

Thursday, March 18, 2004

POSTER SESSION II: IMPACTS: MODELING AND OBSERVATIONS

7:00 p.m. Fitness Center

Artemieva N. A. Lunine J.

*Cratering on Titan: Projectiles, Craters and Impact Melt* [#1522]

We calculate impact melt production on Titan for various impact velocities and various impact angles. According to cooling time and impact rate estimates, the melt layer is not global.

Holsapple K. A. Housen K. R.

*The Cratering Database: Making Code Jockeys Honest* [#1779]

The cratering database and on-line tools for cratering events.

Ivanov B. A. Artemieva N. A. Pierazzo E.

*Popigai Impact Structure Modeling: Morphology and Worldwide Ejecta* [#1240]

Numerical modeling of the impact structure allows us to reproduce the crater morphology, and to reveal the pre-impact position of the worldwide ejecta.

Ivanov B. A. Langenhorst F. Deutsch A. Hornemann U.

*Anhydrite EOS and Phase Diagram in Relation to Shock Decomposition* [#1489]

We construct ANEOS-based model equation of state for anhydrite. The EOS predicts melting shock pressure and may be used in numerical simulations of impact events.

Crawford D. A. Barnouin-Jha O. S.

*Computational Investigations of the Chesapeake Bay Impact Structure* [#1757]

High resolution CTH simulations of the shallow marine Chesapeake Bay Impact with emphasis on effects of layer strength, tsunami resurge and ejecta/atmosphere interaction.

Collins G. S. Melosh H. J.

*Hydrocode Simulations of the Chesapeake Bay Impact* [#1005]

Three models are suggested for the formation of the Chesapeake impact structure and the nature of its inner ring. We discuss results of numerical modeling of the Chesapeake impact event to test these models.

Lindström M. Shuvalov V. V. Ivanov B. A.

*Lockne Crater as a Result of Oblique Impact* [#1475]

In this paper we present the results of 3D numerical modeling of the Lockne impact conducted to give more theoretical constraints for the geologic data interpretation, and conversely, to control the numerical model assumption with the field observation.

Ormö J. Lindström M.

*The Influence of a Deep Shelf Sea on the Excavation and Modification of a Marine-Target Crater, the Lockne Crater, Central Sweden* [#1283]

The Lockne crater is one of the best exposed marine-target craters in the world. Most are covered by sea and/or sediments. New data on ejecta distribution and morphology has improved the interpretation of the formation of the crater.

Karp T. Artemieva N. Milkereit B.

*Pre-Drilling Investigation of the Lake Bosumtwi Impact Crater: Constraints from Geophysics and Numerical Modelling* [#1282]

Geophysical investigation of the Lake Bosumtwi is combined with numerical models of the impact. Results from field work and theoretic models provide necessary information for scientific drilling, and suggest interesting and well suited drill sites.

Milam K. A. Kuehn K. Deane B.

*Central Uplift Formation at the Middlesboro Impact Structure, Kentucky, USA* [#2073]

This study examines central uplift formation in complex craters using the Middlesboro impact structure as a case study.

Reimold W. U. Cooper G. R. J. Romano R. Cowan D. R. Koeberl C.

*A SRTM Investigation of Serra da Cangalha Impact Structure, Brazil* [#1232]

We review the current knowledge about the Serra da Cangalha (SdC) impact structure in Brazil and compare observations from MSS Landsat and STRM.

Romano R. Crósta A. P.

*Brazilian Impact Craters: A Review* [#1546]

A brief review of the currently known impact craters in Brazil, and of some possible ones, is presented in this contribution.

Evenick J. C. Lee P. Deane B.

*Flynn Creek Impact Structure: New Insights from Breccias, Melt Features, Shatter Cones, and Remote Sensing* [#1131]

Spot melt and flow textures found in thin sections further strengthens the theory that the Flynn Creek structure has an impact related origin. The structure contains Upper Devonian shatter cones, breccias, evidence of shock metamorphism, and melt.

Deane B. Lee P. Milam K. A. Evenick J. C. Zawislak R. L.

*The Howell Structure, Lincoln County, Tennessee: A Review of Past and Current Research* [#1692]

The Howell Structure in Tennessee is a suspected, but not proven, impact crater that has received little scientific attention.

Lefticariu M. Perry E. Lefticariu L. Ward W.

*After the Chicxulub Impact: Control on Depositional and Diagenetic History of the Cenozoic Carbonate Formations of the Northwestern Yucatan Peninsula, Mexico* [#1083]

The Chicxulub bolide impact produced a complex crater structure that had a strong influence on carbonate deposition and subsequent diagenesis during much of the Cenozoic Era in what is now northwestern Yucatan Peninsula, Mexico.

Miura Y. Koga N. Nakamura A.

*Ni Contents by Non-Destructive In-Situ XRF Method of Takamatsu-Kagawa Crater District in Japan* [#2094]

Geological map drawn at surface and andesite intrusions with altered or broken rocks. Ni contents of grains and rocks are determined by in-situ XRF analyzer. Transported distance within crater structure are estimated from 610 m to 410 m.

Miura Y. Tanaka S.

*Akiyoshi Limestone Blocks Transported by the P/T Boundary Event to Japan Islands* [#2150]

Model of impact and continental drift of Paleozoic rocks at the PTB event is applied to the Akiyoshi limestone blocks with shocked materials of Fe-Ni-Co-bearing grains, and by increased process by Takamatsu-Kagawa impact.