

PRINT-ONLY PRESENTATIONS

Origins of Planetary Systems

Canup R. M. Asphaug E.

On an Impact Origin of Pluto-Charon [#1984]

We report results of simulations of potential Pluto-Charon forming impacts using smoothed-particle hydrodynamics and a variety of rock-ice compositions.

Furuya I. Nakagawa Y. Daisaka H.

Planetesimal Formation Through Gravitational Instability [#1577]

We reproduce the gravitational fragmentation of a dust layer by 3D local N-body simulations in order to examine the process of planetesimal formation and the mass of a planetesimal.

Grubert J. P.

Pulse of the Solar System [#1168]

The gravitational frequency or pulse of the solar system is calculated and found to vary from about 1.5 Hz to 1.8 Hz. Also, the planets of the solar system all occupy stable orbits imposed on them by the frequencies emitted by the Sun and Jupiter.

Lindsay B. D. Orr K. W. Hyde T. W. Barge L. B.

Gravitational Interactions Between Protoplanets and Planetesimal Disks of Equal Mass [#1204]

Numerical simulations show that planetesimal systems with unevenly distributed masses may actually be more stable than those where all the bodies are of roughly equal size.

Moriwaki K. Nakagawa Y.

A Planetesimal Accretion Zone in a Circumbinary Disk [#1275]

From the viewpoint of celestial mechanics, we examined a zone where planetesimals can accrete to form a P-type planet, which orbit outside both of the binary stars. We derived the inner boundary of planetesimal accretion zone.

Val'ts I. E. Lyubchenko S. Yu.

The Mass of Double Protostar with Protoplanetary Systems in Norma [#1030]

A new way to obtain the velocity of a protostar and to calculate its mass is presented. The analysis has been carried out for a double protostar in the Norma constellation which is accompanied by two protoplanetary systems emitting in methanol.

Vityazev A. V. Pechernikova G. V. Bashkirov A. G.

Accretion and Differentiation of Terrestrial Protoplanetary Bodies and Hf-W Chronometry [#1656]

During accumulation it was possible differentiation in exothermal regime with selfheating. Hf-W data are interpreted as evidence for early differentiation in large bodies tens of Ma before their final integration. Data on Nb-Zr are not in contradiction with this scenario.

Ward W. R.

Type II Migration and Giant Planet Survival [#1736]

Type II migration where a large planet opens a gap in its evolving nebula may be the delivery mechanism of close stellar companions. However, we show by simple conservation arguments that if the disk has a finite outer edge, some planets resist migration to the star.