

Tuesday, March 16, 2004
POSTER SESSION I: ORIGIN OF PLANETARY SYSTEMS
7:00 p.m. Fitness Center

Thebault P. Marzari F. Barbieri M. Turrini D. Vanzani V. Scholl H.

Planetary Formation in the the Gamma Cephei System by Core — Accretion [#1136]

We study the formation of the planet in the Gamma Cephei system by the core-accretion model. Our numerical simulations include the gravitational perturbations by the companion star and gas drag on small planetesimals.

Ciesla F. J. Hood L. L.

Accretion and Heating of Particles by Supersonic Planetesimals [#1220]

We study the thermal and dynamical histories of small particles in the solar nebula when they encounter the bow shocks created by supersonic planetesimals. We find that it is difficult to explain the formation of chondrules in such a scenario.

Moriwaki K. Nakagawa Y.

Planetesimal Accretion in Close Binary Systems [#1221]

We examine a planetesimal accretion zone in a circumbinary disk by performing long-term numerical integration of the planetesimal orbital motion in the frame work of the coplanar elliptic restricted three-body problem.

Wurm G. Krauß O. Paraskov G.

Collisions, Gas Flow, and the Formation of Planetesimals [#1274]

In experiments and calculations we find that net growth of a body in a binary collision at 'high speed' (several tens of m/s) is possible if the colliding bodies both consist of dust and gas flow (in protoplanetary disks) is taken into account.

Genda H. Abe Y.

Hydrodynamic Escape of a Proto-Atmosphere Just After a Giant Impact [#1518]

We investigate the thermal escape of a proto-atmosphere from extremely hot planetary surface. The escape time scale of hydrogen is calculated as more than 1 million years, which indicates no large-scale escape of hydrogen just after a giant impact.

Nakamoto T. Kita N. T. Tachibana S. Hayashi M. R.

X-Ray Flare Induced Shock Waves and Chondrule Formation in Upper Solar Nebula [#1821]

We examined a possibility that X-Ray flares associated with young Sun generate shock waves in the solar nebula. It seems possible that chondrule-forming shock waves are generated in the upper solar nebula by winds caused by X-ray flares.

Desch S. J. Leshin L. A.

Making Water Worlds: The Role of ^{26}Al [#1987]

The majority of solar systems may form far enough from a supernova to contain no ^{26}Al . Asteroids in those systems would not be heated significantly, and Earths accreted from asteroids in those systems would be significantly wetter than our own.