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# Review: A Coherent and Comprehensive Model of the Evolution of the Outer Solar System

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(Submitted on 29 Oct 2010)

Since the discovery of the first extra-solar planets, we are confronted with the puzzling diversity of planetary systems. Processes like planet radial migration in gas-disks and planetary orbital instabilities, often invoked to explain the exotic orbits of the extra-solar planets, at first sight do not seem to have played a role in our system. In reality, though, there are several aspects in the structure of our Solar System that cannot be explained in the classic scenario of in-situ formation and smooth evolution of the giant planets. This paper describes a new view of the evolution of the outer Solar System that emerges from the so-called 'Nice model' and its recent extensions. The story provided by this model describes a very "dynamical" Solar System, with giant planets affected by both radial migrations and a temporary orbital instability. Thus, the diversity between our system and those found so far around other stars does not seem to be due to different processes that operated here and elsewhere, but rather stems from the strong sensitivity of chaotic evolutions to small differences in the initial and environmental conditions.

Comments: in press in CR Physique de l'Academie des Sciences

Subjects: **Earth and Planetary Astrophysics (astro-ph.EP)**

Cite as: **arXiv:1010.6221v1** [astro-ph.EP]

## Submission history

From: Alessandro Morbidelli [view email]

[v1] Fri, 29 Oct 2010 14:27:11 GMT (223kb)

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