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[U-06_28AM1]New Progress toward the Understanding of Small Solar System Bodies

Convener:*Masahiko Arakawa(Graduate School of Science, Kobe University), Taishi Nakamoto(Tokyo Institute of Technology), Sei-ichiro WATANABE(Division of Earth and Planetary Sciences, Graduate School of Science, Nagoya University), Masanao Abe(Institute of Space and Astronautical Science, Japan Aerospace Exploration Agency), MASATERU ISHIGURO(Department of Physics and Astronomy, Seoul National University), Chair:Masahiko Arakawa(Graduate School of Science, Kobe University) Mon. Apr 28, 2014 9:00 AM - 10:45 AM 503 (5F)

This session is aimed at setting up a forum to discuss how we can make progresses in our understanding of the solar system evolution with our hands on data. Presentations related to the science of the small bodies in the solar system (satellites, asteroids, comets, interplanetary dust particles, trans-Neptunian objects, and planetesimals) are invited. In addition to the extensive astronomical/remote-sensing observations and theoretical works, Hayabusa has brought us samples back from Itokawa (S-type asteroid) for unprecedentedly detailed analysis. The results of the Hayabusa sample initial analysis do prove that analysis of returned samples will play a key role in our future study of the solar system evolution. While the mission preparation of Hayabusa2, which is targeted at a more primordial asteroid than Itokawa (1999JU3, C-type), is being matured, expectation of building a new gateway to biology-flavored topics via organic material and aqueous alteration analysis is ramping up. In this session, after summarizing the cutting-edge results obtained by various studies, including the impact physics important for the asteroid evolution, we will discuss the future shape of the study of the solar system evolution.

10:30 AM - 10:45 AM

[U06-P24_PG]The Origin of The Moon and The Earth in Multi-Impact Hypothesis

3-min talk in an oral session

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Keywords:Serra tidal disruption, Perturbation of Jupiter, Orbit transition of Serra, Match of the planets revolving surface, Feedengue zone (integrated range), Origin of Deep Sea Bottom

Origin of the moon and the earth in the multi-impact hypothesis This new hypothesis to the origin of the Moon and Earth, This is the proposal of solutions that satisfy unified manner new hypothesis to the origin of the Earth and the Moon, all of the following questions.(1).Why, large biological extinction of five times or more were happened on the earth?(2).The meteorite falling on Earth, why stony-meteorites, stony-iron meteorite, iron-meteorite, such as differentiated and undifferentiated chondrites, what mixed in there?(3).The old theory, why cosmic dust or did not become a planet in the asteroid belt?I think Itokawa's aggregate piece of crust differentiated?(4).We have proposed a theory of the origin of the original description to solve the problems of the giant planet collision theory, all of the earth and the moon and deep sea bottom.(5).Why, protoplanetary Serra did they destruction? = The tragedy caused by tidal forces and deformation due to Jupiter orbit perturbation.(6).Increase in the aspect ratio of Serra orbital perturbation by Jupiter, destruction by tidal force of the approaching Jupiter.(7).Plate boundary formation of plate tectonics,I suggest the formation origin of the deep sea bottom crust by peeling.(8).The origin of deep-sea bottom update and continental drift and Mystery of the driving force was solved.(9).Why diamond pipe did formed in South Africa?(10).Why core eccentric (about ten percent) of what is happening? Radiation anomaly of Brazil over the Van Allen belt.(11).New

hypothesis at the origin of Jupiter's Great Red Spot, I think about How and Why to that Mystery ! (12).Why is whether the silicate star (asteroid now) Pluto of the outer planets?Until now, Giant impact hypothesis is a theory only for making the moon. Protoplanet is the result of accidental collision with the Earth there Mars core size to the Earth, It only has to calculate the conditions formed by the mantle further moon.It is the original collision hypothesis.Protoplanetary Serra was born in Ceres position of Bode's law. The planet Serra that differentiated, elliptical orbit was flattened by the Jupiter perturbations. Major axis is constant because of energy conservation law. Eccentricity of Serra increases, the orbit that focus of the solar get closer so as to extend to the point of near-side Jupiter.Just before the collision with Jupiter, Serra was rupture in tidal forces of Jupiter.By the mantle debris collides with the Earth, the moon was formed.Position Serra collides to the Earth becomes the Pacific Ocean, it becomes the origin of the plate boundary crack. In addition, deep-sea of multiple formed with Impact of Multi-attack which is the time difference. Eccentricity of the moment of inertia is estimated to be the driving force of the seabed update theory and theory of continental drift.Mantle debris energy is large becomes Pluto, heavy and high density Koaritchi debris became Mercury with scattered to the inner planet side. I estimated that the debris of Serra collide to Jupiter, it became the origin of the Jupiter's Great Red Spot. The fact that iron meteorites, stony-iron meteorites, stony meteorites are differentiated, and chondrite undifferentiated are mixed, Ceres is present in the asteroid belt, the origin of the meteorite is convinced straightforwardly with this hypothesis. Multi-impact theory be the basis of large organism extermination repeated, it is also the reason sea accounts for 70%, it was possible to understand the origin of the plate boundary crack.Multi-impact hypothesis can be explained in a unified manner present condition of the earth as well as make the moon in this manner. It is believed that asteroid Itokawa could check a set? Like Serra crust, then it becomes even proof of this hypothesis.