Thursday, March 21, 2013 **[R707]**
POSTER SESSION: SUTTER'S MILL METEORITE
6:00 p.m. Town Center Exhibit Area

Sears D. W. G. ***POSTER LOCATION #75***
The Sutter's Mill CM Chondrite and the Tissint Shergottite: First Data from the NASA Ames Thermoluminescence Laboratory **[#2376]**
Sutter's Mill has been heated to ~300°C, probably during atmospheric passage. Tissint cooled slowly after ejection from Mars (~Shergotty), implying a large object.

Beck P. Garenne A. Yin Q.-Z. Bonal L. Quirico E. et al. ***POSTER LOCATION #76***
Thermal History of Sutter's Mill CM Carbonaceous Chondrite Fall from Water-Abundance and the Structure of its Organic Matter **[#1521]**
Our study of fragment Sutter's Mill fragment SM18 by TGA, Raman, and IR spectroscopy reveals that it experienced significant heating leading to dehydration.

Beauford R. E. Arnold S. K. Sears D. ***POSTER LOCATION #77***
The Macrostructure of the Sutter's Mill CM Chondrite Regolith Breccia **[#1683]**
Lithologic variation in the Sutter's Mill CM chondrite records precursor materials and surface processes that contributed to regolith formation.

Glavin D. P. Burton A. S. Elsila J. E. Dworkin J. P. Yin Q. -Z. et al. ***POSTER LOCATION #78***
The Abundance and Enantiomeric Composition of Amino Acids in the Sutter's Mill Carbonaceous Chondrite **[#1189]**
Amino acids were identified in three separate fragments of the Sutter's Mill meteorite. Several non-protein amino acids are likely extraterrestrial in origin.

Dillon J. Tarozo R. Yin Q. Huang Y. ***POSTER LOCATION #79***
Analysis of Carboxylic Acid Compounds in the Sutter's Mill Meteorite **[#2916]**
We analyzed and quantified monocarboxylic acids in the Sutter's Mill meteorite sample using solid-phase microextraction followed by GCMS analysis.

Flynn G. J. Wirick S. Sandford S. A. Nuevo M. ***POSTER LOCATION #80***
Infrared Analyses of Minerals and Organics in the Sutter's Mill Meteorite **[#1595]**
Infrared spectroscopy of two Sutter's Mill samples shows olivine, pyroxene, clay, carbonate, organic similar to IDPs and possible organic contamination.

Haberle C. W. Garvie L. A. J. Domanik K. Christensen P. R. ***POSTER LOCATION #81***
Calcium-Sulfur-Chlorine Bearing Phases Within Sutter's Mill Sample SM3 (Pre-Rain) **[#2810]**
We present results of an SEM investigation of Sutter's Mill sample SM3 focusing on Ca-S-Cl-bearing phases randomly distributed across the section investigated.

Ott U. Herrmann S. Haubold R. Samu S. Yin Q.-Z. ***POSTER LOCATION #82***
Noble Gases and Cosmic Ray Exposure of Sutter's Mill CM Chondrite **[#1849]**
Cosmic ray exposure age of Sutter's Mill is exceedingly short (0.019 Ma), shorter than Jenniskens et al. (2012) report, an order of magnitude shorter than Maribo.

Fries M. Matson R. Schaefer J. Fries J. Hankey M. ***POSTER LOCATION #83***
Faster Recovery, Better Science: Meteorite Fall Events Detected with Weather Radars and Seismometers in 2012 **[#2935]**
Rocks rain from above / Many ready at the reins / New methods reign too.

Yamakawa A. Yin Q.-Z. ***POSTER LOCATION #84***
The Chromium Isotopic Studies of Sutter's Mill CM-type Carbonaceous Chondrite: Implications for Isotopic Heterogeneities of the Solar System **[#2418]**
We will present the chromium-isotopic studies, ^{53}Mn-^{53}Cr chronology and ^{54}Cr-isotopic anomalies, of the newly discovered Sutter's Mill meteorite (CM-type).

Sandford S. A. Nuevo M. Flynn G. J. Wirick S. ***POSTER LOCATION #85***
Mid-Infrared Study of Samples from Several Stones from the Sutter's Mill Meteorite **[#1663]**
We report on the spectra of samples from two stones from the Sutter's Mill meteorite. The spectra are dominated by phyllosilicates, carbonates, and organics.

Beauford R. E. Sears D. ***POSTER LOCATION #86***
Timing of Fine-Grained Rim Formation in the Sutter's Mill CM Chondrite **[#1692]**
The Sutter's Mill CM chondrite offers constraints on timing and insights into context of fine-grained rim formation.

Kohl I. E. Yin Q. Z. Young E. D. ***POSTER LOCATION #87***
Sutter's Mill Meteorite Oxygen Isotopes: More Evidence for Water-Rock Open System Alteration **[#3005]**
We report new oxygen-isotope data for the Sutter's Mill meteorite and interpret it in the context of fluid-rock interactions.

Wallace S. W. Ebel D. S. Hill M. G. ***POSTER LOCATION #88***
Sutter's Mill: Using Computed Tomography to Curate Scientifically Important Meteorites **[#2297]**
In this study, computed tomography imaging of a whole specimen of the Sutter's Mill meteorite is used to locate potential targets before sectioning.