Monday, March 20, 2017 **[M105]**
CERES: FEATURES, COMPOSITION, AND EVOLUTION
8:30 a.m. Montgomery Ballroom

Chairs: **Debra Buczkowski**
Ernesto Palomba

8:30 a.m. Raymond C. A. * Castillo-Rogez J. C. Ermakov A. Park R. S. Marchi S. et al.
Large-Scale Heterogeneity of Ceres: Clues to Interior Evolution **[#1506]**
Ceres is nearly hydrostatic with compensated topography. Correlation of residual gravity anomalies with other data provide clues to its evolution.

8:45 a.m. Buczkowski D. L. * Sizemore H. G. Jozwiak L. M. Schenk P. M. Scully J. E. C. et al.
Floor-Fractured Craters on Ceres: Implications for Internal Composition and Processes **[#2117]**
We present a geomorphic and topographic analysis of the Ceres floor fractured craters and propose hypotheses for their formation.

9:00 a.m. Thangjam G. * Nathues A. Platz T. Mengel K. Cloutis E. A. et al.
Understanding Cere's Compositional Heterogeneity from Bright and Dark Materials **[#2235]**
The bright and dark materials on dwarf planet Ceres is intended to study using both FC and VIR data to shed light into the surface compositional heterogeneity.

9:15 a.m. De Sanctis M. C. * Ammannito E. McSween H. J. Marchi S. Raponi A. et al.
Discovery of Organics Rich Terrains on Ceres **[#1493]**
Here we report about the discovery of organic rich areas on Ceres by the Dawn VIR instrument. The spectra show a strong 3.2–3.5 μm band.

9:30 a.m. Pieters C. M. * Nathues A. Thangiam G. Hoffman H. De Sanctis C. et al.
Context of Unusual Red Organic-Rich Areas on Ceres and Geologic Constraints for Their Origin **[#1296]**
Organic material recently identified on Ceres is found to be associated with a family of small fresh craters, providing an important constraint for its origin.

9:45 a.m. Jaumann R. * Presuker F. Krohn K. von der Gathen I. Stephan K. et al.
Topography and Geomprphology of the Interior of Occator Crater on Ceres **[#1440]**
The crater floor of Occator on Ceres contains plain material is about 500 m thick and due to impact melt hydrothermal alteration or cryovolcanic crater filling.

10:00 a.m. Stein N. * Ehlmann B. Ammannito E. Palomba E. De Sanctis M. C. et al.
Characteristics, Formation, and Evolution of Faculae (Bright Spots) on Ceres **[#2547]**
Faculae (bright spots) on Ceres are comprehensively mapped and categorized. Potential mechanisms for their formation and evolution are evaluated.

10:15 a.m. Palomba E. * Longobardo A. De Sanctis M. C. Stein N. T. Ehlmann B. et al.
Bright Spots on Ceres: Occator, Oxo, and the Others **[#1566]**
By using the VIR data, a catalogue of 98 Ceres Bright Spots was obtained and analyzed to reveal if they have a common or a different origin and evolution.

10:30 a.m. Sizemore H. G. * Platz T. Schorghofer N. Crown D. A. Prettyman T. H. et al.
Ceres' Pitted Terrains: Morphological Context and Implications for Ground Ice **[#2033]**
Ceres is the third terrestrial body known to host pitted crater materials. We discuss cerean pit morphology, development, and implications for ground ice.

10:45 a.m. Hughson K. H. G. * Russell C. T. Schmidt B. E. Chilton H. Combe J.-P. et al.
Layered and Low-Aspect-Ratio Ejecta on Ceres: Probing the Effect of Ground Ice on Fluidized Ejecta Deposits **[#1609]**
Ceres supports a multitude of flows similar to martian fluidized ejecta. We analyze and model these flows to assess the effect of ground ice on their genesis.

11:00 a.m. Platz T. * Nathues A. Schorghofer N. Preusker F. Mazarico E. et al.
Surface Water-Ice Deposits in the Northern Shadowed Regions of Ceres **[#2447]**
This study describes how permanent shadow maps are generated and how water-ice deposits were detected (including processes leading to water-ice deposition).

11:15 a.m. Prettyman T. H. * Yamashita N. Toplis M. J. McSween H. Y. Castillo-Rogez J. et al.
Elemental Measurements of Ceres by Dawn: The Search for Nickel **[#1677]**
Elemental mapping data acquired by Dawn's Gamma Ray and Neutron Detector provide new insights into the hydrothermal evolution of Ceres.

11:30 a.m. Lawrence D. J. * Peplowski P. N. Feldman W. C. Prettyman T. H. Russell C. T. et al.
High-Energy Gamma Rays from Dawn's Gamma Ray and Neutron Detector: A Measure of Ceres' Hydrogen Concentration **[#2098]**
High-energy gamma rays measured by Dawn/GRaND provide a measurement of Ceres' hydrogen concentration, and may also be sensitive to Fe variations.

11:45 a.m. Castillo-Rogez J. C. * Raymond C. A. Prettyman T. H. McSween H. Y. Ruesch O. et al.
Evolution of Large Volatile-Rich Bodies: New Insights from Ceres **[#2172]**
We study the feedbacks between chemistry and geophysics at Ceres observed by Dawn. This knowledge is transferred to other large volatile-rich bodies.