**Wednesday, March 12, 2008**
**FROM DUST TO PLANETS (PLANETARY FORMATION AND PLANETESIMALS): WHEN, WHERE, AND KABOOM!**
**8:30 a.m. Marina Plaza Ballroom**

**Chairs:** **T. Kleine**
**S. T. Stewart**

8:30 a.m. Amelin Y. * Neymark L. A.
*Causes of Possible Bias in $^{207}$Pb-$^{206}$Pb Ages of Meteorites* **[#1429]**
We review the factors that can possibly make $^{207}$Pb/$^{206}$Pb ages of meteorites inaccurate: analytical biases, presence of multiple components of radiogenic and non-radiogenic Pb, presence of "freshly" synthesized $^{234}$U, and fractionation of Pb isotopes during leaching.

8:45 a.m. Chen J. H. * Papanastassiou D. A.
*The Concordancy of Uranium-Lead Ages in Meteorites* **[#1956]**
We assess the U-Pb chronologies for dating early solar system materials and for anchoring short-lived nuclide chronologies. The common emphasis on $^{207}$Pb-$^{206}$Pb ages is discouraged.

9:00 a.m. Jacobsen S. B. * Chakrabarti R. Ranen M. C. Petaev M. I.
*High Resolution $^{26}$Al-$^{26}$Mg Chronometry of CAIs from the Allende Meteorite* **[#1999]**
Measurements of CAIs from the Allende meteorite are all consistent with an initial $^{26}$Al/$^{27}$Al of ~0.000052. There is no evidence for supracanonical values.

9:15 a.m. Kleine T. * Bourdon B. Burkhardt C. Irving A. J.
*Hf-W Chronometry of Angrites: Constraints on the Absolute Age of CAIs and Planetesimal Accretion Timescales* **[#2367]**
Hf-W ages for angrites reveal that the absolute age of CAIs is 4568.6±0.7 Ma. Implications: CV, CR, CB chondrules are younger than L and LL chondrules; chondrule ages are inversely correlated with the peak temperature reached inside their parent body.

9:30 a.m. Desch S. J. *
*Mass Distribution and Planet Formation in the Solar Nebula* **[#1004]**
We recalculate the "minimum mass solar nebula" using the starting locations of the giant planets from the "Nice" model, and compute a much more massive disk. Among our findings: Uranus and Neptune formed in <10 Myr and later switched orbits.

9:45 a.m. Johnson T. V. * Castillo-Rogez J. C. Matson D. L. Morbidelli A. Lunine J. I.
*Constraints on Outer Solar System Chronology* **[#2314]**
We address effects of the "Nice" model in the outer solar system.

10:00 a.m. Suyama T. * Wada K. Tanaka H.
*Density Evolution of Dust Aggregates Growing in Protoplanetary Disks* **[#1473]**
In protoplanetary disks, dust aggregates grow through mutual collisions. Such collision results in not only coalescence but also compression. We perform the N-body simulation of aggregate collisions and examine the density change.

10:15 a.m. Davison T. M. * Collins G. S. Ciesla F. J.
*Hydrocode Modelling of Melt Production in Planetesimal Collisions* **[#2008]**
We present preliminary hydrocode modelling results that quantify the effects of target properties on melt production in planetesimal collisions, indicating that porosity and the relative size of the impacting bodies greatly affect melt production.

10:30 a.m. Stewart S. T. * Leinhardt Z. M.
*Variable Catastrophic Disruption Criteria During Planet Formation* **[#2207]**
Catastrophic disruption criteria for bodies <~100 km changes dramatically during the formation and evolution of the solar system. Planet formation calculations should implement velocity and porosity dependent criteria for disruption.

10:45 a.m. Haghighipour N. * Scott E. R. D.
*Meteorite Constraints on the Early Stages of Planetary Growth in the Inner Solar System* **[#1679]**
We present the results of a study of the delivery of the parent bodies of iron meteorites to the inner part of the asteroid belt through collision, accretion, and scattering of planetesimals at the early stage of planet growth in our solar system.

11:00 a.m. Bond J. C. * Lauretta D. S. O'Brien D. P.
*The Composition of Simulated Terrestrial Planets* **[#1438]**
Detailed compositions of simulated terrestrial planets have been obtained by combining dynamical and chemical modelling. These compositions are in good agreement with the compositional ranges of the actual terrestrial planets.

11:15 a.m. Nuth J. A. * Rietmeijer F. J. M. Marnocha C. L.
*Why Isn't the Earth Completely Covered in Water?* **[#1158]**
Models for the accretion and heating of planetesimals indicate that they should be water rich when runaway growth forms the terrestrial planets. Extra water (from comets) may be unnecessary. Instead, we should ask "Where did all of the initial water go?"

11:30 a.m. Canup R. M. *
*Implications of Lunar Origin via Giant Impact for the Moon's Composition and the Thermal State of the Protoearth* **[#2429]**
Results of recent simulations of lunar-forming impacts that include effects of pre-impact rotation in the impactor and the target protoearth are discussed.