Tuesday, March 18, 2003
POSTER SESSION I
7:00 p.m.   Fitness Center

Digging Deeper: Impact Experiments and Theory

Cintala M. J.   Barnouin-Jha O. S.   Hörz F.
   A Method of Estimating Transient-Cavity Diameters for Impact Craters Formed in Dry Sand **[#2070]**
   A technique used to measure the velocities of ejecta from impact craters permits, in principle, extrapolation to
   the rim of the transient cavity before its modification. Knowledge of the dimensions of the transient cavity
   could be instrumental in addressing a number of problems.

Wada K.   Senshu H.   Yamamoto S.   Matsui T.
   A Numerical Simulation of Impacts into Granular Materials by Distinct Element Method **[#1529]**
   We discuss the application of the Distinct Element Method for numerical simulations of impacts into granular
   materials by comparing with experimental data.

Anderson J. L. B.   Schultz P. H.   Heineck J. T.
   A Test of Maxwell's Z Model Using Inverse Modeling **[#1762]**
   Experimental ejection angles determined using 3D PIV are used to constrain various modifications of
   Maxwell's Z Model in order to test the utility of the point-source approximation for both vertical and
   oblique impacts.

VanVeghten T. W.   Flynn G. J.   Durda D. D.   Hart S.   Asphaug E.
   Mass and Size Frequency Distribution of the Impact Debris from Disruption of Chondritic Meteorites **[#1264]**
   We used the NASA AVGR to disrupt several ~70–200 g samples of chondrite meteorites. The debris from each
   impact was sieved and the material in each sieve was weighed, along with the individual particles in the largest
   two sieves. From this, fragment mass and size distributions were determined.

Trubetskaya I. A.   Shuvalov V. V.
   Impacts of 100-km-Diameter Asteroids Against the Earth **[#1102]**
   The purpose of this study is to determine ejecta velocity distribution, the distribution of deposits on the
   Earth's surface, and the mass of escaped atmosphere.

Korycansky D. G.
   3D Simulations of Comet Impacts into the Atmospheres of Titan and Venus **[#1196]**
   We present the results of 3D simulations of the impact of porous icy comets into the atmospheres of Titan and
   Venus. We analyze and characterize the resulting profiles of ablation and mass deposition into the atmosphere
   for the purpose of predicting crater populations.

Shuvalov V.   Dypvik H.
   Ejecta Formation and Deposition After the Mjølnir Impact **[#1056]**
   In this study the ejecta distribution of the Jurassic/Cretaceous Mjølnir Crater (Barents Sea) is numerically
   simulated. These simulations show a highly asymmetrical ejecta distribution and underline the importance of
   the presence of water in ejecta formation and distribution.

Abramov O.   Kring D. A.
   Finite-Difference Modeling of Impact-Induced Hydrothermal Systems **[#1846]**
   The computer program HYDROTHERM is applied to terrestrial impact craters to model convective and
   conductive water and heat transport. The goal is to estimate the lifetimes of impact-induced hydrothermal
   systems and further understand their mechanics.