木星と太陽引力でCERRA断層(マントル強度<<潮汐力), コア+マントル⇒内側に
- マントル断層片⇒トレースマントル惑星と成り太陽を楕円軌道で周回

木星振動でセラ分裂  
破片の地球衝突軌道  
マントル破片の衝突  
月形成の接線衝突  
時間差衝突で大絶滅

太陽

木星近点

地球軌道

セラ分裂マルチインパクト説

時間差衝突 ⇒ 月形成

接線衝突 ⇒ 月形成

マルチ大絶滅

Mantle Impactor

SEVEN direction

EARTH

Mantle

Liquid Core

Solid Core

Crust

MOON

Relative Velocity

$V_{max} = 12.21 km/s$

$V_{min} = 11.2 km/s$

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### 4. Compare the differences between The Multi-Impact Hypothesis and The Giant Impact Hypothesis.

#### The Multi-Impact Hypothesis

[The Origin of The Moon and The Earth in Multi-Impact Hypothesis.] Akira Tanaka, 2014, Ang. マルチインパクト仮説による月と地球の起源

月形成のメカニズム

Mantle Impactor

$V_{max} = 12.3 km/s$

Relative Velocity

$V_{min} \leq 11.2 km/s$

#### The Giant Impact Hypothesis

[Satellite-sized planetimals and lunar origin.] et al. Hartman, W. K. and D. R. Davis 1975 Icarus, 24, 504-515.

火星サイズの原始惑星衝突仮説

火星サイズの惑星が衝突し、コアが合体して月が形成。衝突メカニズムの説明が無く、月存在が軌道で奇跡と主張に頼る。

cf.2018 旭川P71

● MIH=月サイズの分化したマントル破片の衝突仮説

● GIH=火星サイズの原始コア有り惑星の衝突仮説

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### 7. 月の射出と地球マントル密度差による月偏芯, 月表面が常に地球を向く根拠

常に地球を向く根拠

月の裏側には玄武岩が少ないので、月の海が出来ない。

表面側に衝突したマントル断層片は内部の玄武岩を再熔融し膨脹して流出し海となる。

共通重心  $V_{Impact} = 12.4 km/s$

Impact Angle  $A = 36.45^\circ$

偏芯の理由=密度差

$V_{Eject} \leq 11.2 km/s$

Eccentric Moon

共通重心(地球の内部3/4)の周りを巴回転している。偏芯した月の重い側が常に重心へ向くことで説明

Mantle Impactor