

Tuesday, March 13, 2007

POSTER SESSION I: IMPACT CRATERING FROM OBSERVATIONS AND INTERPRETATIONS
6:30 p.m. Fitness Center

Salge T.

The Ejecta Blanket of the Chicxulub Impact Crater, Petrographic and Chemical Studies of the K-P Section of El Guayal and of the UNAM Boreholes [#1748]

Proximal and distal ejecta deposits of Chicxulub have been studied in order to develop a refined model of the plume evolution with special focus on the behaviour of the carbonate and sulphate target.

Guillemette R. N. Yancey T. E.

Primary and Diagenetic Characteristics of Chicxulub Impact Ejecta Spherules in the Northwestern Gulf of Mexico [#2218]

Carbonate accretionary lapilli spherules are documented from Mimbral, Mexico, with comparison to Brazos River, Texas. Patterns of diagenetic alteration of lapilli and bubbly glass spherules are described.

Kinsland G. L. Borst C. W. Indugula A. P. Guichard A. M. Baiyya V. B.

Best C. M. Hurtado Cardador M.

3-D Virtual Reality Database of the Chicxulub Impact Structure and New Interpretations Within [#1317]

We have a 3-D virtual reality system within which we have topographic and gravity data from the Chicxulub Impact Structure. Special interpretation techniques have been designed, and new interpretations of the data will be presented.

Rajmon D. Shaulis B.

Suspected Earth Impact Sites (SEIS) — Recent Developments and Remote Sensing Investigations [#2374]

Suspected Earth Impact Sites database contains over 600 proposed impact structures with rigorous referencing but many poorly documented. We used remote sensing data from the Internet to investigate the nature of some of the structures and we rejected impact origin for several structures.

Misra S. Newsom H. Mukherjee T. Dube A. Sengupta D.

No Evidence of Impact Induced Volatile Loss from Maskelynite of Lonar Crater, India [#1672]

A study of shocked plagioclase, maskelynite, in samples from the ejecta blanket of Lonar Crater show limited chemical differences from the unshocked plagioclase, although XRD analyses do show some evidence for aqueous alteration.

Louzada K. L. Weiss B. P. Maloof A. C. Stewart S. T. Swanson-Hysell N.

A Paleomagnetic Study of Lonar Impact Crater, India [#2344]

We identified two components to the magnetization of the Lonar Crater basalts, a viscous overprint and a Deccan component. Statistics of these components suggest that no shock remanent magnetization has been acquired and that paleomagnetism can be used to study the cratering process.

Weiss B. P. Garrick-Bethell I. Pedersen S. Maloof A. C. Louzada K. L. Stewart S. T.

Paleomagnetism of Impact Glass and Spherules from Lonar Crater, India [#2360]

Impact glasses from Lonar Crater are terrestrial analogs for young extraterrestrial samples in the solar system. Lonar glasses exhibit a highly unusual magnetization consistent with cooling while in motion but no evidence for impact-amplified magnetic fields.

King D. T. Jr. Ormö J. Petruny L. W.

Core Drilling on the Rim of Wetumpka Impact Structure, Alabama USA [#2178]

This paper describes the results of drilling two wells on different places upon the crystalline rim of the Wetumpka impact structure, Alabama, and the varied lithologies and modes of emplacement of the materials at each site.

Coney L. Reimold W. U. Gibson R. L. Koeberl C.

Revised Stratigraphy and Suevite Characteristics of ICDP Borehole LB-07A, Bosumtwi Impact Structure, Ghana Based on New Petrographic and Geochemical Results [#1539]

In-crater suevites from the ICDP borehole LB-07A are compared to the fallout suevites of the Bosumtwi impact structure, Ghana. These differ in the amount of melt and clast population. No evidence for a meteoritic component has been found.

Luetke S. Deutsch A. Kreher-Hartmann B. Berndt J.

On the Origin and Precursor Materials of Glassy Fallback Particles in the Lake Bosumtwi ICDP Cores — Status Report [#1682]

Major element composition of fallback particles from the Bosumtwi crater matches well with that one of target rocks with intermediate SiO₂ content. Variations in CaO and MgO may reflect heterogeneous carbonate distribution in the precursor material.

Tsikalas F. Faleide J. I.

Reconstruction of the Original Impact-Crater Relief for Mjølnir, Chicxulub and Bosumtwi Impact Craters Reveals Surprisingly Shallow Structures: Did We Miss Something? [#1014]

Reconstruction of the immediately-after-impact Mjølnir, Chicxulub and Bosumtwi craters reveals surprisingly shallow structures that are related to post-impact differential compaction above a substratum of radially-varying physical property changes.

Johnson R. C. Glidewell J. Petruny L. W. King D. T. Jr.

Comparison of Two Marine Impacts: Chesapeake Bay and Wetumpka [#2356]

Chesapeake Bay crater and Wetumpka impact structure are both marine impact craters with similar targets, and when the differences in size are taken into account, the scale of their features and details of their crater-filling stratigraphies are really quite similar.

Milam K. A. Deane B.

The Search for a Meteoritic Component in Impactites from the Flynn Creek Impact Crater [#2320]

We examine breccias from the interior of the Flynn Creek impact structure in Tennessee, U.S. for evidence of a chondritic or iron meteoritic component.

Fackelman S. P. McElvain T. H. Morrow J. R. Koeberl C.

Shatter Cone Exposures Indicate a New Bolide Impact Structure near Santa Fe, New Mexico [#1207]

The discovery of bona fide shatter cones in an area at least 3 km² in extent near Santa Fe, New Mexico, USA, indicates the presence of a so-far unknown, deeply eroded impact structure that is between ~320 Ma and ~1 Ga in age.

Spevack S. C. Morrow J. R. Spevack B. Z.

3-D Seismic and Well Log Analyses of the Victoria Island Structure, a Potential Buried Impact Crater, San Joaquin County, California [#1033]

Analyses of 3-D seismic and well log data from the southwestern Sacramento basin, California, reveal a circular, ~5.5-km-diameter anomaly, buried at a depth of ~1500 m, which may represent a previously unrecognized, Eocene-age complex impact crater.

Miura Y.

Analyses of Surface and Underground Data of Takamatsu Crater in Japan [#1188]

As complicated impact crater with surface and underground data, Takamatsu crater shows irregular basements with uplifted of granitic basement and without large central uplift by intrusions. Trace compositions of drilled samples indicate mixture with meteoritic elements.

Ori G. G. Rossi A. P. Komatsu G. Ormo J. Rainone M. Signanini P. Torrese P. Sammartino P.

Madonna R. Baliva A. Di Achille G.

Seismic Data from the Main Crater of the Proposed Sirente Meteorite Crater Field (Central Italy) [#1092]

We present the first seismic study on the internal structure of the main crater in the proposed Sirente crater field. A deep bowl-shaped geometry contrasts with the surrounding chaotic to mounded seismic reflections.